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APPENDIX 2 TO MAIN REPORT

STUDY OF APPLE HILL ENERGY EFFICIENT HOMES

TASK C - AIR TIGHTNESS TESTS

Prepared for:

THE POLICY DEVELOPMENT AND RESEARCH SECTOR

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BY

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EXECUTIVE SUMMARY

The purpose of the air tightness testing was to measure the degree to which unintentional openings had been avoided in the construction of the Apple Hill homes; and to evaluate the usefulness of various air tightness testing techniques.

A total of 35 houses were tested at three month intervals, over a period of one year. The tests were conducted in three configurations:

1. A depressurized test in accordance with the draft procedures of the CGSB Standard 14A GP 10M.
2. A pressurized air tightness test following the same procedures as the CGSB Standard.
3. A depressurized test with all intentional openings sealed. These include the furnace room, bathroom vents, dryer vents, and fireplace.

Based on these test, the normalized equivalent leadage area (NELA), and air change rates at 50Pa (AC§50Pa) for gas heated houses are:

	NELA(cm2/m2)	AC§50Pa
CGSB	3.2	3.86
Pressurized	3.4	4.07
Depressurized Seal	1.8	2.43

The Apple Hill homes are tighter, relative to other new houseing in the same area, but not as tight as would be expected for new energy efficient standards. Current standards for R-2000 houses call for AC§50Pa to be less than 1.50. These are standards which only the electrically heated houses come close to meeting. The furnace room in gas heated houses appears to be the major contributor to the air leakiness of these houses. The gas heated houses are 30 to 70% leakier than the comparable electrically heated houses.

Both CGSB, and depressurized sealed tests provide reliable and reproductible results. The pressurized test is impractical, due to inconveniences to teh homeowner during winter tests. The depressurized sealed test provides a useful measure for assessing the vapour barrier integrity only, while the current CGSB Standard provides a measure of the overall tightness of the above grade envelope. Some clarification of the draft CGSB Standard is required, in terms of

- defining the envelope area, and heated volume more regourously;
- clarifying the necessary preparation of heat exchangers for testing;
- analysing the temperature correction term for flow.

1.0 INTRODUCTION

The field of airtightness testing has received considerable attention, since the mid-seventies, as a useful and relatively quick method of rating the integrity of the air/vapour barrier of a house. The fan depressurization method has been performed on several hundred houses in Canada by both independent contractors, and many Government related building research departments. The results fo the airtightness tests are not only uses to rate houses, but are becoming increasingly important in terms of providing key parameters for many natural infiltration models. With the growing demand for tighter homes, in reponse to increased energy costs, recommendations are presently being discussed to incorporate airtightness testing results as a measure of the thermal performance of new and existing houses.

Airtightness test results could become a reliable source of information for comparison analysis, as these results are less sensitive to local weather conditions (in contrast to tracer gas techniques), but this would require well defined test guidelines and standards. Numerous pressurized, depressurized CGSB, and depressurized sealed tests were performed in the Apple Hill subdivision. Evaluations of each test procedure, in terms of reliability, reproductibiltiy, and practicability are documented, with regard to potential delineation of guidelines and standards.

2.0 OBJECTIVES

The purpose of this series of tests was:

- To measure the degree to which unintentional openings in the building structure had been avoided.

- To identify the distribution and magnitude of specific air leakage sites.

- To evaluate the usefulness of the draft CGSB Standard for airtightness in building in terms of reliability, cost, time, significance of data, equipment specifications: and compare this with other procedures.

This report presents the results of airtightness tests conducted in various configurations, during the four testing phases of the Study of Apple Hill Energy Efficient Homes. The test procedures are dicussed and evaluated. The results of airtightness tests are compared between houses, models, and test phases, in order to make conclusions concerning the airtightness of Apple Hill Homes.

3.0 METHODOLOGY

Three types of airtightness tests were carried out to meet these objectives:

1. An airtightness test conducted according to detailed procedures of the draft CGSB Standard 14A GP 10M (third draft, January 1982). A copy of this draft is presented in Appendix 2-A. It should be noted that significant changes in this procedure have been incorporated in later drafts.

2. A pressurized airtightness test following the same procedure as 1.

3. A depressurized test with all the intentional openings sealed. These included those of the furnace room, bath vents, dryer, and fireplace. These are not normally sealed in the CGSBS Standard test.

The first airtightness test was the pressurization test on a house prepared to the CGSB Standard. Then the door fan unit was reversed and the house was depressurized in this condition. Finally, the house had all intentional openings sealed and a second depressurization test was completed. Phase 4 tests omitted the pressurized test, as most homeowners would not permit cold winter air to be blown into their house.

There was initially some question as to how the CGSB Standard shoud be applied to houses with enclosed furnace rooms. The Standard required that the flue of the furnace and hot water tank be sealed if they are located within a heated space of the house. Since the enclosed furnace room was essentially isolated from the heated space, both thermally and aerodynamically, it was decided that the CGSB Standard would not permit the sealing of these flues for test purposes. Consequently, the CGSB test in Apple Hill homes entailed only the closing of exterior doors and windows, and the closing of dampers on vents. There was no sealing whatsoever in the house. This practice is confirmed in CGSB Standard Draft #5. Leak location checklists were completed during the first phase of airtightness testing.

4.0 EVALUATION OF TEST PROCEDURE

Analysis of the airtightness test summaries, in Appendix 2-B, shows that the airtightness test is the most reproducible of all tests performed in the Apple Hill project.

Some qualification of the test results follows:

1. Calculation of house volumes and envelope areas should be rigourous and double checked, particularly for research purposes. Errors are easy to make, and seem deceptively insignificant. Any comparison of model-to-model airtightness tests, results (NELA or AC§50Pa) of one airtightness survey to another, are directly dependent on accurate envelope areas or house volumes. This report uses total house heated volume within the vapour barrier (including basement), and total above grade envelope area including doors and windows.

2. Phases 2,3, and 4 have comparable data using identical equipment, and technicians. Phase 1 data reflects the variabiltiy of equipment used to establish a good testing procedure. It also does not include sealing the hot water flue in many sealed tests, and oversight that occurred in phase 1 testing.

3. Based on the data from phases 2,3, and 4, it is difficult to see any significat seasonal trend in airtightness. All seasons showed roughly the same values for NELA and AC§50Pa, with perhaps a moderate increase in leakiness in cold weather testing.

4. Pressurized test results during the summer months were generally higher than depressurized test results. In other works, the houses were leakier for the pressurized test than for the depressurized test. The opposite was found in cold weather testing (see Table 4.1: A comparison of Pressurized vs. Depressurized CGSB Tests by Model Means).

It is hard to imagine how this reversal is caused by seasonal changes in structural characteristics of the house. However, it is quite apparent that the temperature correction factors used to modify airflow in the CGSB equations would cause this trend. This suggests that some testing on a control house under various temperature conditions might be informative.

TABLE 4.1

COMPARISON OF PRESSURIZED VS DEPRESSURIZED CGSB TESTS BY MODEL MEANS

Mean Model A.C. § 50 Pa (no electric houses)

	Houses 1-8		Houses 10-18		Houses 20-25		Houses 27-30	
Phase	Pres.	Dep.	Pres.	Dep.	Pres.	Dep.	Pres.	Dep.
1	3.68	3.97	4.52	4.90	4.40	4.67	4.35	4.48
2	3.61	3.32	4.18	3.83	4.20	4.12	4.22	3.91
3	3.59	3.52	4.14	3.79	4.42	4.14	4.22	3.95
4	----	3.60	----	3.91	----	4.32	----	3.83

5.0 DISCUSSION OF RESULTS

Airtightness tests have been conducted on all available homes in each of the test phases. Summaries of the airtightness results for the three different types of tests are shown in Tables 5.1, 5.2 and 5.3 with detailed data sheets in Appendix 2-B. Based on this data, equivalent leakage areas (NELA), and air changes at 50 Pa for a representative sample of airtightness testing on gas heated houses, are shown here:

AIRTIGHTNESS SUMMMARY FOR GAS HEATED HOUSES ONLY

	NELA (cm 2/m 2)		AC/H § 50 PA	
	Phase 1	Phase 2-4	Phase 1	Phase 2-4
Depressurized Unsealed (CGSB)	3.8	3.2	4.59	3.86
Pressurized Unsealed	3.8	3.4*	4.26	4.07*
Depressurized Sealed	2.5	1.8	3.50	2.43

*Note: includes only phases 2 and 3

These results compare favorably with the study of R.K. Beach, "Relative Tightness of New Housing in the Ottawa Area", DBR Building Research Note No. 149-1978. In this study, the average normalized ELA was 3.25 cm 2/m 2 for the depressurized sealed test, with a range of 1.8 to 5.3 cm 2/m 2. The Apple Hill homes are not as tight as would be expected of energy efficient homes. Standards for R-2000 houses require airtightness levels better than 1.5 acph at 50 pascals.

A comparison of sealed and unsealed ELA'S shows a clear reduction in houses that have been sealed. This suggests that dampers or weather-stripping are not functioning as intended. The worst problem is in the furnace room. Results from intensive furnace room studies on four houses revealed that up to 95% of the difference between CGSB and sealed test is attributable to the furnace flues and combustion air inlets. Table 5.4, a comparison of Depressurized Sealed vs. Depressurized CGSB Test, shows that gas houses were 29 to 46 percent tighter when sealed. Electric houses only averaged a 13 percent increase in tightness by sealing, as there were no flues or combustion air inlets to block.

Summary of results, comparing the normalized equivalent leakage are (NELA) and air changes at 50 Pa (AC§50) as determined by the CGSB Standard test for each model, is presented in Tables 5.5 and 5.6. Based on these results, the following observation are made:

1. Russett houses, heated electrically, are 30 to 40% tighter in terms of NELA and AC§50 than gas heated houses.
2. The electrically heated Cortland model is 60 to 67% tighter than the gas heated models in terms of NELA and AC§50.
3. The York electrically heated house is 33 to 53% tighter than the gas heated houses.

4. Houses 50 and 51 have about 20% more envelope area than the Fireside model which is the largest fo the Apple Hill homes. When compared to the Fireside, houses 50 and 51 have NELA'S and AC§50's about 50% lower. House 52, which is electrically heated, has a 40% higher NELA and 15% higher AC§50 than the comparable electrically heated Cortland model.

5. When air movement is traced by smoke pencils during air tightness tests, there appears to be a great deal of air infiltrating through the fireplace. When the results of the CGSB test is compared between houses with and without fireplaces, there is no discernible pattern of difference in airtightness.

6. The study of Furnace Room Design involved extensive retrofits to three furnace rooms in the Apple Hill subdivision. The retrofits included airtightening of the furnace room in one case; the installation of a condensing gas furnace in the second case; and retrofitting a power venter to the conbustion appliances in the third. These retrofits involed reducing the size of the combustion air inlets, or completely sealing them. This action resulted in improvements of between 20 to 30% in airtightness of the houses.

Leak location checklists were completed for 22 houses. This required depressurizing the house, and identifying leaks with a smoke pencil. Detailed leak location checklists for each house are presented in Appendix 2-D. This checklist revealed several areas with a high frequency of observed leaks:

1/ Drywall discontinuities such as outlets, ceiling fixtures, and baseboard;
2/ Air/Vapour barrier detail at the ceiling/partition walls;
3/ Window and exterior door;
4/ Fireplace/wall construction;
5/ Basement wall/joist, basement wall/sill, and furnace room door;
6/ Attic hatch;
7/ Bathroom ceiling vent.

Athough the Apple Hill homes are identified as energy efficient homes, it is clear that not enough attention was given to air/vapour barrier detail in the critical areas such as partitions, windows, doors, fistures etc. The leakage sites are characteristic of ommissions in air/vapour barriers.

Table 5.1

CGSB TEST SUMMARY

	PHASE 1 (Mar-Apr'82)				PHASE 2 (Jun-Jul'82)				PHASE 3 (Sep-Oct'82)				PHASE 4 (Dec-Jan'83)			
HOUSE #	N	C m^3/s	NELA 10^-4	AC@ 50Pa	N	C m^3/s	NELA 10^-4	AC@ 50Pa	N	C m^3/s	NELA 10^-4	AC@ 50Pa	N	C m^3/s	NELA 10^-4	AC@ 50Pa
1	.597	.081	3.3	4.18	.588	.068	2.9	3.37	.613	.058	2.6	3.17	.596	.066	2.9	3.36
2	.791	.036	2.5	3.94	.692	.053	2.9	3.93	.61	.07	3.2	3.77	.707	.052	2.9	4.1
3	.613	.077	3.3	4.19	.648	.05	2.5	3.16	.618	.058	2.7	3.25	.716	.043	2.5	3.51
4	---	---	---	---	.635	.042	2	2.52	.638	.049	2.4	2.94	.671	.044	2.3	3.04
5	.529	.108	3.9	4.25	.655	.054	2.8	3.52	.62	.055	2.6	3.12	.692	.044	2.4	3.31
6	.667	.055	2.8	3.73	.636	.057	2.8	3.4	.591	.079	3.4	3.94	.689	.047	2.6	3.46
7	.611	.065	2.8	3.52	.631	.056	2.6	3.31	.724	.044	2.6	3.73	.675	.055	2.9	3.85
8	---	---	---	---	---	---	---	---	.59	.085	3.7	4.27	.644	.068	3.4	4.2
X	.63467	.07033	3.1	3.9683	.64071	.05429	2.6429	3.3157	.63057	.059	2.7857	3.4171	.678	.05014	2.6429	3.5186
10	.567	.106	4.8	5.63	.689	.077	4	4.84	.64	.056	3.1	3.97	.636	.06	3.3	4.19
11	.566	.09	4.1	4.77	.743	.031	2.2	3.32	.643	.042	2.3	3	.699	.03	1.9	2.74
12	.635	.058	3.2	3.97	.631	.05	2.8	3.45	.634	.051	2.8	3.56	.705	.042	2.7	3.86
13	.49	.126	4.8	4.95	.589	.069	3.4	4.03	.585	.092	3.7	3.83	.643	.051	2.9	3.69
14	.663	.068	3.8	4.25	.733	.03	2.1	3.1	.685	.047	2.9	3.99	.701	.038	2.5	3.47
15E	.613	.042	2.2	2.73	.65	.031	1.8	2.32	.658	.034	2	2.6	.701	.032	2.1	2.95
16	.589	.144	3.2	4.85	.657	.057	3.3	4.37	---	---	---	---	.638	.066	3.7	4.62
17E	.689	.032	1.9	2.74	.658	.028	1.7	2.17	.615	.036	1.9	2.35	.713	.023	1.6	2.23
18	---	---	---	---	.691	.036	2.3	3.16	.617	.055	2.9	3.58	.63	.053	2.9	3.621
X	.5915	.08325	3.5	4.2363	.663	.044	2.5375	3.2988	.62463	.05163	2.7	3.36	.6785	.04113	2.4875	3.3439
20	.651	.07	3.9	4.92	.631	.061	3.4	3.94	---	---	---	---	.621	.071	3.9	4.43
21	.526	.114	4.9	4.89	.605	.068	3.6	3.97	.586	.074	3.8	4.03	.629	.072	4.1	4.67
22	.561	.088	4.3	4.37	.696	.051	3.4	4.32	.543	.094	4.3	4.3	.624	.062	3.6	4.22
23E	.575	.051	2.3	2.66	.604	.026	1.4	1.54	.641	.023	1.3	1.59	.597	.028	1.5	1.61
24	.521	.107	4.6	4.48	.622	.047	2.6	2.96	.598	.05	2.6	2.85	.624	.042	2.4	2.68
25	---	---	---	---	.559	.087	4.2	4.26	.602	.071	3.8	4.09	.593	.071	3.7	3.99
X	.5668	.086	4	4.264	.6172	.0558	3.04	3.41	.594	.0624	3.16	3.372	.6134	.055	3.06	3.434
27	.558	.096	3.7	3.92	.612	.074	3.3	3.86	.754	.04	2.5	3.57	.689	.047	2.5	3.18
28	.702	.075	4	5.34	.556	.109	4.2	4.34	.666	.064	3.2	3.98	.722	.051	2.9	3.94
29	.548	.107	4	4.18	.586	.091	3.8	4.12	.453	.145	4.4	3.89	.704	.054	2.9	3.9
30	---	---	---	---	.51	.115	4	3.89	.718	.057	3.2	4.34	.724	.055	3.1	4.28
X	.60267	.09267	3.9	4.48	.566	.09725	3.825	4.0525	.64775	.0765	3.325	3.945	.70975	.05175	2.85	3.825
31E	.752	.037	3	5.58	.639	.041	2.7	4.05	.813	.021	2.1	4.2	.719	.03	2.4	4.02
32	.692	.051	4.5	7.75	.574	.079	4.5	5.96	.596	.076	4.5	6.23	.801	.034	3.3	6.31
X	.722	.044	3.75	6.665	.6065	.06	3.6	5.005	.7045	.0485	3.3	5.215	.76	.032	2.85	5.165
34	.656	.065	2.7	3.31	.723	.055	2.9	3.6	.564	.096	3.5	3.4	.778	.043	2.5	3.51
35	---	---	---	---	.662	.068	3	3.53	.579	.095	3.5	3.57	.589	.096	3.7	3.76
X					.6925	.0615	2.95	3.565	.5715	.0955	3.5	3.485	.6835	.0695	3.1	3.635
37	.498	.115	4.2	4.6	.613	.053	2.7	3.37	.607	.056	2.8	3.43	.645	.045	2.4	3.22
39	.599	.091	3.7	4.6	.468	.122	3.8	3.76	.577	.091	3.7	4.32	.628	.078	3.5	4.51
50E	---	---	---	---	.788	.026	1.3	2.24	.739	.037	1.7	2.66	.812	.028	1.5	2.69
51	---	---	---	---	.614	.035	1.1	1.49	.662	.026	.9	1.38	.734	.021	.9	1.48
52E	---	---	---	---	---	---	---	---	.653	.031	1.9	1.68	.648	.035	2.1	1.88

NOTE:Electric houses #15,17,23,31 are not included in the mean calculations
Modified houses #11,24 are not included in the mean calculations for phases 2,3 and 4.

Table 5.2

PRESSURIZED TEST SUMMARY

HOUSE #	PHASE 1 (Mar-Apr'82) N	C m^3/s	NELA 10^-4	AC@ 50Pa	PHASE 2 (Jun-Jul'82) N	C m^3/s	NELA 10^-4	AC@ 50Pa	PHASE 3 (Sep-Oct'82) N	C m^3/s	NELA 10^-4	AC@ 50Pa	PHASE 4 (Dec-Jan'83) N	C m^3/s	NELA 10^-4	AC@ 50Pa
1	.519	.096	3.4	3.36	.673	.052	2.8	3.6	.663	.051	2.6	3.43	----	----	----	----
2	.483	.118	3.8	3.86	.579	.075	3.2	3.59	.551	.082	3.3	3.53	----	----	----	----
3	.473	.115	3.8	3.63	.627	.056	2.6	3.23	.678	.068	2.9	3.26	.736	.035	2.1	3.11
4	---	---	---	---	.734	.039	2.9	3.41	.662	.049	2.5	3.26	----	----	----	----
5	.498	.115	3.9	4.01	.682	.059	3.2	4.23	.622	.058	2.7	3.25	----	----	----	----
6	.717	.041	2.3	3.42	.685	.068	3.1	3.6	.624	.07	3.3	3.96	----	----	----	----
7	.617	.064	2.7	3.54	.695	.048	2.7	3.63	.671	.052	2.7	3.57	----	----	----	----
8	---	---	---	---	---	---	---	---	.643	.072	3.6	4.47	----	----	----	----
X	.55117	.0915	3.3167	3.6367	.65643	.05671	2.9286	3.6129	.63871	.06143	2.8571	3.4657				
10	.586	.086	4.1	4.94	.625	.078	4.2	5.21	.676	.051	3.1	4.2	----	----	----	----
11	.753	.037	2.6	4.11	.61	.055	2.9	3.49	.613	.058	3.1	3.76	.571	.053	2.5	2.85
12	.541	.093	4.1	4.42	.661	.061	3.1	3.82	.614	.058	3	3.72	----	----	----	----
13	.487	.156	4.9	4.42	.577	.076	3.7	4.23	.579	.078	3.8	4.37	----	----	----	----
14	.486	.121	4.5	4.69	.732	.034	2.3	3.43	.641	.062	3.5	4.44	----	----	----	----
15E	.609	.049	2.5	3.12	.675	.034	2.1	2.74	.674	.033	2	2.72	----	----	----	----
16	---	---	---	---	.621	.071	3.8	4.68	---	---	---	---	----	----	----	----
17E	.73	.027	1.9	2.76	.69	.027	1.7	2.34	.735	.023	1.6	2.42	----	----	----	----
18	---	---	---	---	.768	.031	2.4	3.72	.62	.06	3.2	3.95	----	----	----	----
X	.58743	.08129	3.5143	4.0657	.66725	.0495	2.8	3.6225	.644	.05288	2.9125	3.6975				
20	.529	.106	4.6	4.63	.612	.072	3.9	4.34	---	---	---	---	----	----	----	----
21	.392	.169	5.3	4.31	.605	.069	3.7	4.04	.573	.092	4.6	4.77	----	----	----	----
22	.528	.099	4.2	4.26	.567	.082	4	4.13	.564	.086	4.2	4.29	----	----	----	----
23E	---	---	---	---	.706	.021	1.4	1.83	.698	.02	1.3	1.92	----	----	----	----
24	---	---	---	---	.549	.072	3.4	3.84	.567	.06	2.9	3.04	----	----	----	----
25	---	---	---	---	.541	.094	4.3	4.28	.577	.08	4	4.2	.493	.098	4	3.68
X	.483	.12467	4.7	4.4	.5936	.06833	3.45	3.624	.5958	.0676	3.4	3.644				
27	.46	.126	3.8	3.42	.589	.091	3.8	4.2	.666	.058	2.9	3.66	----	----	----	----
28	.782	.055	3.5	5.19	.502	.129	4.4	4.19	.643	.071	3.3	3.97	----	----	----	----
29	.543	.102	3.7	3.92	.669	.078	3.9	4.09	.741	.056	3.3	4.69	.737	.051	3	4.21
30	----	----	----	----	.581	.097	4	4.32	.65	.077	3.7	4.43	----	----	----	----
X	.595	.09433	3.6667	4.1767	.58525	.09875	4.025	4.4	.675	.0655	3.3	4.1875				
31E	----	----	----	----	.658	.039	2.7	4.09	.541	.058	3.1	3.87	----	----	----	----
32	.624	.081	4.9	7.49	.508	.102	5	5.95	.551	.092	4.9	6.32	.707	.05	3.9	6.38
X	.624	.081	4.9	7.49	.583	.0705	3.85	5.02	.546	.075	4	5.095	.707	.05	3.9	6.38
34	.731	.04	2	2.75	.652	.078	3.4	3.87	.642	.08	3.5	3.87	----	----	----	----
35	----	----	----	----	.497	.128	3.9	3.47	.594	.097	3.7	3.86	----	----	----	----
X	.731	.04	2	2.75	.5745	.103	3.65	3.67	.618	.0885	3.6	3.865				
37	.58	.084	3.7	4.64	.602	.062	3	3.69	.62	.056	2.9	3.64	----	----	----	----
39	----	----	----	----	.51	.115	4	4.22	.602	.091	3.8	4.89	----	----	----	----
50E	----	----	----	----	.684	.038	1.5	2.2	.78	.032	1.6	2.69	----	----	----	----
51	----	----	----	----	----	----	----	----	.601	.044	1.3	1.8	----	----	----	----
52E	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

NOTE:Electric houses #15,17,23,31 are not included in the mean calculations
Modified houses #11,24 are not included in the mean calculations for phases 2,3 and 4.

Table 5.3

DEPRESSURIZED SEALED SUMMARY

	PHASE 1 (Mar-Apr'82)				PHASE 2 (Jun-Jul'82)				PHASE 3 (Sep-Oct'82)				PHASE 4 (Dec-Jan'83)			
HOUSE #	N	C m^3/s	NELA 10^-4	AC@ 50Pa	N	C m^3/s	NELA 10^-4	AC@ 50Pa	N	C m^3/s	NELA 10^-4	AC@ 50Pa	N	C m^3/s	NELA 10^-4	AC@ 50Pa
1	.647	.051	2.5	3.17	.641	.04	2	2.45	.621	.04	1.8	2.25	.644	.04	2	2.47
2	.681	.034	1.7	2.43	.707	.031	1.8	2.46	.585	.049	2.1	2.39	.669	.038	2	2.58
3	.551	.097	3.3	3.56	.617	.037	1.7	2.05	.683	.029	1.6	2.13	.683	.032	1.7	2.32
4	---	---	---	---	.63	.03	1.4	1.74	.66	.032	1.6	2.12	.709	.026	1.5	2.07
5	.62	.065	2.8	3.21	.642	.036	1.8	2.24	.765	.021	1.4	2.07	.719	.027	1.6	2.22
6	.62	.045	1.9	2.52	.643	.033	1.6	2.07	.541	.056	2.2	2.32	.689	.03	1.7	2.27
7	.67	.035	1.7	2.43	.719	.026	1.5	2.2	.747	.028	1.8	2.58	.762	.028	1.8	2.81
8	---	---	---	---	---	---	---	---	.637	.048	2.3	2.88	.718	.033	2	2.78
X	.6315	.0545	2.3167	2.8867	.657	.03329	1.6857	2.1729	.65743	.03643	1.7857	2.2657	.69643	.03157	1.7571	2.3914
10	.667	.046	2.5	3.63	.673	.033	2	2.68	.676	.026	1.6	2.16	.669	.03	1.8	2.44
11	.926	.015	1.6	3.28	.713	.022	1.5	2.14	.681	.024	1.5	2	.695	.023	1.5	2.06
12	.661	.039	2.2	3	.781	.019	1.5	2.36	.676	.029	1.7	2.36	.754	.022	1.6	2.5
13	.639	.051	2.9	3.63	.603	.036	1.8	2.23	.585	.04	2	2.31	.637	.031	1.7	2.21
14	.637	.069	3.8	4.84	.683	.027	1.7	2.32	.71	.027	1.7	2.52	.702	.028	1.8	2.56
15E	.596	.042	1.9	2.51	.713	.022	1.7	2.08	.668	.029	1.7	2.35	.755	.022	1.6	2.46
16	.61	.059	2.9	3.71	.633	.038	2.1	2.65	---	---	---	---	.708	.03	2	2.86
17E	.584	.042	1.9	2.41	.723	.02	1.4	1.99	.665	.026	1.6	2.05	.739	.018	1.2	1.88
18	---	---	---	---	.639	.027	1.5	1.9	.671	.027	1.7	2.22	.642	.03	1.7	2.15
X	.665	.04538	2.4625	3.3763	.691	.02575	1.6375	2.2125	.6665	.0285	1.6875	2.2463	.69913	.0255	1.6125	2.2825
20	.801	.026	2	3.36	.632	.032	1.8	2.13	---	---	---	---	.619	.038	2.1	2.37
21	.763	.037	2.6	4.09	.667	.029	1.8	2.22	.59	.04	2	2.21	.669	.027	1.7	2.06
22	.622	.04	2	2.54	.578	.041	2.1	2.19	.651	.03	1.8	2.13	.626	.034	1.9	2.17
23E	.548	.04	1.6	1.86	.737	.013	.9	1.27	.613	.022	1.2	1.35	.623	.025	1.4	1.57
24	.648	.04	2.3	2.78	.582	.033	1.6	1.76	.681	.019	1.2	1.55	.608	.026	1.6	2.06
25	---	---	---	---	.65	.031	1.9	2.21	.598	.035	1.8	1.99	.678	.026	1.6	2.06
X	.6764	.0366	2.1	2.926	.641	.02983	1.6833	1.9633	.6266	.0292	1.6	1.846	.63717	.02933	1.7167	2.0483
27	.627	.074	3.2	3.94	.649	.051	2.4	2.96	.758	.029	1.8	2.64	.673	.042	2.1	2.69
28	.643	.063	2.9	3.58	.663	.049	2.4	3	.73	.028	1.6	2.25	.758	.026	1.6	2.32
29	.588	.113	3.7	3.76	.635	.045	2.1	2.5	.598	.054	2.3	2.57	.711	.031	1.7	2.34
30	---	---	---	---	.621	.05	2.2	2.6	.669	.041	2.1	2.61	.73	.033	1.9	2.65
X	.59267	.08333	3.2667	3.76	.642	.04875	2.275	2.765	.68875	.038	1.95	2.5175	.718	.033	1.825	2.5
31E	.69	.041	3	4.89	.618	.04	2.5	3.61	.631	.037	2.4	3.48	.689	.032	2.4	3.79
32	.823	.034	1.5	6.77	.689	.037	2.7	4.41	.693	.053	2.7	4.29	.77	.025	2.2	4.08
X	.7565	.0375	2.25	5.83	.6535	.0385	2.6	4.01	.662	.045	2.55	3.885	.7295	.0285	2.3	3.935
34	---	---	---	---	.694	.039	1.9	2.3	.681	.042	2	2.39	.722	.04	2.1	2.64
35	---	---	---	---	.704	.038	1.9	2.32	.686	.043	2	2.44	.731	.039	2.1	2.67
X	---	---	---	---	.699	.0385	1.9	2.31	.6835	.0425	2	2.415	.7265	.0395	2.1	2.655
37	.739	.031	1.8	3.18	.742	.017	1.1	1.79	.696	.021	1.3	1.87	.673	.022	1.3	1.78
39	.585	.072	2.4	3.54	.658	.038	1.8	2.48	.726	.03	1.7	2.58	.666	.037	1.8	2.48
50E	---	---	---	---	.766	.024	1.2	1.93	.758	.028	1.3	2.15	.769	.03	1.44	2.44
51	---	---	---	---	.571	.034	1	1.27	.639	.023	.8	1.13	.662	.023	.8	1.21
52E	---	---	---	---	---	---	---	---	.673	.028	1.8	1.62	.706	.029	2.4	1.92

NOTE:Electric houses #15,17,23,31 are not included in the mean calculations
Modified houses #11,24 are not included in the mean calculations for phases 2,3 and 4.

TABLE 5.4

COMPARISON OF DEPRESSURIZED SEALED VS DEPRESSURIZED CGSB TESTS BY MODEL MEANS

Mean Model A.C. § 50 Pa

	House1-8		House10-18		House20-25		Houses27-30		Electric	
Phase	Sealed	CGSB	Sealed	CGSB	Sealed	CGSB	Sealed	CGSB	Sealed	CGSB
1	2.89	3.97	3.38	4.24	2.93	4.26	3.76	4.48	2.92	3.42
2	2.17	3.32	2.21	3.30	1.96	3.41	2.77	4.05	2.24	2.52
3	2.27	3.42	2.25	3.36	1.85	3.37	2.52	3.95	2.31	2.69
4	2.39	3.52	2.28	3.34	2.05	3.43	2.5	3.83	2.43	2.70
% change	32%		34%		46%		29%		13%	

TABLE 5.5

COMPARISON OF NORMALIZED ELA'S BY HOUSE MODEL

House Model	No. of Houses	Volume (m 3)	Envelope Area (m 2)	Mean Nela (cm 2/m 2)	Standard Deviation
Regent					
(All gas)	8	730	360	2.77	0.38
Russet					
Gas	6	626	315	3.02	0.51
Electric	2	626	315	1.85	0.19
Cortland					
Gas	5	660	330	3.80	0.30
Electric	1	660	330	1.40	0.10
Willow					
(All gas)	4	790	375	3.33	0.63
York					
Gas	1	454	266	4.10	0.69
Electric	1	454	266	2.40	0.30
Fireside					
Gas	2	930	410	3.18	0.46
Westfield					
Gas	1	635	330	2.63	0.21
Baldwin					
Gas	1	730	375	3.67	0.15
#50 Electric	1	923	500	1.50	0.20
#51 Gas	1	921	520	0.97	0.12
#52 Electric	1	864	292	2.00	0.14

TABLE 5.4

COMPARISON OF AIR CHANGES § 50 Pa BY HOUSE MODEL

House Model	No. of Houses	Volume (m 3)	Envelope Area (m 2)	Mean AC§50·Pa	Standard Deviation
Regent	8	730	360	3.49	0.43
Russet					
Gas	6	626	315	3.84	0.47
Electric	2	626	315	2.44	0.29
Cortland					
Gas	5	660	330	4.20	0.23
Electric	1	660	330	1.58	0.04
Willow	4	790	375	3.94	0.33
York					
Gas	1	454	266	6.17	0.18
Electric	1	454	266	4.09	0.04
Fireside	2	930	410	3.56	0.12
Westfield	1	635	330	3.34	0.11
Baldwin	1	730	375	4.20	0.39
#50	1	921	520	1.45	0.06
#51	1	864	292	1.78	0.14

6.0 CONCLUSIONS

1. Airtightness test produced fairly consistent results from phase to phase, season to season.
2. The Apple Hill homes are tighter relative to other new housing in the same areas, but not as tight as would be expected for new energy efficient standards. Current standards for R-2000 houses call for AC§50Pa to be less than 1.5. These are standards which only the electricallty heated houses came close to meeting.
3. The furnace rooms in gas heated houses are the major contributors to the air leakiness of these houses. The gas heated houses are 39 to 70% leakier than the comparable electrically heated houses.

7.0 RECOMMENDATIONS

Based on the results of the Apple Hill tests, it appears that a pressurized test is impractical as a standard test. This is primarily due to inconveniences to the homeowner during winter tests. Both CGSB and depressurized sealed tests satisfy the criteria of being reliable, and practical. The sealed test, as opposed to the CGSB test, is preferred for asessing air/vapour barrier integrity only, a measure of the degree to which "unintentional" openings have been avoided. Although instructive, it is still recommeded that the current CGSB guidelines be used for the standard airtightness test. This test is more analagous to tracer gas test conditons, and better represents the degree of tightness of the whole house envelope, that part of the house exposed to infiltration of exfiltration.

As airtightness testing becomes more prevalent, it is recommended that current draft standard for airtightness be resolved. Based on the testing in Apple Hill, many points in the draft were, and still are unclear. Some of these areas are listed below.

- A rigorous definition of Envelope Area and Heated Volume.
- More clarification on air exchangers and their preparation for testing.
- More analysis of the temperature correction term for flow.

APPENDIX 2-A

DETAILED TEST PROCEDURES

PROCEDURE OF AIR TIGHTNESS TESTING

The steps followed in conducting an air tightness test are similar to those outlined in the CGSB Stanard 14A GP 10M. Apple Hill was unusual in the sense that three tests were being conducted on the same house. It was found to be most efficient to begin with a pressurization test on the house, with intentional openings in a unsealed state; then to reverse the door fan unit and depressurize the house (still it is unsealed conditions); and finally to seal up the house and complete a second depressurization test. By leaving the sealing of the house for the final finding that wind speeds, or mechanical difficulties prevented the collection of valid data, thus rendering the sealing of the house useless.

Third Draft

149-GP-10M

January 1982

CANADIAN GENERAL STANDARDS BOARD
Standard for
DETERMINATION OF AIRTIGHTNESS OF BUILDINGS BY
THE FAN DEPRESSURIZATION METHOD

1. SCOPE AND FIELD OF APPLICATION

1.1 This is a method for the determination of the airtightness of a building's exterior envelope. It is not a method for determining the actual air leakage which occurs through the building envelope under the influence of wind and buoyancy pressures or the operation of ventilation systems.
1.2 The method is applicable to small detached buildings (especially houses) but with appropriate modifications, it can also be used for other buildings or parts of buildings.

2. PRINCIPLE

A fan or fans are used to exhaust air from the building at rates required to maintain specified pressure differences across the building envelope. The air flows and the pressure differences are measured. The intention is to subject the complete envelope under test to a simultaneous and similarly directed air pressure.

3. TERMINOLOGY

Airtightness - the degree to which unintentional openings in the building envelope have been avoided.
Building envelope - that portion of the heated structure which separates conditioned from unconditioned space.
Envelope under test - that portion of the heated structure which separates the space under test from that not under test.
Intentional opening - an opening in the building envelope deliberately made to fulfill a particular function.

4. APPARATUS

4.1 Fan
4.1.1 The fan or fans shall have a total air flow capacity capable of producing a pressure difference of at least 50 Pa between the inside and outside. (Sufficient capacity for testing

new detached houses is normally about 1500 L/s and for older detached houses it is normally 2500 L/s.)

4.1.2 The fan shall have a varible speed control or a control damper in series with the fan.

4.1.3 The fan shall be calibrated in air flow units or be connected to an air flow metering system. The accuracy of air flow measurement shall be + 5%.

4.2 Pressure-measuring apparatus - This device (e.g. a micro-manometer) shall be used to measure pressure differences between 0 and 50 Pa and it shall have an accuracy of -+2 Pa.

4.3 Thermometer(s) - This device shall be used to measure temperature in C and it shall have an accuracy of -+1C.

4.4 Sealing apparatus - This apparatus shall be used to seal the fan into a window or a door.

4.5 Pressure averaging box - This device shall be suitable for connection of multiple tubes from exterior pressure taps and shall have a volume of not less than 1 L and a time contstant of 5 + 1 s. Construction and calibration of the pressure averaging box shall be completed as described in Appendix F.

5. CALIBRATION OF APPARATUS

5.1 Routine Inspection - After setting up the apparatus, take the following steps to check all the measuring devices.

5.1.1 Visually inspect for various physical defects.

5.1.2 Visually inspect for proper installation in accordance with manufacturer's specification.

5.1.3 Inspect the levelling of devices which require this precaution (e.g. a manometer).

5.1.4 Ensure that all indicators are at zero settings.

5.2 Laboratory Calibration - Calibrate all measuring devices at least once a year and when any major component is replaced.

5.2.1 Calibrate the air flow and pressure measuring devices in accordance with the manufacturer's instructions.

5.2.3 Calibrate the pressure measuring device in accordance with the manufacturer's instructions or alternatively, calibrate it in accordance with Appendix A-3.

6. TESTING

6.1 Set-Up Procedures

6.1.1 Measure and record the outdoor ambient temperature.

6.1.2 Record the outdoor ambient pressure. (A report from the local weather station should normally be sufficient.)

6.1.3 Include in the test all rooms which are intended to be heated to more than 10C except rooms with separate ventilation (e.g. boiler room and garages.)

6.1.4 Switch off all fuel combustion equipment, exhaust fans, vented dryers and air conditioners.

6.1.5 Shut off all pilot lights on vented gas-fired appliances.

6.1.6 Prepare intentional openings as detailed in Table 1.

6.1.7 Remove ashes from fireplaces. Check chimneys and furnace

flues for excessive soot and do not perform the test if soot is likely to enter the building.
6.1.8 Open all interior doors except those to rooms which are not included in the test (par.6.1.3.)
6.1.9 Install the test apparatus such that air will be exhausted from the building. To eliminate the possiblity of disturbance of the flow entering the nozzle when using a bell-mouthed nozzle apparatus, ensure that no obstructions are placed within on throat diameter away from the centre of the nozzle entrance.
If the wind speed reported by the local weather office is greater than 20 km/h, the test should not be conducted. When using a blower door apparatus, ensure that no obstructions are placed within the width of the door and closer than one fan diameter in front of the fan.
6.1.10 Seal the joints between the apparatus and the envelope.
6.1.11 Attach the exterior pressure taps to the exterior walls of the envelope under test such that the square-cut ends point downward. For single unit residences, secure the exterior pressure taps at points at least 2 m above grade if possible, and at the horizontal mid-point of the principal exterior wall facing in that direction. See Figure 2 for the recommended locations of the exterior pressure taps on some common shapes of houses.
6.1.12 Protect the interior and exterior pressure taps from the influence of the fan.
6.1.13 When the building to be tested has walls, ceilings or floors common with the rooms that are not included in the test but which are intended to be heated to more than 10C, make provision to reduce the pressure in the adjacent rooms to match the pressure in thhe rooms under test at each test point.
6.1.14 For fireplace chimneys without a damper, perform the test without any sealing unless the leakage is so large that the test cannot be performed. In this case, seal the fireplace at the opening and report this matter as a deviation from the usual test procedure in the test report. (See par.7.1, item 0.)

6.2 Test Procedures

6.2.1 Switch on the fan or fans.
6.2.2 Adjust the air flow to produce a suitable test pressure difference across the envelope. (See par. 6.2.5.)
6.2.3 Adjust the pressure in any adjacent rooms (par.6.1.13) to achieve a zero pressure difference across common partitions.
6.2.4 When conditions have stabilized, measure and record the air flow in L/s, the pressure difference in Pa and the intake temperature at the fan in C.
6.2.5 Repeat par. 6.2.2 to 6.2.4 at other pressure differences to provide at least four readings at reasonably uniformly spaced pressure differences within the range 10 to 50 Pa.

6.2.6 Verification of Data

Determine the correlation coefficient of the fit of the data in

accordance with par. 6.3.3 and Appendix C. Repeat the entire test if the correlation coefficient (r) is less than 0.9.8.
6.2.7 When the purpose of the test is to show a reduction in air infiltration rate as a result of sealing unintentional openings, perform the test as described both before and after the sealing work.

6.2.8 Completion of the Test - After the test;

a) remove all seals applied in accordance with Table 1
b) reopen dampers as necessary
c) relight the gas pilot light.

6.3 CALCULATIONS

6.3.1 Determination of the Area Envelope Under Test

6.3.1.1 Use interior dimensions when determining the area of the envelope under test.
6.3.1.2 Include all ceilings (flat or sloping), floors and walls (including doors and windows) that are correspondingly below, above and adjacent to unheated spaces and spaces intended to be heated to less than 10c. For example, include
a) ceilings below unheated attics and roofs
b) floors above unheated basements (or unheated portions thereof), cellars, crawl spaces, cold storage rooms, garages, and floors exposed to the ambient environment such as floors above carports, floors of bay windows and floors of buildings (or parts thereof) supported above grade
c) exterior above grade walls and walls adjacent to unheated portions of basements, cellars, crawl spaces, cold storage rooms, unheated porches, garages and stairwells to basement entrances.

6.3.1.3 To conveniently determine the area of the walls, draw the exterior wall to scale on squared paper showing the grade line, the areas not under test and the position of interior walls and ceilings. Count the squares to dtermine the area of the wall.
6.3.1.4 The area of the envelope under test is the total area of all eligible ceilings, floors and walls.

TABLE 1

PREPARATION OF INTENTIONAL OPENINGS

fireplace flue	no preparation
fireplace	
- with damper	CLOSE
- with doors	CLOSE
- without damper	see par.6.14
fireplace combustion air intake damper	CLOSE
fuel fired furnace and/or stove flues	SEAL
furnace combustion air intake	CLOSE
furnace fresh air intake damper	CLOSE
Fuel fired not water system flues with damper	SEAL
floor drains	FILL
plumbing traps	FILL
exhaust fans	
- with motorized damper	CLOSE
- without motorized damper	no preparation
air to air heat exchangers designed to operate continuously	
- intake and exhaust openings	SEAL
other air to air heat exchangers	
- intake and exhaust openings, with motorized damper	CLOSE
- intake and exhaust openings, without motorized damper	no preparation
dryer vents	
- with exhaust divertor	WINTER POSITION
- with motorized damper	CLOSE
- without motorized damper	no preparation
windows and doors	LATCH
exhaust systems common to more than one unit	SEAL
window air conditioners	SEAL
attic hatch	CLOSE

Determination of the Volume Enclosed by the Envelope Under Test

Include the total volume of all rooms specified in accordance with par. 6.4 when determining the volume enclosed by the envelope under test.

6.3.3 Correction of Air Flow Readings

Using the method described in Appendix B, correct each air flow reading for the indoor and outdoor temperatures, the ambient atmospheric pressure and the calibration temperature.

6.3.4 Determination of Correlation Coefficient

Applying the procedure described in Appendix C to the data collected, fit a curve of the form:

$$Q = C\,(dp)^{n}$$

where Q is in units of L/s

C is in units of $\frac{L}{s.Pa^{n}}$

dp is in units of Pa

n is dimensionless

by the least squares method and calculate the correlation coefficient, n.

6.3.5 Calculation of Equivalent Leakage Area

6.3.5.1 Calculate the density of outside ambient air, , using the following equation:

$$\underline{P} = \frac{P}{R\,(T + 273)}$$

where $\underline{P}$ is in units of Kg/m3

R = gas constant for air = 0.2872 J/g.K

P = ambient barometric pressure (kPa)

T = temperature of outside ambient air (C)

6.3.5.2 Knowing P , calculate the equivalent leakage area, ELA, using the following equation:

ELA = 1.57 *(10**3)*P*C*10**(n-0.5)

ELA =
1.57*(10**3)*(P**0.5)*C*10**(n-0.5)

where ELA is in units of m2

P is determined in accordance with par.6.3.5.1.

C and n are determined in accordance with par.6.3.4.

7. TEST REPORT

7.1 The test report shall include the following information:

a) The name and address of the company which conducted the test.

b) The name of the testor.

c) The addres of the building under test.

d) The date of test and the date of the report.

e) The test conditions which include the outdoor temperature in C, the barometric pressure in KPa, the differential pressures measured in accordance with par 6.1.3 and comments on the wind speed, direction and variabiltiy.

f) A description of the envelope under test if other than the building envelope.

g) The area in m2 of the envelope under test.

h) The volume in m3 enclosed by the envelope under test.

i) The measured air flow rates in L/s, the corresponding pressure differences in Pa and the fan intake air temperatures in C.

j) The corrected air flow rates in L/s at each pressure differential.

k) Values for C and n.

l) The determined correlation coefficient, n.

m) The equivalent leakage area (ERA) in m2.

n) When applicable, items i) to
m) inclusive before and after sealing work.

o) Any deviation from the method prescribed.

7.2 It is recommended that the test report include the following:

a) If the building is of an unusual shape, a sketch of the building under test showing the locations of the pressure taps and the location of the fan.

b) A plot of the measured air flow rates versus the corresponding pressure differences on log-log paper.

7.3 Specimen Test Report

It is recommended that the test report follow the format given in Appendix D.

THE RETROTEC DOOR FAN

The Retrotec Door Fan is a portable, accurate and very powerful fan depressurization system that heralds a new era for energy conservation technology and services. With the RDF you can:

- quickly and easily discover exactly where air is leaking into (and out of) buildings, and;
- accurately rate any building for air tightness.

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆

OPERATING PRINCIPLES

The Door Fan consists of a calibrated, variable speed fan mounted in an expanding panel system. The unit is temporarily installed in an exterior doorway. The fan is used to expel large amounts of air from the building, creating a negative pressure inside the building envelope. Air then leaks into the building at exaggerated rates, allowing for easy detection of air leakage sites. At the same time, the **pressure difference** across the building envelope can be compared to the **air flow** through the fan to obtain a measurement of "air tightness" for the building.

☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆☆

UNEQUALLED CHARACTERISTICS

Two years of design and development work, and **extensive** field testing have produced a high quality product with your needs in mind.

POWERFUL

The Retrotec Door Fan is the most powerful system commercially available — and for a good reason. Field tests have demonstrated that high air flow rates are essential for testing leaky buildings — precisely those buildings that can most benefit from air-tightening. Even large, tightly constructed buildings need high air flow rates to achieve the high negative pressures required for accurate testing.

RUGGED AND PORTABLE

The RDF can be installed by one person in less than five minutes. The equipment can be transported in a hatchback. There are no messy fluids in the measurement system.

The RDF is powered directly from a standard household electrical outlet (there is a power connect on either side of the lower panel for adaptation to outside power source when necessary).

The RDF has been built to last with durable, high quality hardware and materials. The only maintenance required is occasional replacement of batteries (LCD read-out), paper (SHARP printer) and panel weatherstripping.

REVERSIBLE

A simple flick of a toggle switch will reverse the system and permit the building to be pressurized. This option is especially useful when testing for air leakage sites in the attic or around the exterior of the building. The fan is also calibrated for air flow in reverse so that the building can be tested in both directions if desired. (The lower panel must be reversed if the bell-mouth nozzle is attached).

VERSATILE

The RDF will fit approximately 95 per cent of existing door frames with **no** modifications or door removal. An even greater range is possible if the operator is prepared to use 2 x 4 spacers on exceptionally large door frames. The lower panels of the RDF can also be stacked, one on top of the other, to double the air flow when testing extremely large buildings.

COMPUTERIZED

A built in computer takes all the error and pain out of the calculations, allowing for an almost instantaneous assessment of air tightness. Simply enter the temperature, area and volume of the building, and four or five pressure readings at different fan speeds, and the computer automatically prints out everything you will need to know, including:

- correlation of data,
- air flow at different pressures,
- air changes per hour at different pressures;
- equivalent leakage area;
- ratio of air flow to building surface area; and
- the logarithmic relationship between air flow and pressure difference.

The data correlation permits you to quickly determine if there is any bad data which might bias or disqualify the results. The air flows are all temperature corrected. The results can be printed in metric or imperial units. After completion of the test the computer and printer can be easily removed for other purposes if desired.

ACCURATE

The Retrotec Door Fan calibration facility was developed with assistance from the National Research Council of Canada and employs an air-tight chamber, sharp edged orifice plates, and a pitot traverse flow measuring system. Each RDF has been accurately calibrated for air flow before leaving the shop. Analogue pressure gauges are also recalibrated for accuracy.

The Door Fan system incorporates many features intended to facilitate accurate, repeatable measurements. To ensure consistent high air flow measurements the system employs venturi rings on both sides of the fan with an aluminum honeycomb flow straightener mounted up stream of the blades, and a pressure averaging system is used to reduce inaccuracies due to wind gusting. Accurate measurement of the low air flows needed to test air tight buildings is obtained by attaching the bell mouth nozzle.

The Door Fan system currently meets all requirements of the CGSB and ASTM standards for air tightness testing of new buildings. The system can also produce consistent results when testing older, leaky buildings. Your test reports will avoid conflicting data which might confuse clients, disenhearten tradesmen, or damage your reputation for competence and professionalism.

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APPLICATIONS

The RDF has been intentionally designed to meet a range of applications. It is an all-purpose system. The most common applications are described below.

AIR LEAKAGE DETECTION

The fan induced negative pressure causes air to rush in through every crack and hole in the building envelope. The operator can detect these leaks by using an inexpensive smoke pencil to create puffs of cool smoke next to any suspicious-looking areas. Even the most tiny air leaks become visible geysers of smoke. The effect is most impressive. Building owners are easily convinced of the value of air tightening work when they can actually "see" the magnitude of the problem.

Alternatively the operator can use an infra-red scanner to locate cold air leaking into the building. Infrared equipment works far better when used in conjunction with the Door Fan since all air leakage will be "cold" air instead of a hopeless confusion of infiltration and exfiltration.

Once air leaks have been detected they can be quickly recorded on a master chart for future reference. Efforts to tighten the building can then be directed at the most extreme leaks or at the most cost-effective areas.

QUALITY CONTROL FOR RETROFIT WORK

The RDF can be used as a quality control device for anyone involved in weatherizing, re-insulating or renovating buildings. A comparison of air tightness tests performed **before** and **after** the job provides an accurate and objective evaluation of any airtightening work.

The RDF can be an especially effective marketing tool. Retrofit contractors can specify a minimum reduction in air leakage rates; and builders can promise energy efficient buildings that are "certified" airtight. Eventually the results of airtightness tests will become as important as "R" values in defining the energy efficiency and comfort of a building, and even more important as a measurement of the building's integrity and durability.

STANDARDS TESTING

National standards for air tightness in buildings have recently been established in both Canada and the United States.* These standards rely on door fans to test for air tightness. Eventually such standards will be incorporated into national and local building codes for new houses. In Sweden such a regulation has been in place since 1976 with considerable success (new homes in Sweden are approximately three times as tight as Canadian new homes) Even now the more progressive home builders are using the RDF to evaluate their construction techniques and to provide their clients with certificates of air tight construction

*Canadian General Standards Board 149 GP 10

ENERGY SURVEYS AND BUILDING DIAGNOSIS

The RDF can definitely improve the accuracy and usefulness of any recommendations for energy conservation in buildings. In fact, without the Door Fan an energy consultant will have only the vaguest ideas about the real distribution and magnitude of air leakage.

The RDF was originally developed as a part of a building science kit for use by energy consultants. It is an excellent research and diagnostic tool since air leakage is often a key factor - not just in energy conservation programs — but in solving a host of problems related to moisture depositions, structural degradation, occupant discomfort and ventilation control.

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SPECIFICATIONS

Air Flow	Maximum 2.75 m³ sec at 60 Pa (5800 cfm at .25" H_2O)
Power Requirements	115 VAC 9 VDC (battery for digital tach)
Minimum Door Frame Dimensions	755 mm x 1981 mm (29.75" x 78")
Maximum Door Frame Dimensions	965 mm x 2184 mm (38" x 86")
Weight	lower panel 29.5 kg. (65 lbs) upper panel 11.3 kg. (25 lbs) control box 5.5 kg. (12 lbs)
Building Size Limitations	Approximately 600 m² floor area (6000 ft²) in very leaky buildings approximately 6000 m² (60,000 ft²) in new airtight construction.
Colour	black and dark bronze
Reversibility	toggle switch
Expansion System	spring loaded locking cams
Panel Finish	anodized aluminum
Computer Printer	SHARP PCI2II with CE122 (can be removed for other uses)

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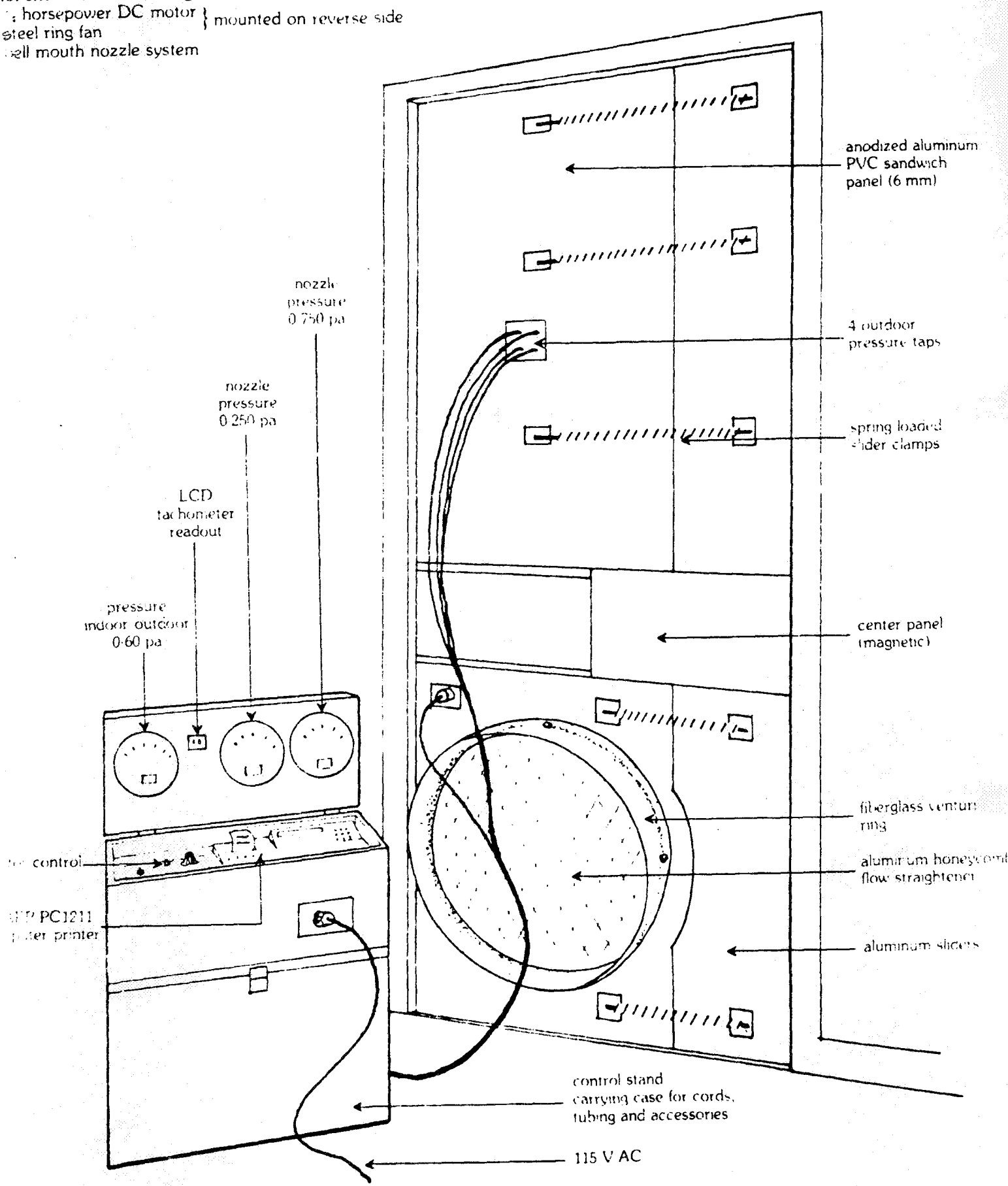
The RETROTEC DOOR FAN is warranted by RETROTEC Energy Innovations Ltd. to the original user against defects in workmanship or materials under normal use for 120 days after purchase. Any part which is determined to be defective in material or workmanship and returned to RETROTEC with prior authorization, shipping costs prepaid, will be repaired or replaced at RETROTEC's option. Various subcomponents (i.e. SHARP computer and printer) have longer warranty periods. A full description of the limited warranty is included with the Door Fan.

RETROTEC DOOR FAN

not shown in this drawing:
- ½ horsepower DC motor
- steel ring fan
- bell mouth nozzle system

} mounted on reverse side



APPENDIX 2-B

AIR TIGHTNESS TESTS
DETAILED DATA SHEETS

TABLE B-4
AIR TIGHTNESS TESTING WEATHER SUMMARY

	PHASE 1 (Mar-Apr'82)					PHASE 2 (Jun-Jul'82)					PHASE 3 (Sep-Oct'82)					PHASE 4 (Dec-Jan'83)				
HOUSE #	Ti Deg.C	To Deg.C	Po kPa	WIND Kph	WIND Dir	Ti Deg.C	To Deg.C	Po kPa	WIND Kph	WIND Dir.	Ti Deg.C	To Deg.C	Po kPa	WIND Kph	WIND Dir.	Ti Deg.C	To Deg.C	Po kPa	WIND Kph	WIND Dir.
1	20	5	100.9	15	sw	23	20	101.5	9	se	25	26	101.7	17	sw	19	3	98.6	7	e
2	20	10	102.4	17	sw	24	21	100.5	15	nw	25	26	101.6	9	sw	20	-13	103.6	16	w
3	19	-7	100.9	28	nw	23	20	101	9	s	21	15	102.1	7	wn	21	-17	104	22	nw
4	--	--	---	--	--	24	21	100.6	0	--	20	16	102.3	9	w	20	-13	103.5	15	sw
5	21	4	101	7	sw	19	13	102.5	17	e	18	13	102.3	3	s	20	-10	102.9	10	nw
6	17	-3	99.2	32	w	24	24	101	15	sw	22	17	101.3	15	se	17	-8	102.4	19	e
7	17	16	102.2	15	s	21	19	101.8	6	ne	19	15	101.7	30	s	19	-8	102.8	15	nw
8	--	--	---	--	--	--	--	---	--	--	21	14	102.2	28	nw	20	3	99.5	15	sw
$\bar{X}$	19	4.17	101.1	19		22.57	19.71	101.27	10.14		21.375	17.75	101.9	14.75		19.5	-7.875	102.16	14.875	
10	18	8	102.4	8	s	20	15	101.3	7	se	23	19	102.2	12	s	20	-14.7	102.4	9	sw
11	20	-11	103	45	nw	24	25	101.3	22	se	19	12	101.3	15	ne	21	3	100.9	17	w
12	20	-1	99	33	sw	23	16	101	26	w	18	11	102.1	14	n	19	-11	103.5	12	nw
13	20	-9	101.6	20	e	23	23	100.8	6	se	22	17	101.9	10	ne	20	1	99.9	18	s
14	20	5	100.9	13	sw	23	21	101.5	7	s	21	11	102.2	30	e	18	-18.5	102.6	11	sw
15E	22	16	102.5	10	nw	22	17	100.4	20	w	22	13	101.3	11	sw	19	-16	102.3	22	nw
16	22	-13	102.6	16	w	22	20	101.7	19	wn	--	--	---	--	--	17	-17	102.3	4	w
17E	18	17	102.5	17	w	21	25	101.7	7	e	18	12	102.1	15	nw	17	-5	102.4	0	--
18	--	--	---	--	---	22	30	101	22	s	20	16	102.5	12	w	19	17	101.1	16	sw
$\bar{X}$	20	1.5	101.81	20.25		22.2	21.3	101.19	15.111		20.375	13.875	101.95	14.875		18.889	-6.8	101.93	12.111	
20	21	3	102.7	15	sw	21	16	101.1	4	s	--	--	---	--	--	18	2	101.5	0	--
21	18	-11	102.2	18	w	18	15	102.4	4	se	20	16	101.8	20	sw	20	1	100.6	10	sw
22	19	13	102.5	14	n	22	23	100.8	31	sw	20	15	102	12	nw	17	-16	103.5	18	ne
23E	20	-13	102.6	9	w	20	18	101.6	20	w	19	16	101.3	22	nw	19	-21	102.8	30	nw
24	22	-10	101.1	26	e	26	25	101.2	22	w	19	12	101.8	8	se	17	-1	100.2	20	e
25	--	---	---	--	--	19	18	101.4	7	w	20	21	102.3	8	w	19	-12	100.3	15	e
$\bar{X}$	20	-3.6	102.22	16.4		21	19.167	101.42	14.667		19.6	16	101.84	14		18.333	-7.833	101.48	15.5	
27	21	3	102.7	17	w	23	20	100.4	10	e	17	17	101.7	24	w	17	-13	102.2	33	nw
28	19	9	99	15	s	19	19	101.5	12	w	20	16	102.3	18	nw	20	-13	102.2	6	w
29	161	0	101.5	9	s	21	18	101	17	sw	20	15	101	7	sw	18	-17	104.1	13	ese
30	--	--	---	--	--	25	25	101.3	15	sw	20	15	101	7	sw	18	-17	100.5	26	w
$\bar{X}$	67	4	101.07	13.667		22	20.5	101.05	13.5		19.25	15.75	101.5	14		18.25	-15	102.25	19.5	
31E	19	-6	101	7	ne	23	23	101.9	18	e	24	26	102.3	0	e	20	-5	102	19	e
32	22	-.4	101.1	23	w	23	23	100.8	14	se	21	20	101.8	20	se	21	13	101.4	19	s
$\bar{X}$	20.5	-3.2	101.05	15		23	23	101.35	16		22.5	23	102.05	10		20.5	4	101.7	19	
34	17	-12	103	15	ne	20	18	102	10	e	19	14	101.2	10	e	18	-13	103.3	18	ne
35	--	---	---	--	--	25	21	100.9	38	sw	21	11	102.2	25	sw	19	1	100.4	5	sw
$\bar{X}$	17	-12	103	15		22.5	19.5	101.45	24		20	12.5	101.7	17.5		18.5	-6	101.85	11.5	
37	22	1	101.5	9	s	25	20	101.6	15	e	22	12	102	19	e	18	-5	100.4	11	w
39	14	-2	101.5	11	s	17	13	101.7	6	sw	18	15	100.9	9	sw	19	1	101.8	3	w
50E	--	--	--	--	--	29	29	100.7	22	nw	22	6	102.5	9	nw	19	-9	102.7	8	nne
51	--	--	--	--	--	19	19	101.9	20	sw	21	17	101.7	5	sw	19	-7	101.3	30	nw
52E	--	--	--	--	--	--	--	--	--	--	18	8	102.8	12	ne	19	-14	103.2	12	ne

NOTE:Electric houses #15,17,23,31 are not included in the mean calculations
Modified houses #11,24 are not included in the mean calculations for phases 2,3 and 4.

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR12/82
TIME	13:30
TEST HOUSE	1
TECHNICIAN	ROSENBERG
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	5°C	20°C
REL. HUM	70%	41%
WIND(SPEED&DIR)	SW @ 15KPH	
AIR PRESSURE	100.9 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTH	
SKY/CLOUD COND	HAZY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15		15	
20	0.450	20	0.486	20	0.371
25		25	0.560	25	0.396
30	0.580	30	0.620	30	0.453
35		35	0.696	35	0.495
40	0.648	40	0.764	40	0.566
45		45	0.780	45	0.588
50	0.732	50	0.829	50	0.675
55		55	0.946	55	0.710
60		60	0.908	60	0.695
EXPONENT (N)	0.519	EXPONENT N	0.597	EXPONENT N	0.647
CONSTANT (C)	0.095	CONSTANT C	0.081	CONSTANT C	0.051
CORRELATION	0.9953	CORRELATION	0.9920	CORRELATION	0.9888
AIR FLOW @ 10PA	0.31 M^3/S	AIR FLOW @ 10PA	0.32 M^3/S	AIR FLOW @ 10PA	0.22 M^3/S
AIR FLOW @ 50PA	0.73 M^3/S	AIR FLOW @ 50PA	0.84 M^3/S	AIR FLOW @ 50 PA	0.64 M^3/S
ELA	0.12 SQM @ 10PA	ELA	0.12 SQM @ 10PA	ELA	0.09 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.63	AIR CHNGS/HRS @ 50PA	4.18	AIR CHNGS/HRS @ 50PA	3.17

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Retrospectors

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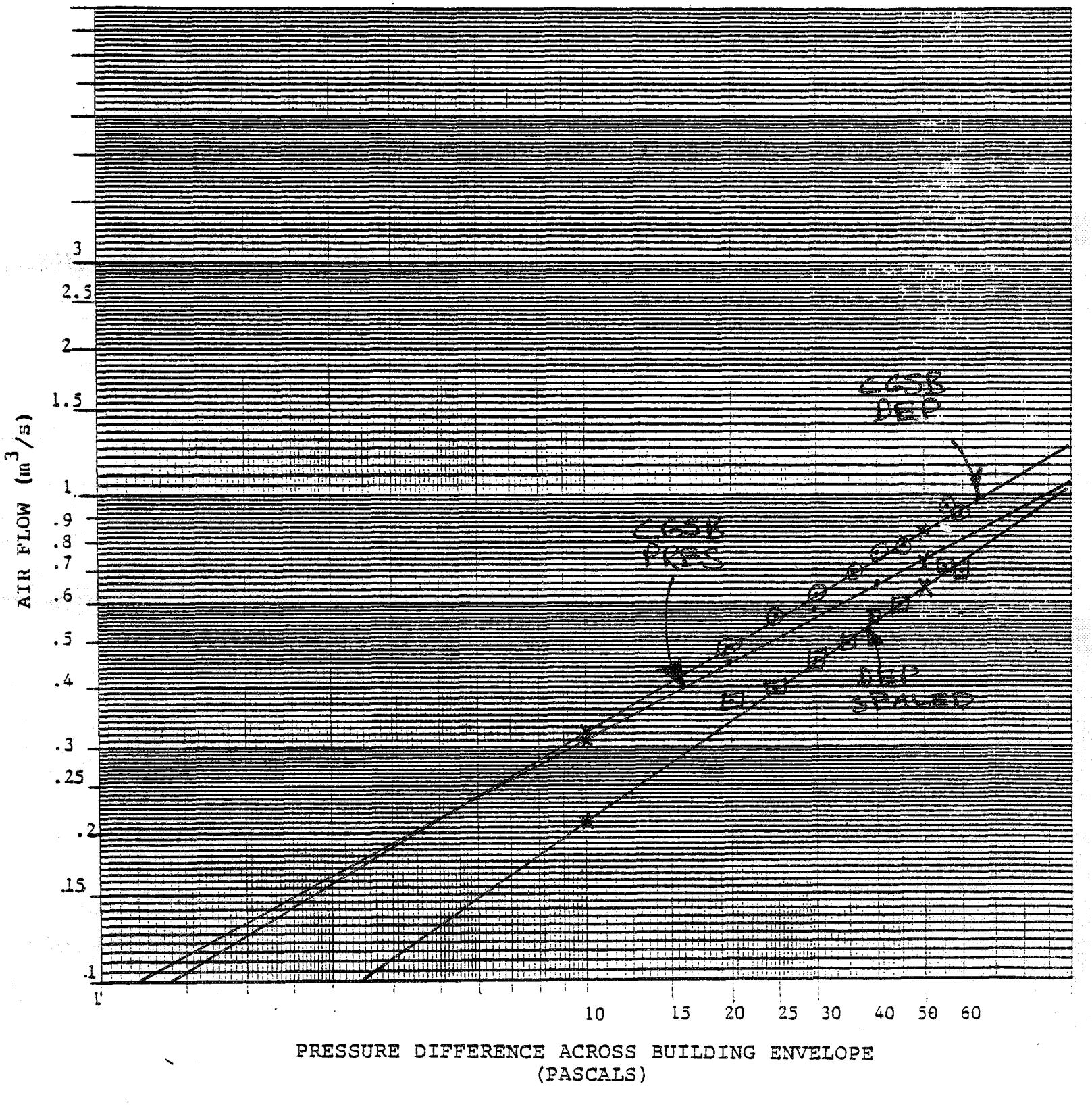
HOUSE # 1

PHASE 1

AIR LEAKAGE PROFILE



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Retrospectors

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: JUNE 10/82
TIME: 9:00-10:10
TEST HOUSE: 1
TECHNICIAN: FUGLER/SETON
ENVELOPE AREA: 360 m^2
VOLUME: 730 m^3
FIREPLACE: NO
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	20°C	23°C
REL. HUM	60%	62%
WIND(SPEED&DIR)	S.E. @ 9 KPH	
AIR PRESSURE	101.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTH EAST	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP SEALED
10	0.239	0.258	
15	0.345	0.350	
20	0.387	0.398	0.277
25	0.460	0.457	0.320
30	0.527	0.500	0.364
35	0.555	0.553	0.391
40	0.620	0.605	0.423
45	0.687	0.638	0.468
50	0.737		0.505
55			0.525
60			0.566

	PRES CGSB	DEP CGSB	DEP SEALED
EXPONENT (N)	0.673	0.588	0.641
CONSTANT (C)	0.052	0.068	0.040
CORRELATION	0.9967	0.9980	0.9986
AIR FLOW @ 10PA	0.24 M^3/S	0.26 M^3/S	0.17 M^3/S
AIR FLOW @ 50PA	0.73 M^3/S	0.68 M^3/S	0.49 M^3/S
ELA	0.099 SQM @ 10PA	0.106 SQM @ 10PA	0.071 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.60	3.37	2.45

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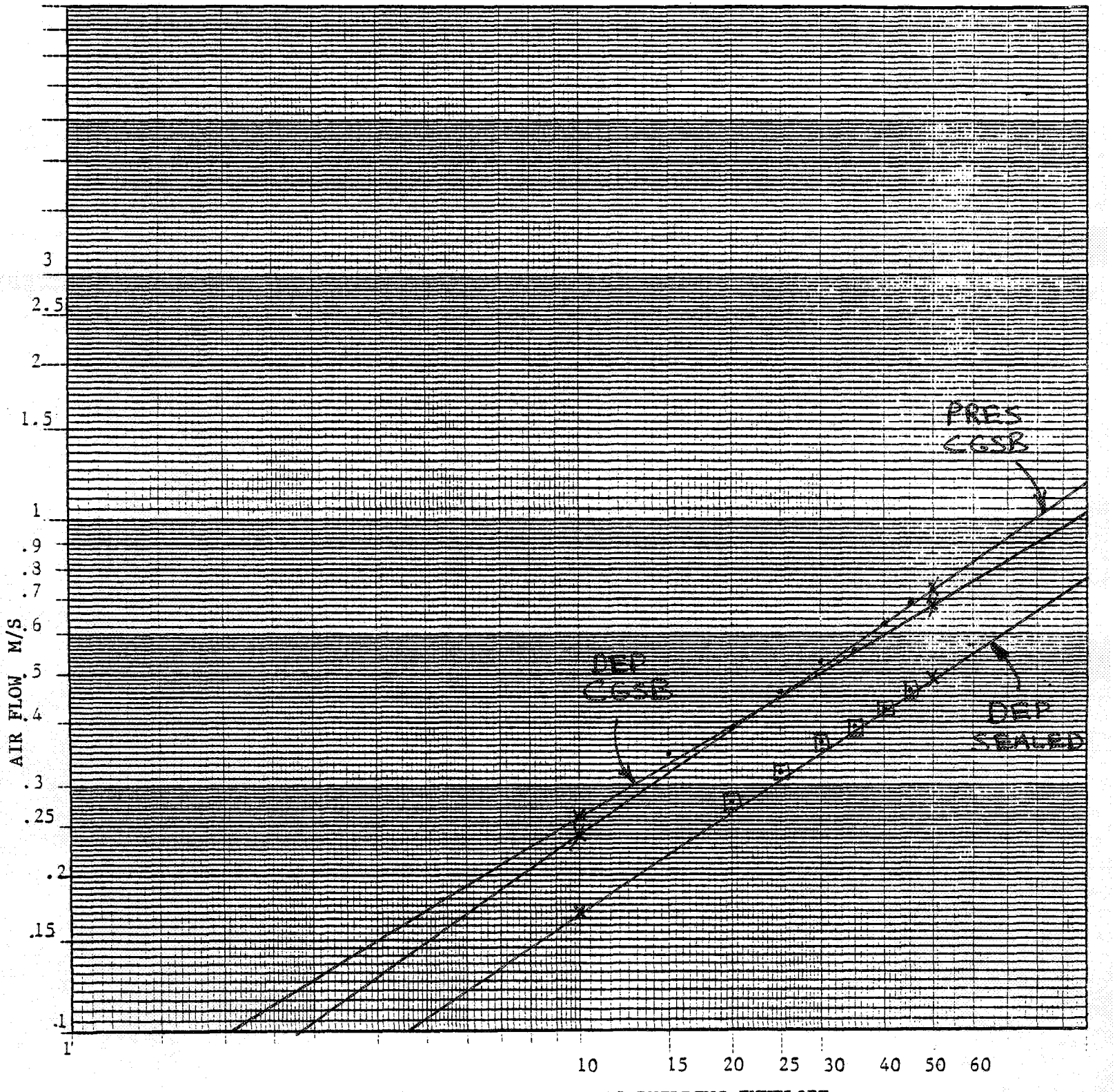
HOUSE # 1

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP" CGSB LINE OMITTED DUE TO LACK OF SPACE

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Retrospectors

IDENTIFICATION

DATE	SEPT 14/82
TIME	11:00-11:40
TEST HOUSE	1
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	NONE
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	26°C	25.4°C
REL. HUM	69%	60%
WIND (SPEED&DIR)	SW 17 KPH	
AIR PRESSURE	101.7 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SLIGHT	
SKY/CLOUD COND	HAZY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.225	0.237	
15	0.318	0.302	0.214
20	0.415	0.377	0.267
25	0.438	0.433	0.294
30	0.492	0.472	0.319
35	0.531	0.493	0.363
40	0.585	0.546	0.403
45	0.650	0.611	0.427
50		0.651	0.461
55			0.493
60			0.503

EXPONENT (N)	0.663	EXPONENT N	0.613	EXPONENT N	0.621
CONSTANT (C)	0.051	CONSTANT C	0.058	CONSTANT C	0.040
CORRELATION	0.9917	CORRELEATION	0.9969	CORRELATION	0.9973
AIR FLOW @ 10PA	0.238 M^3/S	AIR FLOW @ 10PA	0.239 M^3/S	AIR FLOW @ 10PA	0.167 M^3/S
AIR FLOW @ 50PA	0.694 M^3/S	AIR FLOW @ 50PA	0.643 M^3/S	AIR FLOW @ 50 PA	0.456 M^3/S
ELA	0.095 SQM @ 10PA	ELA	0.095 SQM @ 10PA	ELA	0.067 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.43	AIR CHNGS/HRS @ 50PA	3.17	AIR CHNGS/HRS @ 50PA	2.25

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Retrospectors

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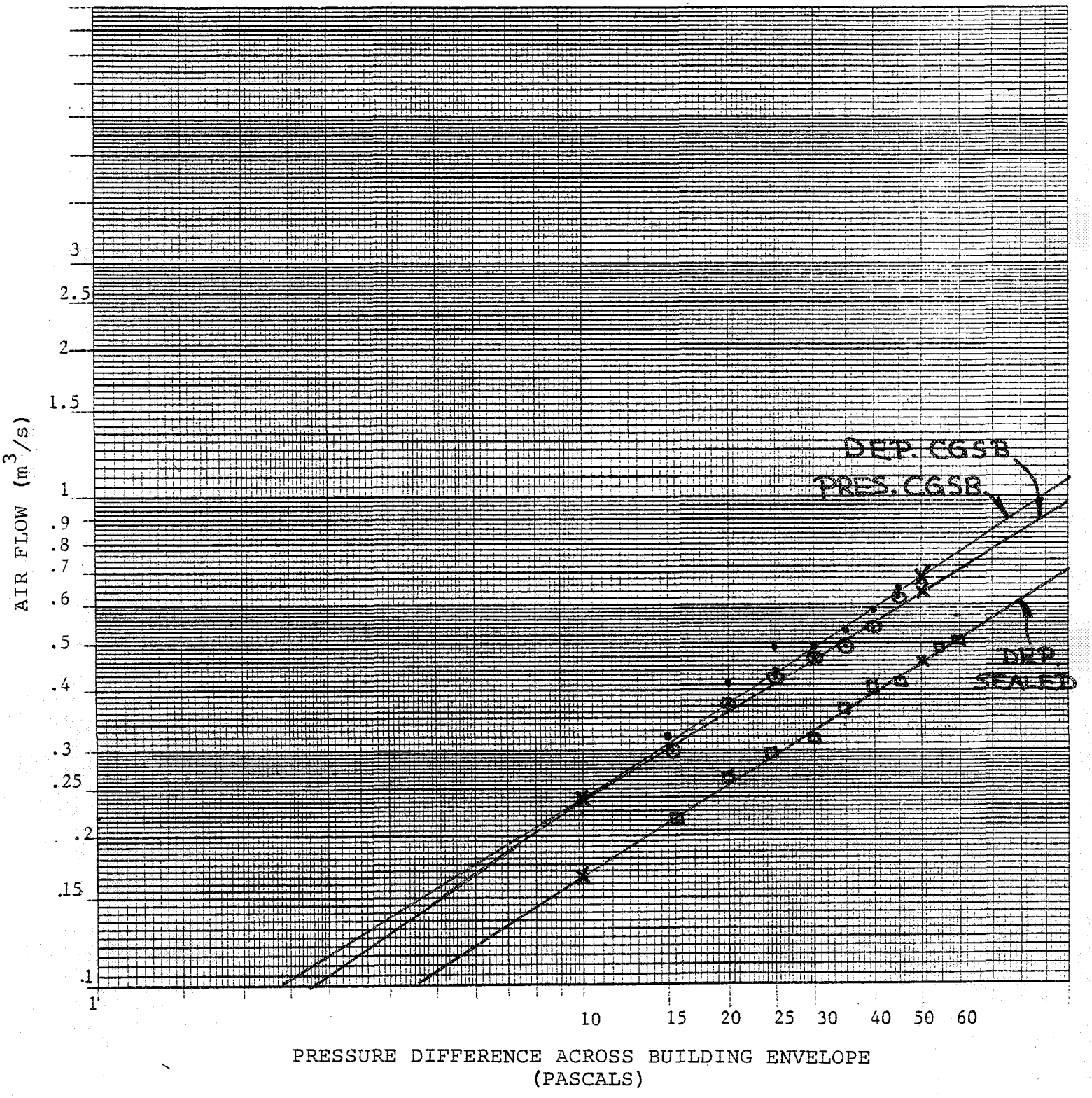
HOUSE # 1

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: FEB. 3/83
TIME: 11:30-12:00
TEST HOUSE: 1
TECHNICIAN: FLUGERISINHA
ENVELOPE AREA: 360 m^2
VOLUME: 730 m^3
FIREPLACE: NO
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	3°C	19.0°C
REL. HUM	93%	42%
WIND(SPEED&DIR)	E@7KPH	
AIR PRESSURE	98.6 KPA.	
PRECIPITATION	RAIN	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.270	
15		0.322	0.228
20		0.381	0.288
25		0.426	0.322
30		0.487	0.353
35		0.556	0.394
40		0.618	0.431
45		0.642	0.466
50		0.673	0.498
55		0.717	0.537
60		0.766	0.575
EXPONENT (N)		0.596	0.644
CONSTANT (C)		0.066	0.040
CORRELATION		0.9970	0.9983
AIR FLOW @ 10PA	M^3/S	0.261 M^3/S	0.178 M^3/S
AIR FLOW @ 50PA	M^3/S	0.682 M^3/S	0.502 M^3/S
ELA	SQM @ 10PA	0.104 SQM @ 10PA	0.071 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		3.36	2.47

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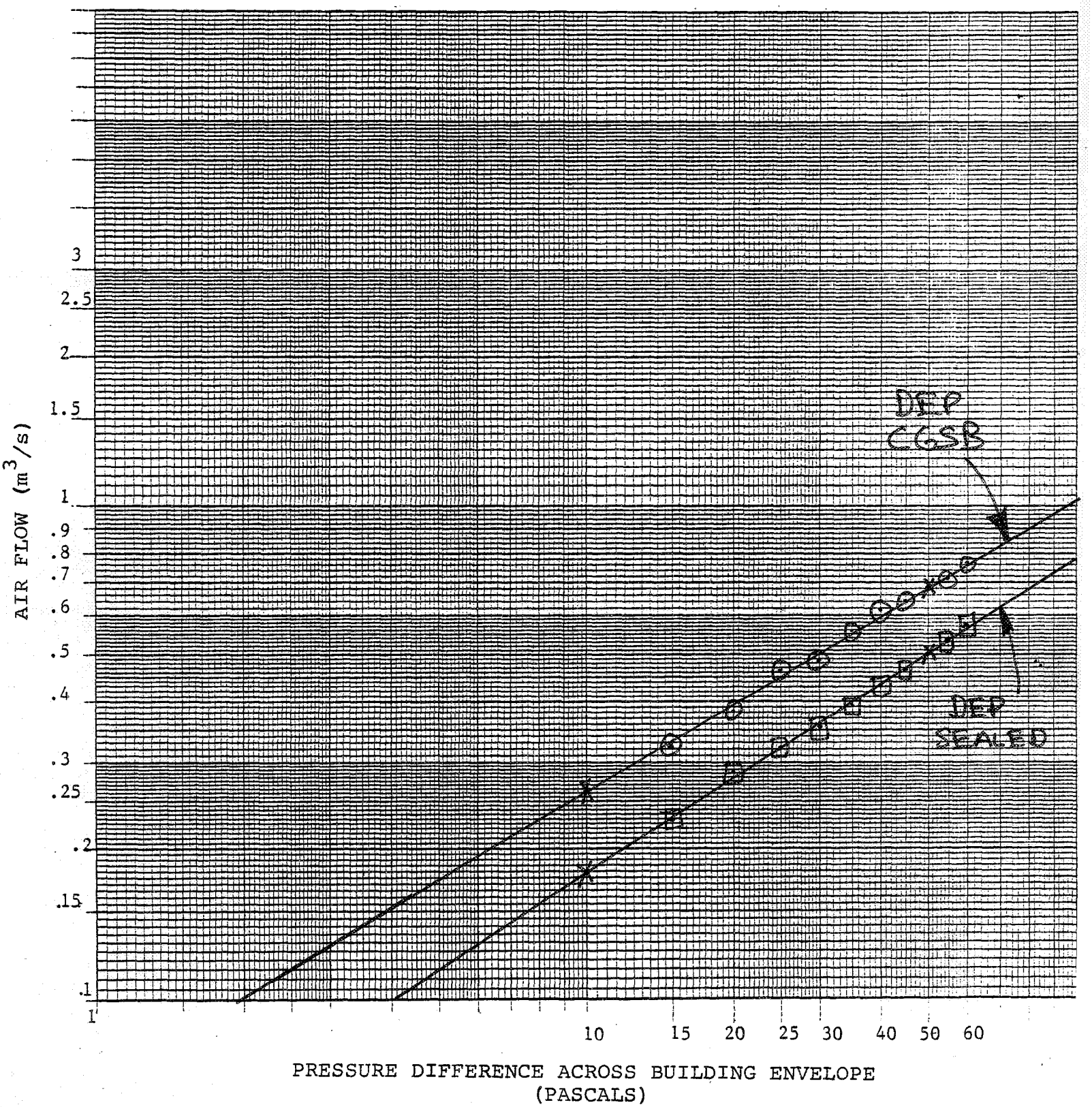
Retrospectors

HOUSE # 1

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
(613) 234-3280

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR.4 '82
TIME	11:00-13:30
TEST HOUSE	2
TECHNICIAN	LILICO/FUGLER
ENVELOPE AREA	360m²
VOLUME	730m³
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	10°C	20°C
REL. HUM	40%	
WIND(SPEED&DIR)	SW.@17KPH	
AIR PRESSURE	102.4KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.366	10		10	
15	0.427	15	0.321	15	
20	0.503	20	0.359	20	0.269
25	0.570	25	0.465	25	0.305
30	0.610	30	0.565	30	
35	0.640	35	0.600	35	0.380
40	0.723	40	0.694	40	0.413
45		45	0.716	45	0.454
50		50		50	0.497
55		55		55	0.532
60		60		60	0.565
EXPONENT (N)	0.483	EXPONENT N	0.791	EXPONENT N	0.681
CONSTANT (C)	0.118	CONSTANT C	0.036	CONSTANT C	0.034
CORRELATION	0.9956	CORRELATION	0.9894	CORRELATION	0.9981
AIR FLOW @ 10PA	0.36 M^3/S	AIR FLOW @ 10PA	0.22 M^3/S	AIR FLOW @ 10PA	0.16 M^3/S
AIR FLOW @ 50PA	0.78 M^3/S	AIR FLOW @ 50PA	0.80 M^3/S	AIR FLOW @ 50 PA	0.49 M^3/S
ELA	0.14 SQM @ 10PA	ELA	0.09 SQM @ 10PA	ELA	0.06 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.86	AIR CHNGS/HRS @ 50PA	3.94	AIR CHNGS/HRS @ 50PA	2.43

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Retrospectors

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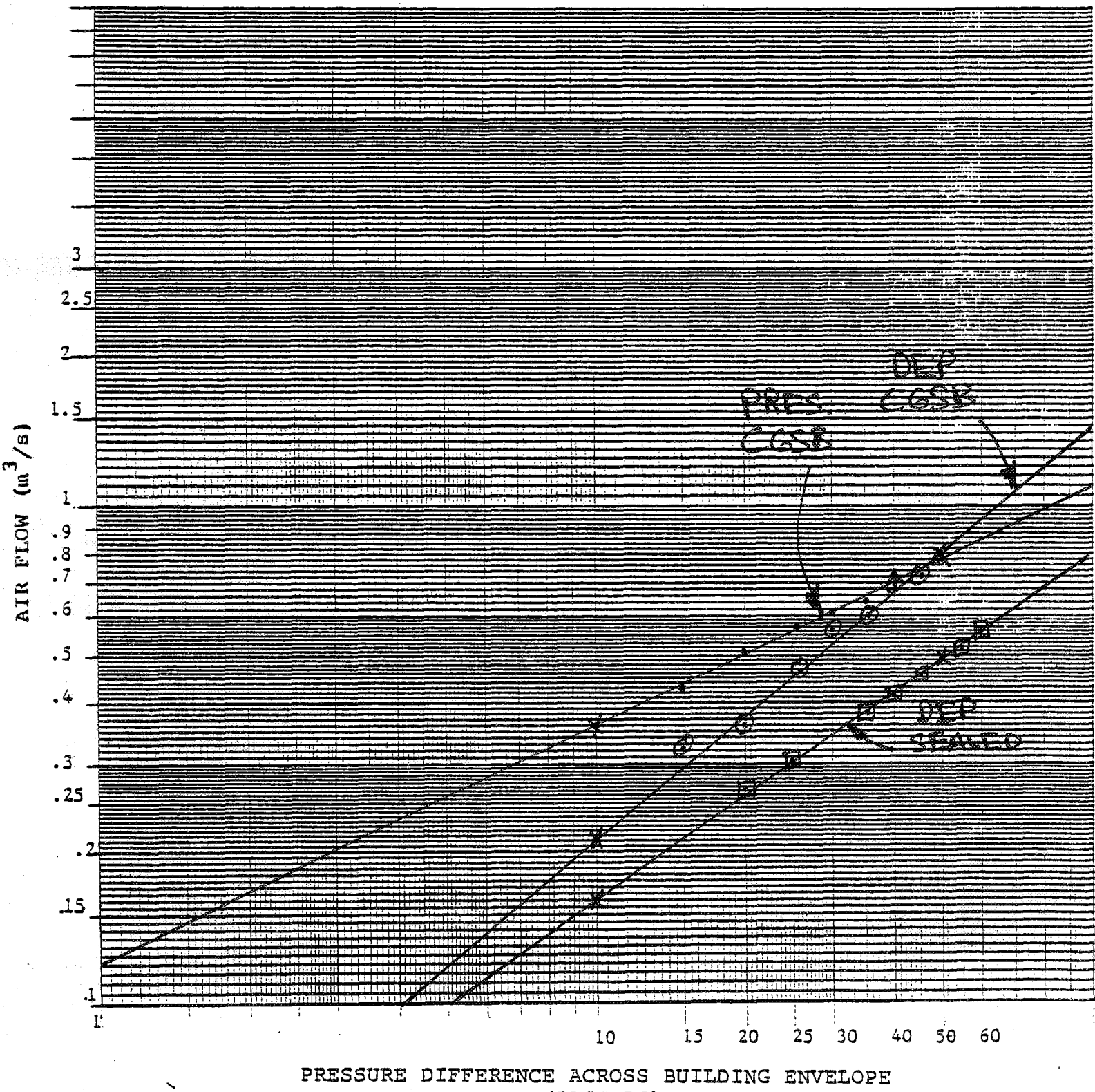
HOUSE # 2

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

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IDENTIFICATION

DATE	June 16/82
TIME	1:00 - 2:15
TEST HOUSE	2
TECHNICIAN	Fuller/Seton
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	Yes
HEATING	Gas

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	21 °C	24 °C
REL. HUM	60%	66%
WIND(SPEED&DIR)	NW @ 15 KPH	
AIR PRESSURE	100.5 KPa	
PRECIPITATION	none	
SOLAR RAD.	none	
SKY/CLOUD COND	overcast	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.286	10	0.258	10	
15	0.350	15	0.342	15	
20	0.452	20	0.428	20	0.268
25	0.494	25	0.504	25	
30	0.529	30	0.574	30	0.335
35	0.588	35	0.608	35	0.391
40		40	0.667	40	0.417
45		45		45	0.468
50		50		50	0.520
55		55		55	0.539
60		60		60	0.562

EXPONENT (N)	0.579	EXPONENT N	0.692	EXPONENT N	0.707
CONSTANT (C)	0.075	CONSTANT C	0.053	CONSTANT C	0.031
CORRELATION	0.9934	CORRELEATION	0.9981	CORRELATION	0.9952
AIR FLOW @ 10PA	0.28 M^3/S	AIR FLOW @ 10PA	0.26 M^3/S	AIR FLOW @ 10PA	0.16 M^3/S
AIR FLOW @ 50PA	0.72 M^3/S	AIR FLOW @ 50PA	0.79 M^3/S	AIR FLOW @ 50 PA	0.50 M^3/S
ELA	0.115 SQM @ 10PA	ELA	0.104 SQM @ 10PA	ELA	0.064 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.59	AIR CHNGS/HRS @ 50PA	3.93	AIR CHNGS/HRS @ 50PA	2.46

176 Bronson Ave.
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Retrospectors

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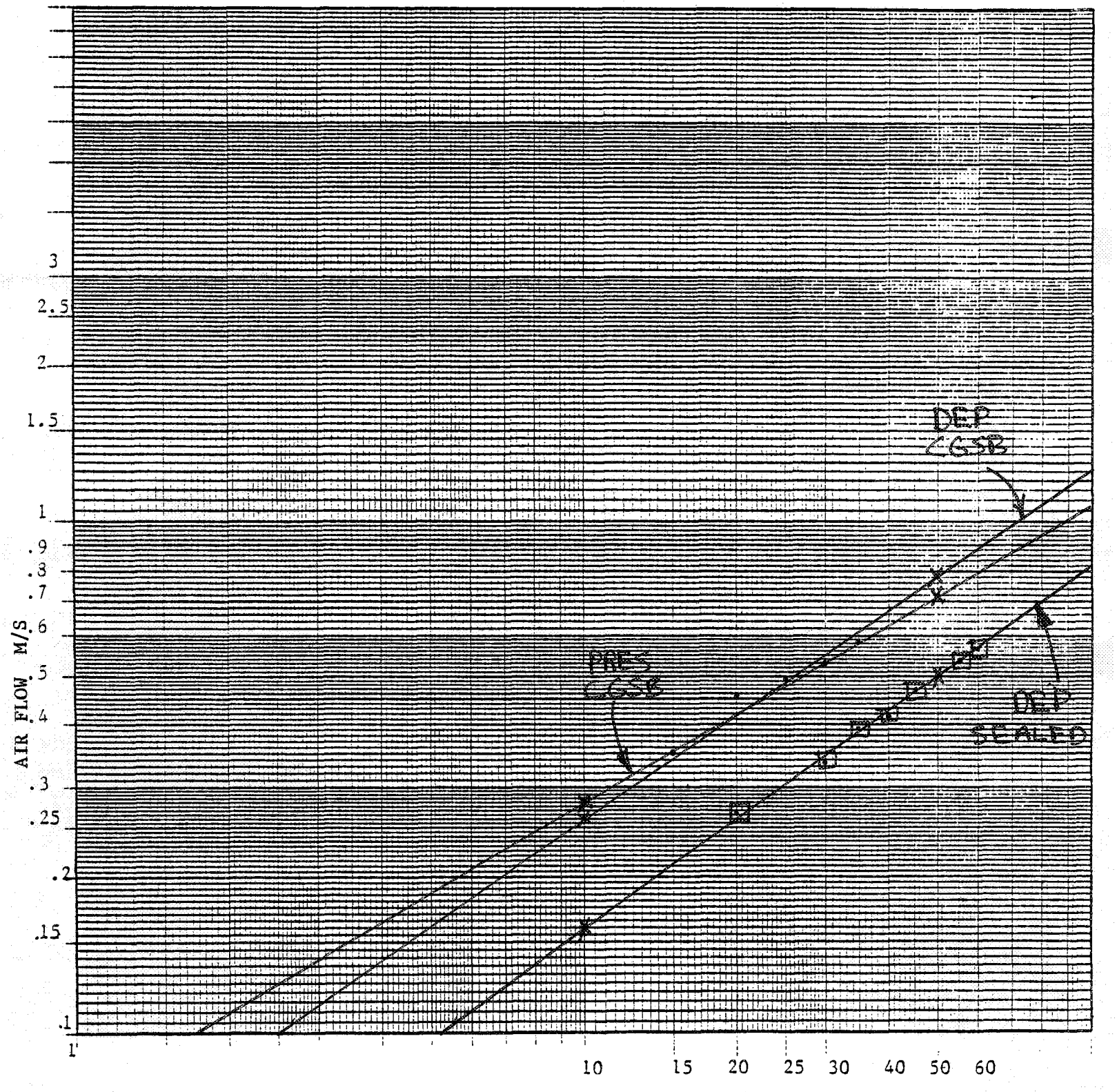
HOUSE # 2

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP" CGSB LINE OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

IDENTIFICATION

DATE	SEPT 14/82
TIME	2:30-3:30
TEST HOUSE	2
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	26°C	25°C
REL. HUM	74%	70%
WIND (SPEED&DIR)	SW 9 KPH	
AIR PRESSURE	101.6 KPA	
PRECIPITATION	LIGHT RAIN	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.285	10	0.285	10	0.189
15	0.376	15	0.363	15	0.247
20	0.449	20	0.435	20	0.285
25	0.492	25	0.513	25	0.319
30	0.531	30	0.564	30	0.334
35	0.594	35	0.611	35	0.377
40	0.618	40	0.659	40	0439
45		45		45	0.467
50		50		50	0.493
55		55		55	0.513
60		60		60	0.541

EXPONENT (N)	0.551	EXPONENT N	0.610	EXPONENT N	0.585
CONSTANT (C)	0.082	CONSTANT C	0.070	CONSTANT C	0.049
CORRELATION	0.9953	CORRELEATION	0.9991	CORRELATION	0.9955
AIR FLOW @ 10PA	0.294 M^3/S	AIR FLOW @ 10PA	0.286 M^3/S	AIR FLOW @ 10PA	0.188 M^3/S
AIR FLOW @ 50PA	0.717 M^3/S	AIR FLOW @ 50PA	0.765 M^3/S	AIR FLOW @ 50 PA	0.484 M^3/S
ELA	0.118 SQM @ 10PA	ELA	0.114 SQM @ 10PA	ELA	0.075 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.53	AIR CHNGS/HRS @ 50PA	3.77	AIR CHNGS/HRS @ 50PA	2.39

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Retrospectors

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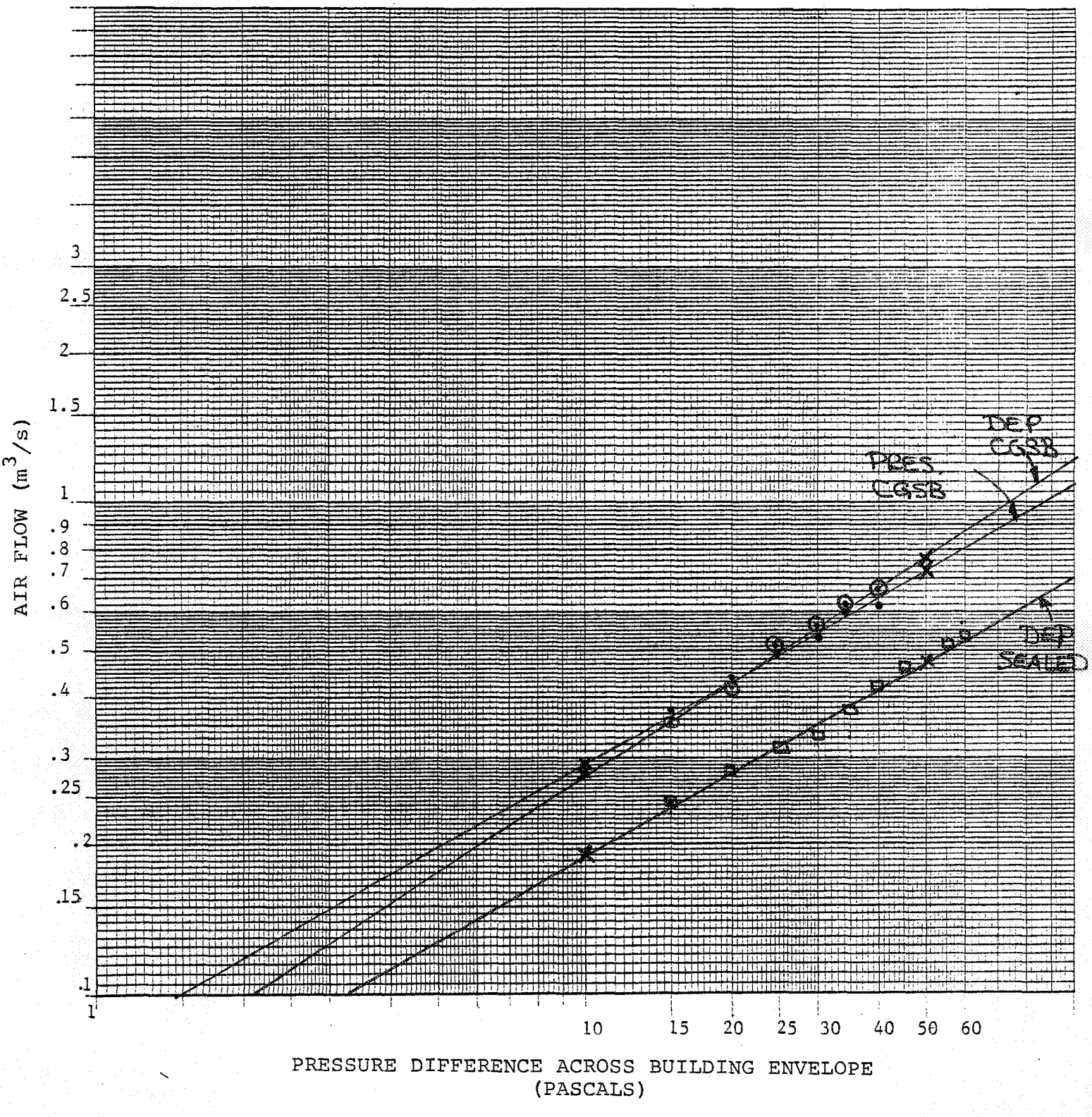
HOUSE # 2

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN.20/83
TIME	14:10-14:30
TEST HOUSE	2
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-13°C	+20°C
REL. HUM	43%	27%
WIND(SPEED&DIR)	W@ 16KPH	
AIR PRESSURE	103.6KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.260	10	
15		15	0.380	15	0.228
20		20	0.406	20	0.288
25		25	0.517	25	0.337
30		30	0.591	30	0.366
35		35	0.649	35	0.419
40		40	0.702	40	0.454
45		45	0.771	45	0.487
50		50	-	50	0.527
55		55	-	55	0.555
60		60	-	60	0.582
EXPONENT (N)		EXPONENT N	0.707	EXPONENT N	0.669
CONSTANT (C)		CONSTANT C	0.052	CONSTANT C	0.038
CORRELATION		CORRELATION	0.9942	CORRELATION	0.9986
AIR FLOW @ 10PA ___ M^3/S		AIR FLOW @ 10PA 0.266 M^3/S		AIR FLOW @ 10PA 0.178 M^3/S	
AIR FLOW @ 50PA ___ M^3/S		AIR FLOW @ 50PA 0.832 M^3/S		AIR FLOW @ 50 PA 0.524 M^3/S	
ELA ___ SQM @ 10PA		ELA 0.106 SQM @ 10PA		ELA 0.071 SQM @ 10PA	
AIR CHNGS/HRS @ 50PA ___		AIR CHNGS/HRS @ 50PA 4.10		AIR CHNGS/HRS @ 50PA 2.58	

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Retrospectors

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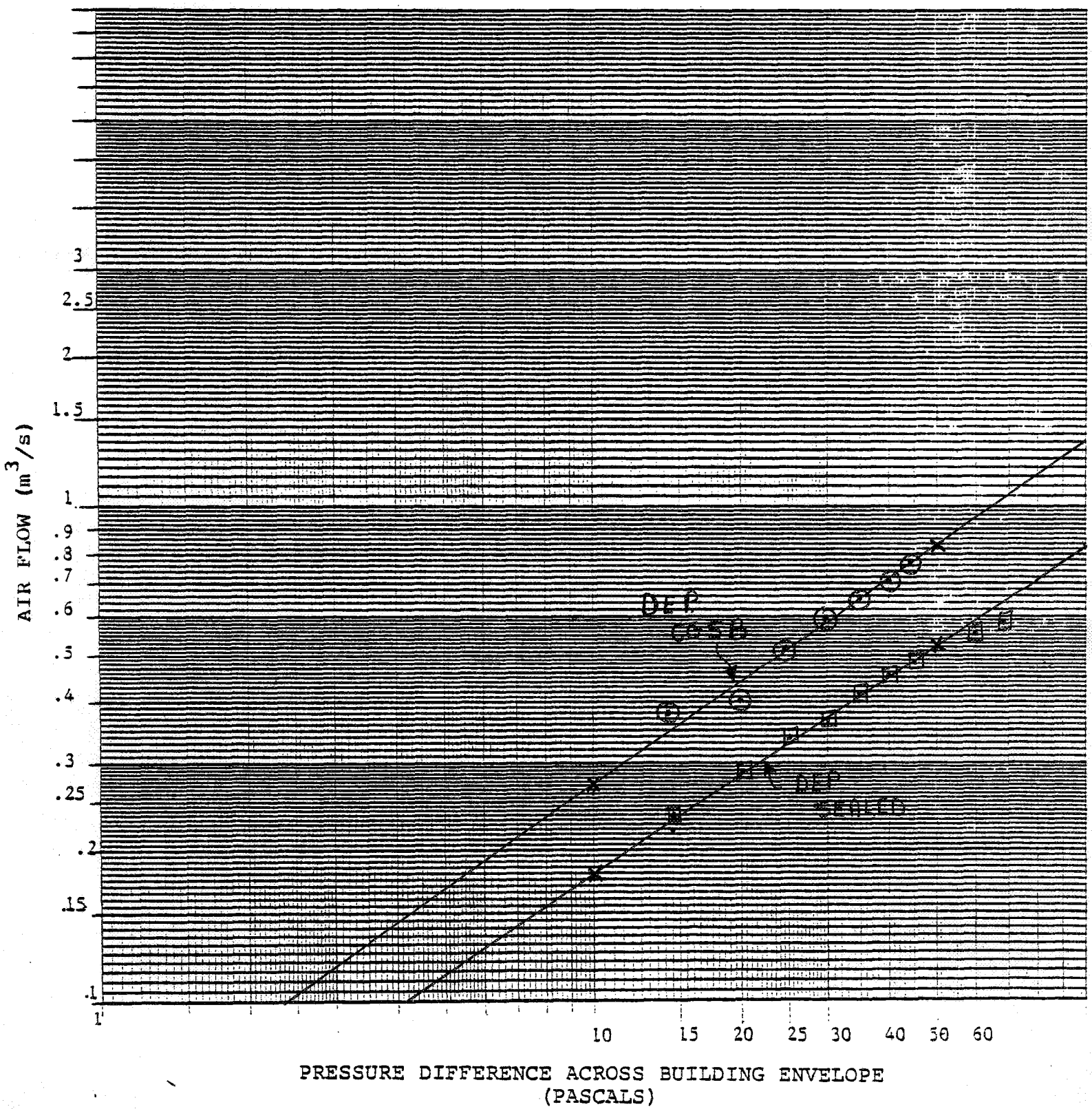
HOUSE # 2

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR.2/83
TIME	10:30
TEST HOUSE	3
TECHNICIAN	ROSENBERG
ENVELOPE AREA	360m²
VOLUME	730 m³
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-6.6°C	19°C
REL. HUM	67%	43%
WIND(SPEED&DIR)	NW. @ 28KPH	
AIR PRESSURE	100.9KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTHEAST	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15		15	
20	0.484	20	0.484	20	0.438
25	0.533	25	0.558	25	0.535
30	0.568	30	0.618	30	0.576
35	0.610	35	0.688	35	0.590
40	0.657	40	0.712	40	0.613
45	0.698	45	0.802	45	0.683
50	0.740	50	0.878	50	0.749
55	0.801	55	0.942	55	0.785
60	0.789	60	0.904	60	0.771

EXPONENT (N)	0.473	EXPONENT N	0.613	EXPONENT N	0.511
CONSTANT (C)	0.115	CONSTANT C	0.077	CONSTANT C	0.097
CORRELATION	0.9942	CORRELATION	0.9913	CORRELATION	0.9818
AIR FLOW @ 10PA	0.34 M^3/S	AIR FLOW @ 10PA	0.31 M^3/S	AIR FLOW @ 10PA	0.31 M^3/S
AIR FLOW @ 50PA	0.74 M^3/S	AIR FLOW @ 50PA	0.85 M^3/S	AIR FLOW @ 50 PA	0.72 M^3/S
ELA	0.14 SQM @ 10PA	ELA	0.12 SQM @ 10PA	ELA	0.12 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.63	AIR CHNGS/HRS @ 50PA	4.19	AIR CHNGS/HRS @ 50PA	3.56

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Retrospectors

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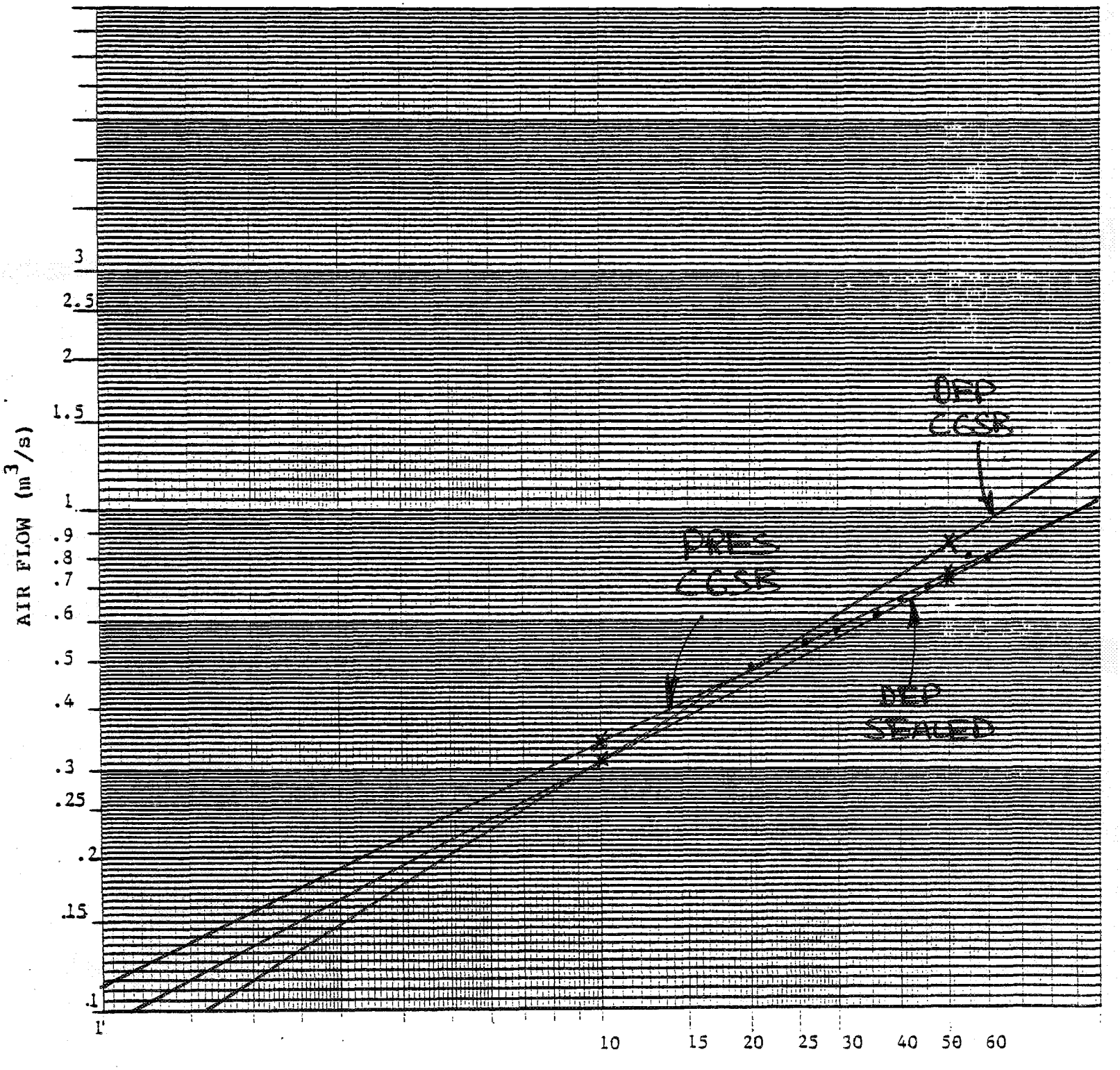
HOUSE # 3

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS ON "DEP" AND "DEP" SEALED CGSB OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: JUNE 15/82
TIME: 13:10 - 15:00
TEST HOUSE: 3
TECHNICIAN: SETON/EUGLER
ENVELOPE AREA: 360 m^2
VOLUME: 730 m^3
FIREPLACE: YES
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	20.3°C	23.3°C
REL. HUM	56%	57%
WIND(SPEED&DIR)	S @ 9 KPH	
AIR PRESSURE	101.0 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP SEALED
10	0.239		
15	0.305	0.295	
20	0.380	0.357	0.237
25	0.425	0.404	0.277
30	0.476	0.452	0.295
35	0.507	0.505	0.328
40	0.574	0.553	0.357
45	0.600	0.588	0.404
50	0.679	0.661	0.404
55			0.440
60			0.474

	PRES. CGSB	DEP CGSB	DEP SEALED
EXPONENT (N)	0.627	0.648	0.617
CONSTANT (C)	0.056	0.050	0.037
CORRELATION	0.9978	0.9981	0.9949
AIR FLOW @ 10PA	0.23 M^3/S	0.22 M^3/S	0.15 M^3/S
AIR FLOW @ 50PA	0.65 M^3/S	0.64 M^3/S	0.41 M^3/S
ELA	0.095 SQM @ 10PA	0.090 SQM @ 10PA	0.062 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.23	3.16	2.05

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Retrospectors

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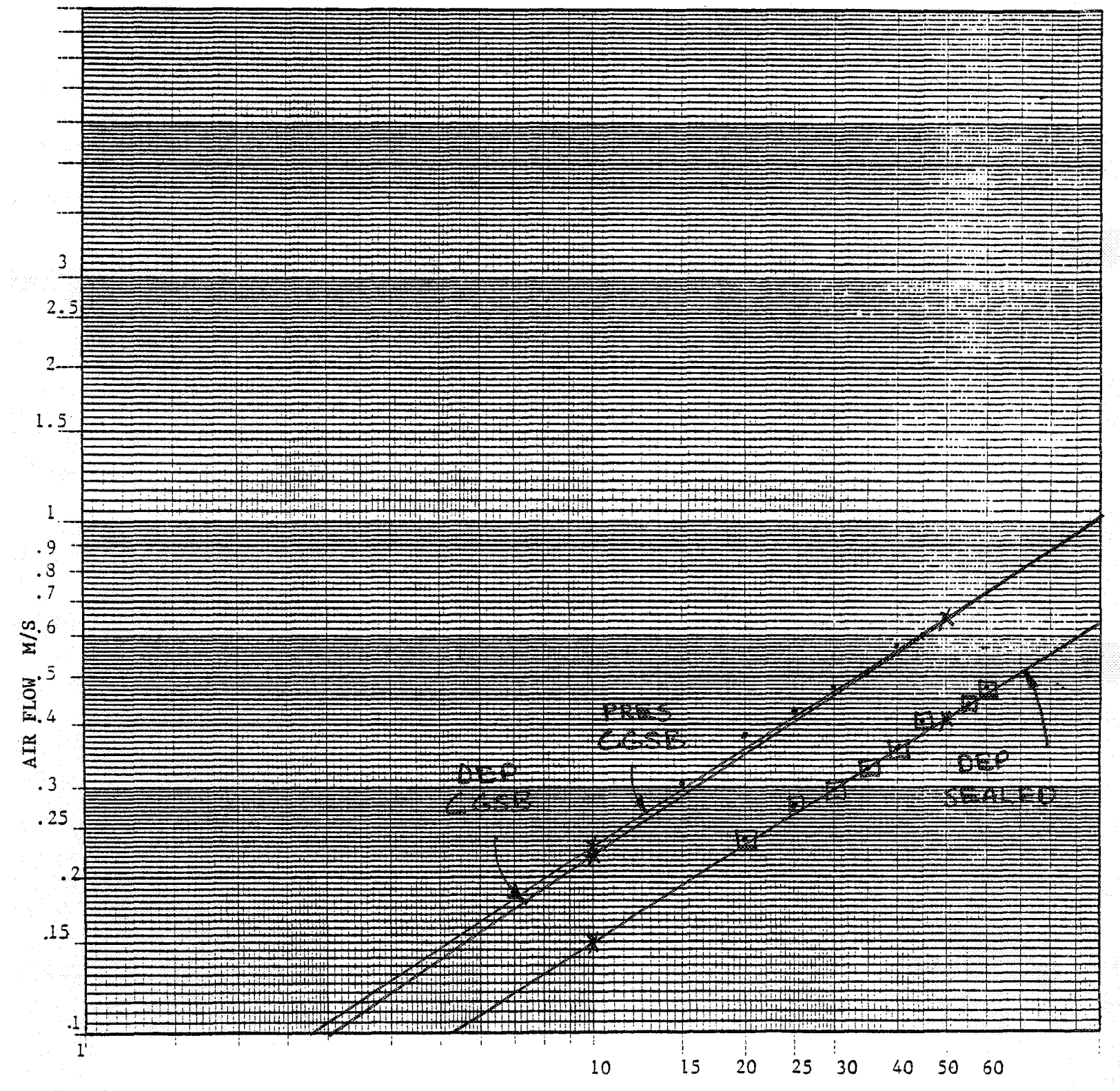
HOUSE # 3

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP" CGSB LINE OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

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IDENTIFICATION

DATE	OCT. 4/82
TIME	15:00
TEST HOUSE	3
TECHNICIAN	Fugère/Pesquin
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	15°C	21°C
REL. HUM	51%	55%
WIND (SPEED&DIR)	WNW 7 KPH	
AIR PRESSURE	102.1 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SUNNY	
SKY/CLOUD COND	NONE	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.262	10	0.249	10	
15	0.324	15	0.304	15	0.190
20	0.397	20	0.379	20	0.227
25	0.446	25	0.418	25	0.269
30	0.491	30	0.475	30	0.304
35	0.532	35	0.536	35	0.352
40	0.570	40	0.590	40	0.379
45	0.622	45	0.615	45	0.393
50	0.670	50	0.655	50	0.430
55	_____	55	0.700	55	0.453
60	_____	60	_____	60	0.496

EXPONENT (N)	0.578	EXPONENT N	0.618	EXPONENT N	0.683
CONSTANT (C)	0.068	CONSTANT C	0.058	CONSTANT C	0.029
CORRELATION	0.9993	CORRELEATION	0.9984	CORRELATION	0.9981
AIR FLOW @ 10PA	0.261 M^3/S	AIR FLOW @ 10PA	0.244 M^3/S	AIR FLOW @ 10PA	0.144 M^3/S
AIR FLOW @ 50PA	0.662 M^3/S	AIR FLOW @ 50PA	0.660 M^3/S	AIR FLOW @ 50 PA	0.433 M^3/S
ELA	0.104 SQM @ 10PA	ELA	0.097 SQM @ 10PA	ELA	0.057 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.26	AIR CHNGS/HRS @ 50PA	3.25	AIR CHNGS/HRS @ 50PA	2.13

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Retrospectors

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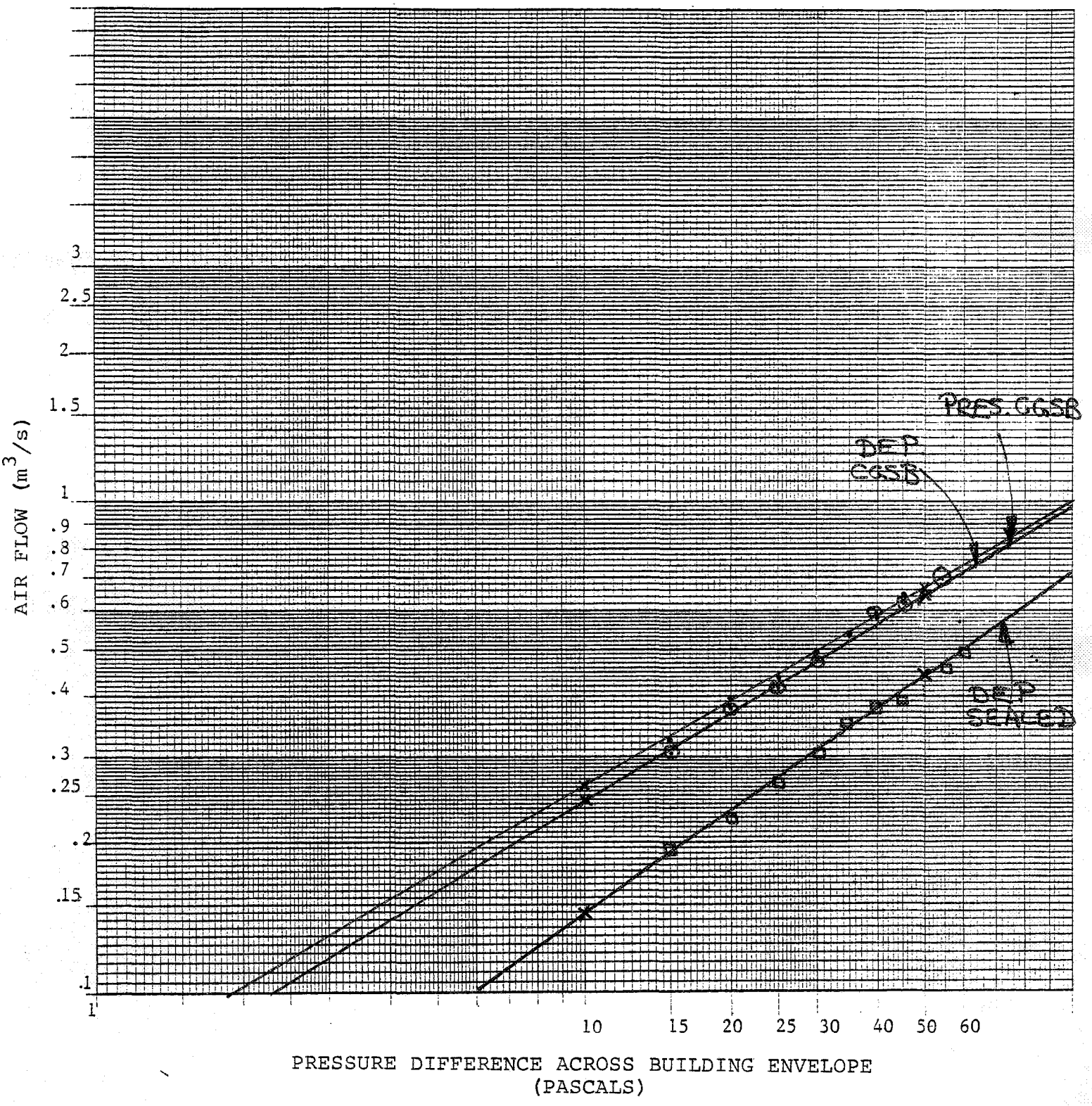
HOUSE # 3

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	DEC. 9/82
TIME	12:00-13:00
TEST HOUSE	3
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-17.0°C	21°C
REL. HUM	50%	30%
WIND(SPEED&DIR)	N.W. @ 22KPH	
AIR PRESSURE	104.0 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.190	10	0.203	10	
15	0.251	15	0.321	15	0.203
20	0.329	20	0.393	20	0.259
25	0.391	25	0.453	25	0.287
30	0.435	30	0.496	30	0.321
35	0.501	35	0.554	35	0.379
40	0.519	40	0.607	40	0.406
45	0.576	45	0.624	45	0.442
50	0.621	50	0.700	50	0.475
55		55		55	0.506
60		60		60	0.516

EXPONENT (N)	0.736	EXPONENT N	0.716	EXPONENT N	0.683
CONSTANT (C)	0.035	CONSTANT C	0.043	CONSTANT C	0.032
CORRELATION	0.9978	CORRELATION	0.9961	CORRELATION	0.9973
AIR FLOW @ 10PA	0.192 M^3/S	AIR FLOW @ 10PA	0.225 M^3/S	AIR FLOW @ 10PA	0.156 M^3/S
AIR FLOW @ 50PA	0.631 M^3/S	AIR FLOW @ 50PA	0.713 M^3/S	AIR FLOW @ 50 PA	0.476 M^3/S
ELA	0.077 SQM @ 10PA	ELA	0.090 SQM @ 10PA	ELA	0.062 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.11	AIR CHNGS/HRS @ 50PA	3.51	AIR CHNGS/HRS @ 50PA	2.32

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Retrospectors

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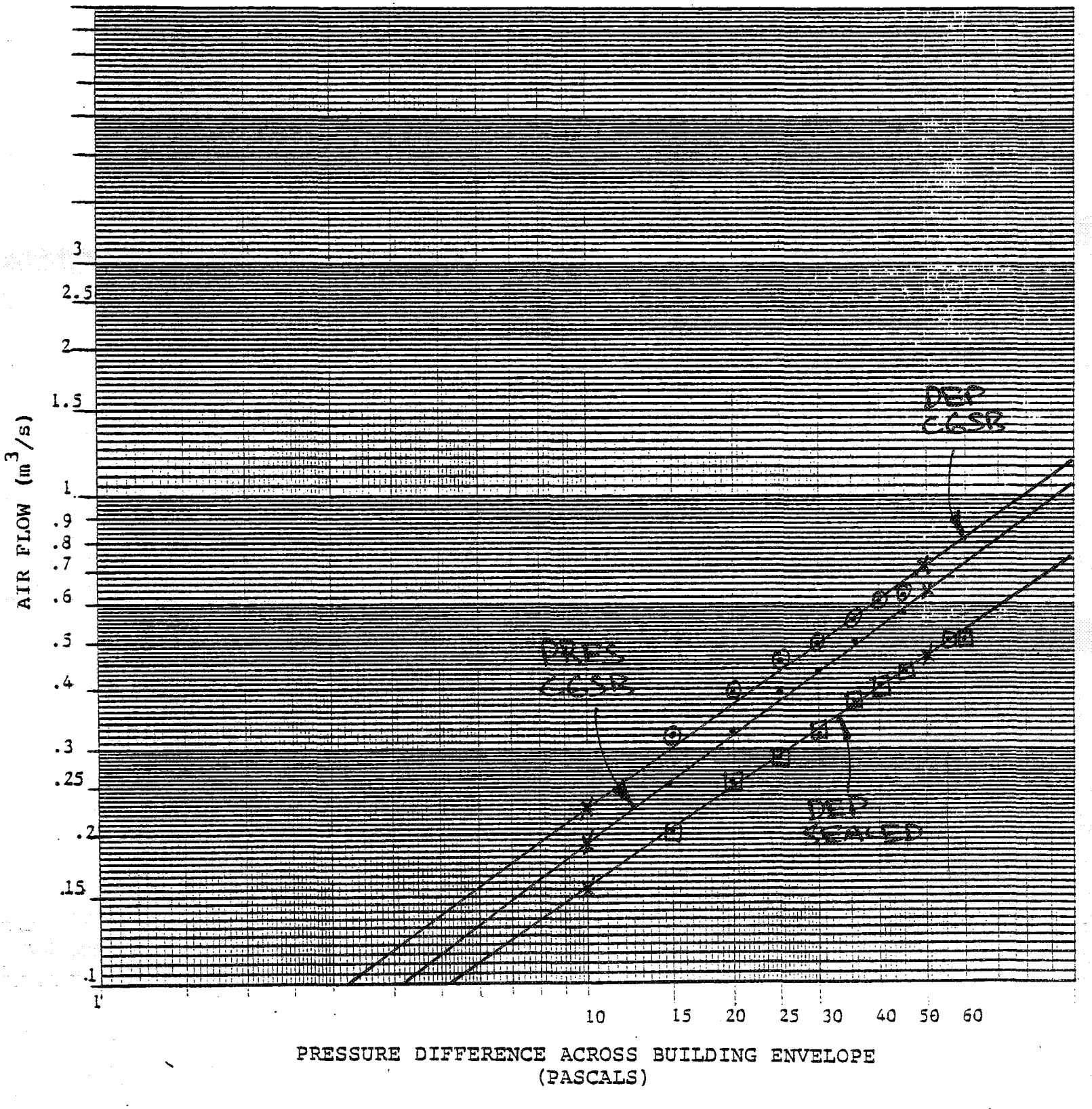
HOUSE # 3

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
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Retrospectors

AIR TIGHTNESS TEST REPORT

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IDENTIFICATION

DATE	JUNE 29/82
TIME	10:45 - 11:25
TEST HOUSE	4
TECHNICIAN	SETON/EUGLER
ENVELOPE AREA	360 M^2
VOLUME	720 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	20.8°C	24.2°C
REL. HUM	78%	69%
WIND (SPEED&DIR)	0	
AIR PRESSURE	100.6 KPa	
PRECIPITATION	NONE	
SOLAR RAD.	DIFFUSE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.216	10		10	
15	0.278	15	0.248	15	
20	0.366	20	0.277	20	0.202
25	0.412	25	0.335	25	—
30	0.454	30	0.350	30	0.248
35	0.517	35	0.404	35	—
40	0.582	40	0.434	40	0.303
45	0.679	45	0.488	45	—
50		50	0.504	50	0.357
55		55	0.552	55	0.377
60		60	0.587	60	0.397
EXPONENT (N)	0.734	EXPONENT N	0.635	EXPONENT N	0.630
CONSTANT (C)	0.039	CONSTANT C	0.042	CONSTANT C	0.030
CORRELATION	0.9955	CORRELEATION	0.9947	CORRELATION	0.9974
AIR FLOW @ 10PA	0.21 M^3/S	AIR FLOW @ 10PA	0.18 M^3/S	AIR FLOW @ 10PA	0.12 M^3/S
AIR FLOW @ 50PA	0.69 M^3/S	AIR FLOW @ 50PA	0.51 M^3/S	AIR FLOW @ 50 PA	0.35 M^3/S
ELA	0.085 SQM @ 10PA	ELA	0.073 SQM @ 10PA	ELA	0.051 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.41	AIR CHNGS/HRS @ 50PA	2.52	AIR CHNGS/HRS @ 50PA	1.74

176 Bronson Ave.
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Retrospectors

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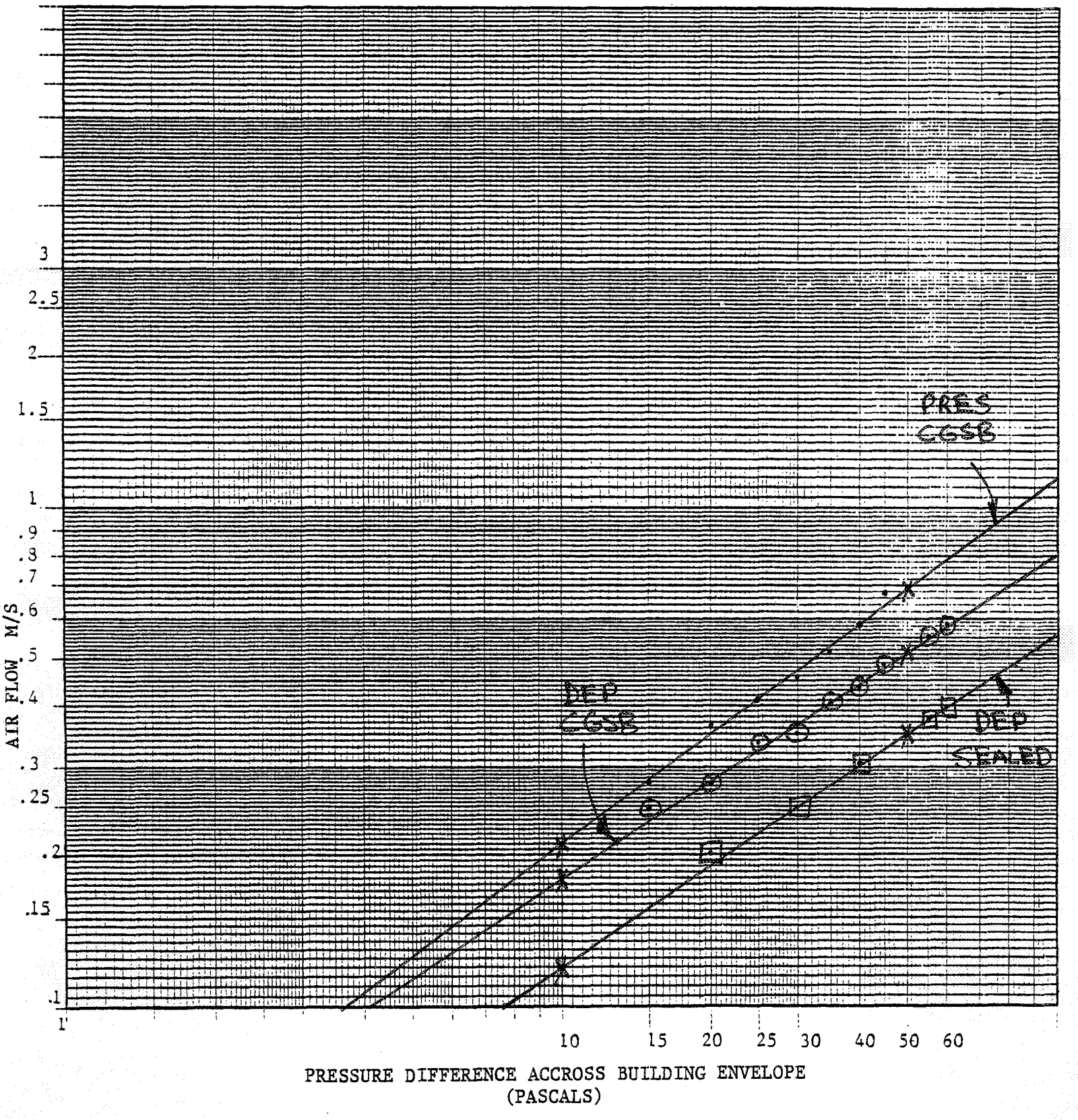
HOUSE # 4

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
(613) 234-3280

Retrospectors

IDENTIFICATION

DATE	Oct. 5/82
TIME	13:00
TEST HOUSE	4
TECHNICIAN	Fugler/Pasquini
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16°C	20°C
REL. HUM	59%	70%
WIND (SPEED&DIR)	W 9 KPH	
AIR PRESSURE	102.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	YES	
SKY/CLOUD COND	NONE	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.228	0.203	
15	0.288	0.287	0.203
20	0.381	0.337	0.227
25	0.419	0.393	0.269
30	0.460	0.418	0.304
35	0.528	0.486	0.337
40	0.556	0.526	0.366
45	0.618	0.559	0.406
50	0.673	0.573	0.442
55	0.703	0.640	0.453
60		0.663	0.496

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.662	0.638	0.660
CONSTANT (C)	0.049	0.049	0.032
CORRELATION	0.9976	0.9969	0.9968
AIR FLOW @ 10PA	0.228 M^3/S	0.213 M^3/S	0.148 M^3/S
AIR FLOW @ 50PA	0.662 M^3/S	0.596 M^3/S	0.431 M^3/S
ELA	0.091 SQM @ 10PA	0.085 SQM @ 10PA	0.059 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.26	2.94	2.12

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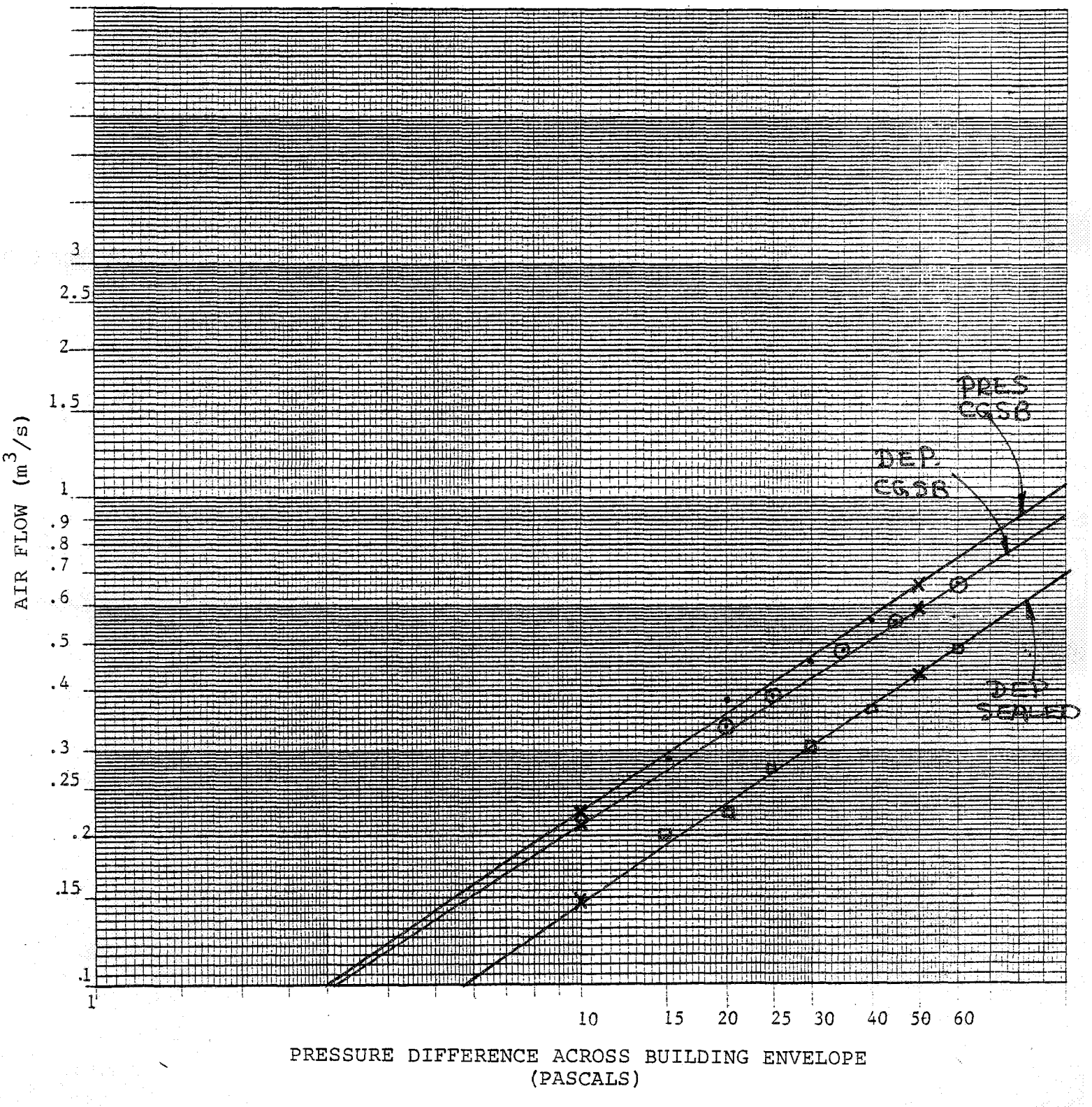
HOUSE # 4

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 20-83
TIME	17:30-18:00
TEST HOUSE	4
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-13°C	20°C
REL. HUM	47%	40%
WIND (SPEED&DIR)	SW @ 15KPH	
AIR PRESSURE	103.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	DARK	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15		0.269	
20		0.337	0.216
25		0.387	0.260
30		0.437	0.288
35		0.491	0.337
40		0.546	0.359
45		0.582	0.400
50		0.595	0.425
55		0.645	0.442
60		0.702	0.471
EXPONENT (N)		0.671	0.709
CONSTANT (C)		0.044	0.026
CORRELATION		0.9978	0.9973
AIR FLOW @ 10PA	M^3/S	0.209 M^3/S	0.134 M^3/S
AIR FLOW @ 50PA	M^3/S	0.617 M^3/S	0.421 M^3/S
ELA	SQM @ 10PA	0.084 SQM @ 10PA	0.053 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		3.04	2.07

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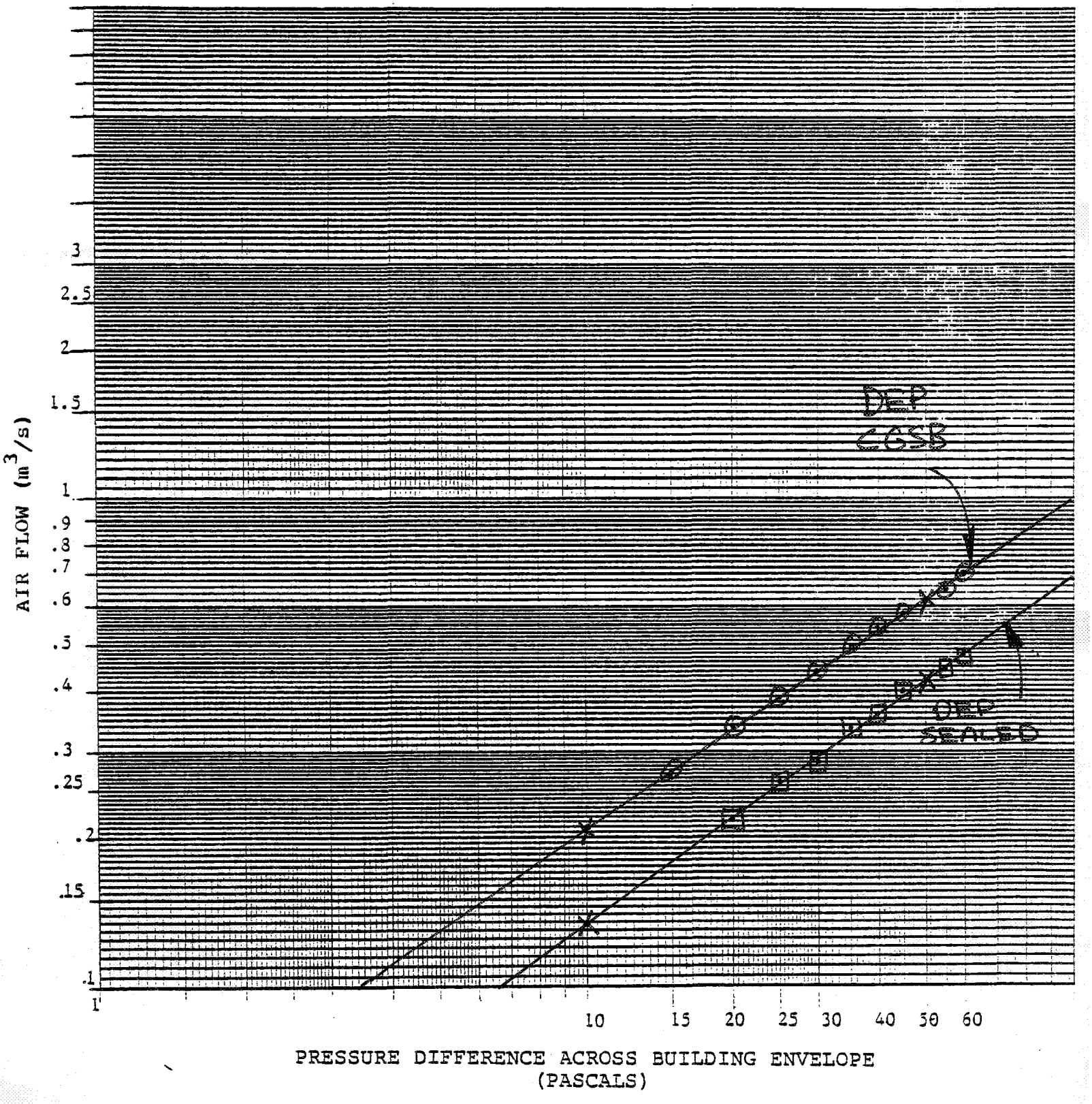
HOUSE # 4

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR.11/83
TIME	18:00
TEST HOUSE	5
TECHNICIAN	ROSENBERG
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	4.°C	21.°C
REL. HUM	81%	
WIND(SPEED&DIR)	SW @ 7KPH	
AIR PRESSURE	101 KPA	
PRECIPITATION	LIGHT SHOWER	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15		15	
20	0.517	20	0.534	20	0.372
25		25	0.586	25	0.445
30	0.626	30	0.670	30	0.503
35		35		35	0.522
40	0.718	40	0.767	40	0.568
45		45	0.807	45	0.591
50	0.831	50		50	0.678
55		55	0.923	55	0.713
60	0.883	60	0.938	60	0.698
EXPONENT (N)	0.498	EXPONENT N	0.529	EXPONENT N	0.620
CONSTANT (C)	0.115	CONSTANT C	0.108	CONSTANT C	0.065
CORRELATION	0.9979	CORRELATION	0.9976	CORRELATION	0.9898
AIR FLOW @ 10PA	0.36 M^3/S	AIR FLOW @ 10PA	0.36 M^3/S	AIR FLOW @ 10PA	0.25 M^3/S
AIR FLOW @ 50PA	0.81 M^3/S	AIR FLOW @ 50PA	0.86 M^3/S	AIR FLOW @ 50 PA	0.65 M^3/S
ELA	0.14 SQM @ 10PA	ELA	0.14 SQM @ 10PA	ELA	0.10 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.01	AIR CHNGS/HRS @ 50PA	4.25	AIR CHNGS/HRS @ 50PA	3.21

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Retrospectors

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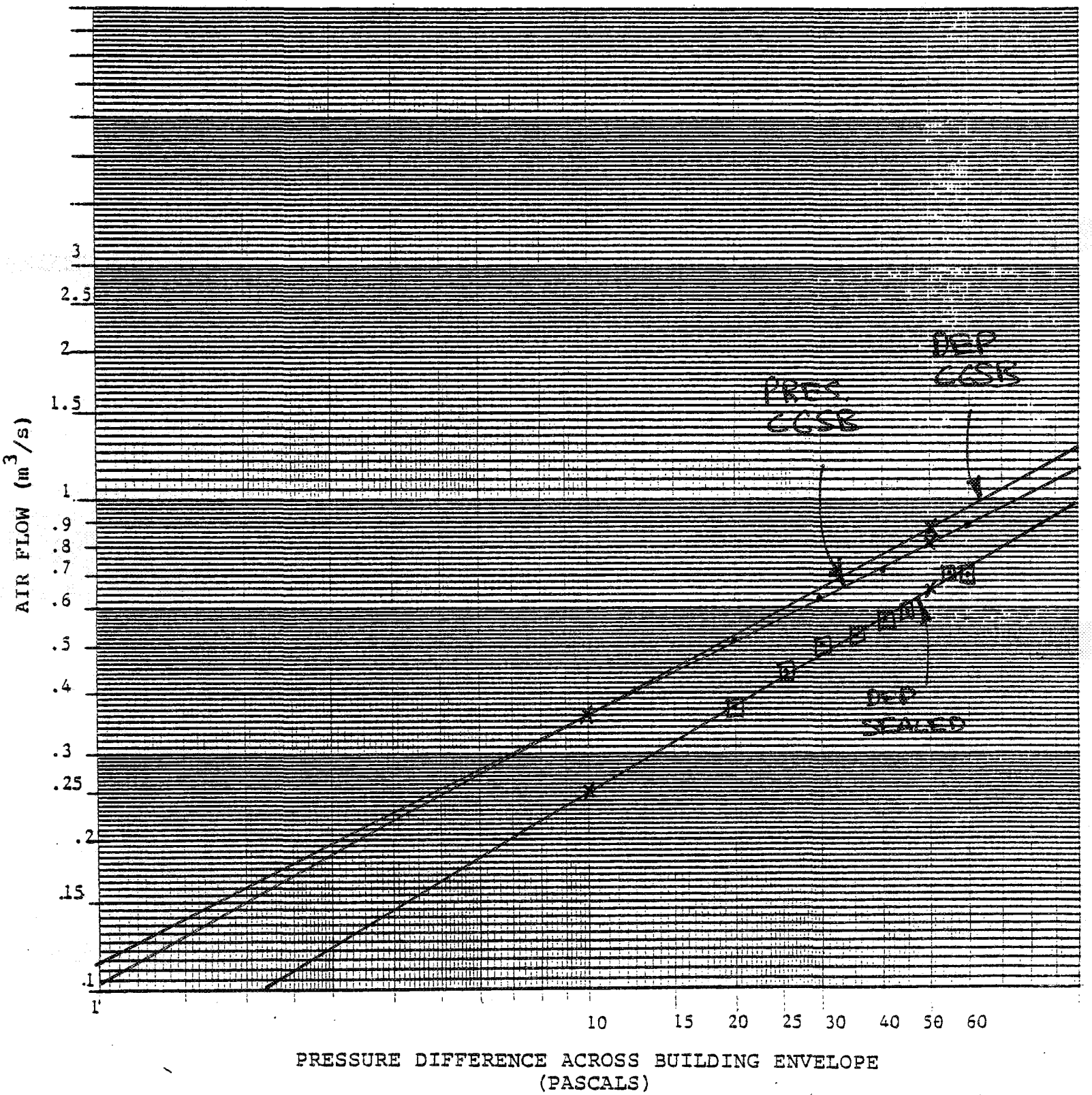
HOUSE # 5

PHASE 1

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JUNE 4/82
TIME	8:50-9:45
TEST HOUSE	5
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	13.3°C	19°C
REL. HUM	66%	58%
WIND(SPEED&DIR)	EE 17KPH	
AIR PRESSURE	102.5KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SLIGHT	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.276	10	0.239	10	—
15	0.389	15	0.338	15	—
20	0.481	20	0.407	20	0.260
25	0.521	25	0.443	25	—
30	0.602	30	0.498	30	0.322
35	0.672	35	0.561	35	0.345
40	0.729	40	0.618	40	0.394
45	—	45	0.665	45	0.419
50	—	50	0.717	50	0.471
55	—	55	—	55	0.487
60	—	60	—	60	0.513

EXPONENT (N)	0.682	EXPONENT N	0.655	EXPONENT N	0.642
CONSTANT (C)	0.059	CONSTANT C	0.054	CONSTANT C	0.036
CORRELATION	0.9961	CORRELATION	0.9970	CORRELATION	0.9936
AIR FLOW @ 10PA	0.28 M^3/S	AIR FLOW @ 10PA	0.24 M^3/S	AIR FLOW @ 10PA	0.16 M^3/S
AIR FLOW @ 50PA	0.85 M^3/S	AIR FLOW @ 50PA	0.71 M^3/S	AIR FLOW @ 50 PA	0.45 M^3/S
ELA	0.114 SQM @ 10PA	ELA	0.099 SQM @ 10PA	ELA	0.064 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.23	AIR CHNGS/HRS @ 50PA	3.52	AIR CHNGS/HRS @ 50PA	2.24

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Retrospectors

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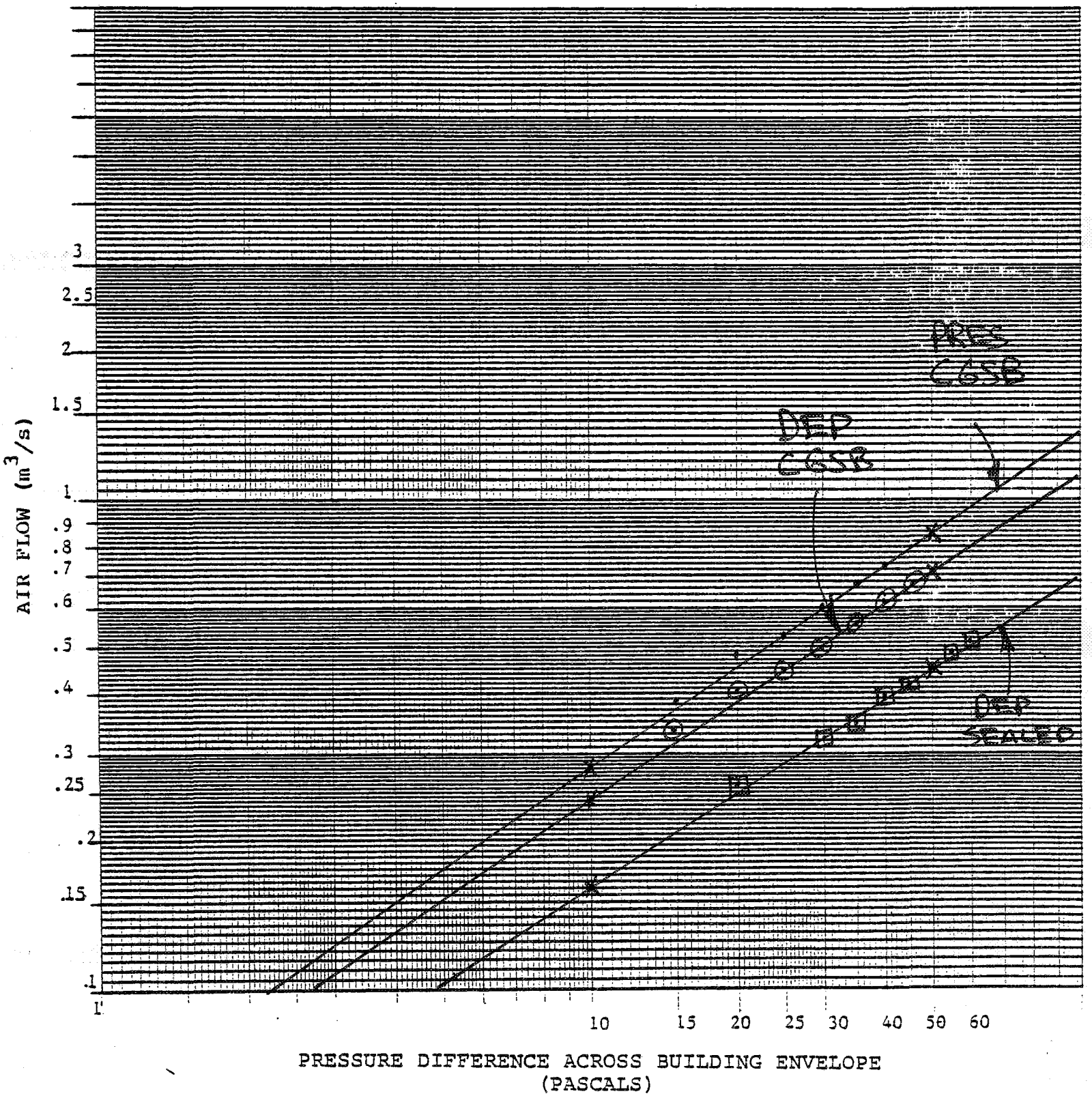
HOUSE # 5

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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2-65

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION		TEST CONDITIONS	OUTSIDE	INSIDE
DATE	OCT. 5/82	TEMPERATURE	13°C	18°C
TIME	10:30-11:30	REL. HUM	76%	60%
TEST HOUSE	5	WIND(SPEED&DIR)	S @ 3KPH	
TECHNICIAN	FULLER/PASQUINI	AIR PRESSURE	102.3KPA	
ENVELOPE AREA	360m²	PRECIPITATION	NONE	
VOLUME	730 m³	SOLAR RAD.	SOUTH	
FIREPLACE	YES	SKY/CLOUD COND	CLEAR	
HEATING	GAS			

NOTE: FRESH AIR INTAKE TO FIREPLACE SEALED BY OWNER

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.257	10	0.228	10	———
15	0.302	15	0.306	15	———
20	0.348	20	0.367	20	0.204
25	0.426	25	0.419	25	0.256
30	0.481	30	0.466	30	0.297
35	0.531	35	0.466	35	0.322
40	0.593	40	0.536	40	0.353
45	0.627	45	0.601	45	0.381
50	0.657	50	0.634	50	0.419
55	0.702	55	0.681	55	0.455
60	———	60	———	60	0.487
EXPONENT (N)	0622	EXPONENT N	0.620	EXPONENT N	0.765
CONSTANT (C)	0.058	CONSTANT C	0.055	CONSTANT C	0.021
CORRELATION	0.9951	CORRELATION	0.9955	CORRELATION	0.9977
AIR FLOW @ 10PA	0.242 M^3/S	AIR FLOW @ 10PA	0233 M^3/S	AIR FLOW @ 10PA	0.123 M^3/S
AIR FLOW @ 50PA	0661 M^3/S	AIR FLOW @ 50PA	0633 M^3/S	AIR FLOW @ 50 PA	0422 M^3/S
ELA	0.097 SQM @ 10PA	ELA	0.093 SQM @ 10PA	ELA	0049 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.25	AIR CHNGS/HRS @ 50PA	3.12	AIR CHNGS/HRS @ 50PA	207

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Retrospectors

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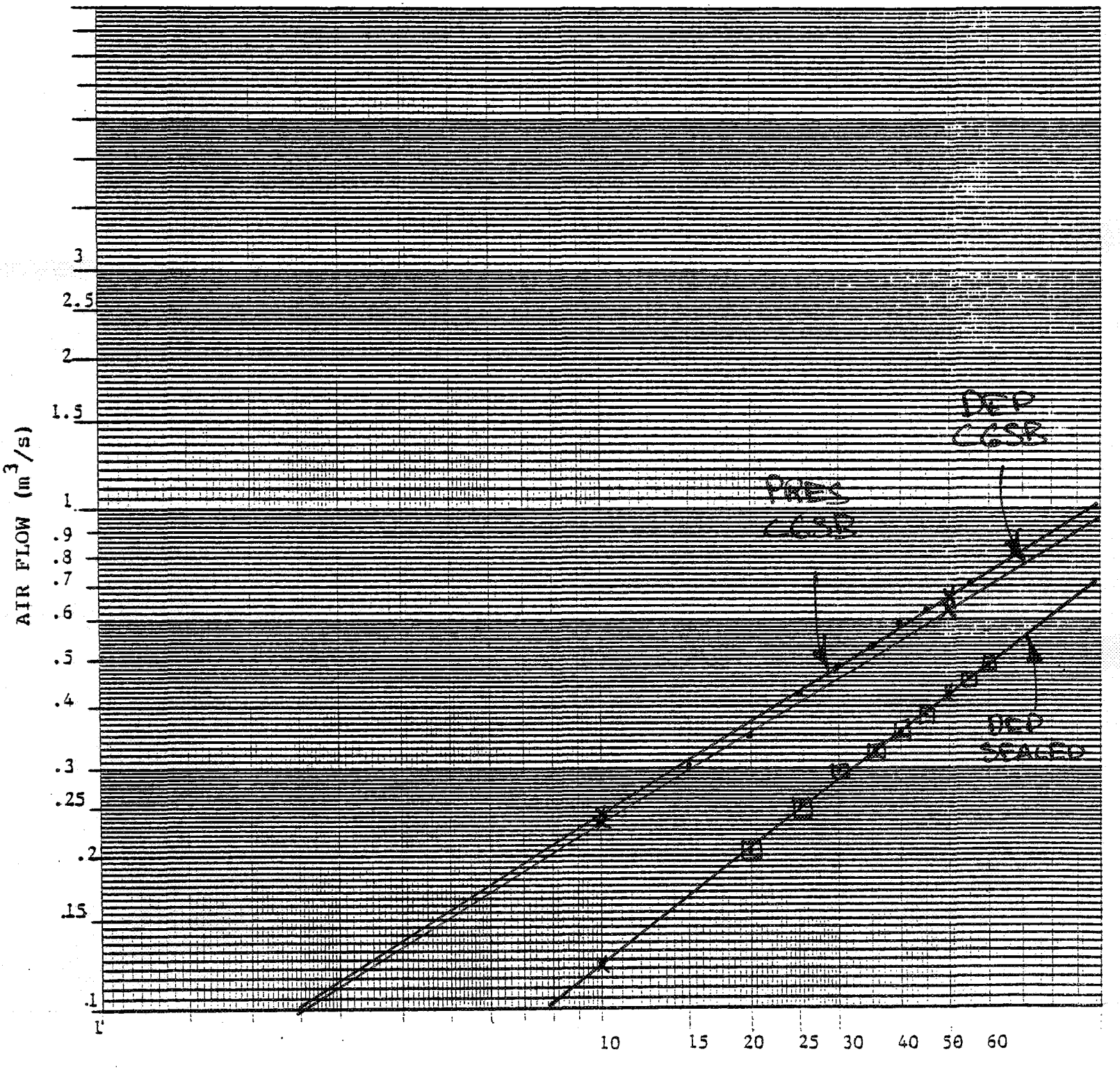
HOUSE # 5

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS. ON "DEP" LINE OMITTED DUE TO LACK OF SPACE
CGSB

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 27-83
TIME	10:40-11:05
TEST HOUSE	5
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-10°C	20°C
REL. HUM	67%	35%
WIND(SPEED&DIR)	NW@ 10 KPH	
AIR PRESSURE	102.9 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.228	-
15		0.288	0.185
20		0.345	0.228
25		0.406	0.288
30		0.454	0.305
35		0.546	0.366
40		0.582	0.393
45		0.600	0.413
50		0.664	0.454
55		0.702	0.471
60		0.764	0.507
EXPONENT (N)		0.692	0.719
CONSTANT (C)		0.044	0.027
CORRELATION		0.9968	0.9959
AIR FLOW @ 10PA	M^3/S	0.219 M^3/S	0.141 M^3/S
AIR FLOW @ 50PA	M^3/S	0.670 M^3/S	0.451 M^3/S
ELA	SQM @ 10PA	0.088 SQM @ 10PA	0.056 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		3.31	2.22

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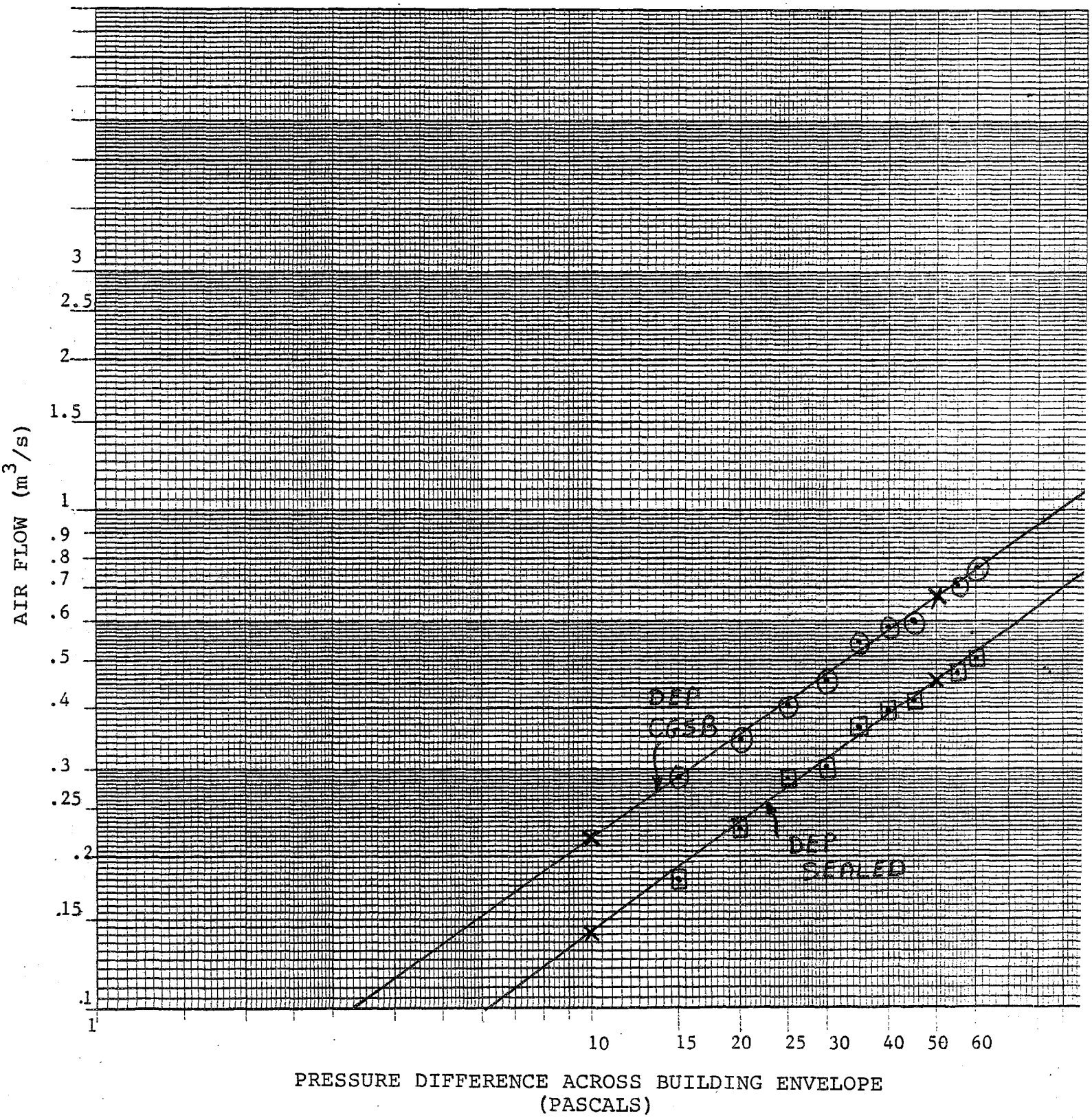
Retrospectors

HOUSE # 5

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR 4 18
TIME	14:00 - 16:00
TEST HOUSE	6
TECHNICIAN	LILICO/FUGLER
ENVELOPE AREA	360 m²
VOLUME	730 m³
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-3.0°C	17°C
REL. HUM	80%	
WIND(SPEED&DIR)	W@32KPH	
AIR PRESSURE	99.2KPA	
PRECIPITATION	SNOW	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.218	10	0.251	10	0.205
15	0.276	15	0.339	15	0.229
20	0.376	20	0.408	20	0.271
25	0.390	25	0.500	25	0.323
30	0.477	30	0.539	30	0.368
35	0.551	35	0.620	35	0.408
40	0.576	40	0.652	40	0.445
45		45	0.698	45	0.500
50		50	0.726	50	0.526
55		55		55	
60		60		60	

EXPONENT (N)	0.717	EXPONENT N	0.667	EXPONENT N	0.620
CONSTANT (C)	0.041	CONSTANT C	0.055	CONSTANT C	0.045
CORRELATION	0.9867	CORRELATION	0.9965	CORRELATION	0.9902
AIR FLOW @ 10PA	0.21 M^3/S	AIR FLOW @ 10PA	0.25 M^3/S	AIR FLOW @ 10PA	0.18 M^3/S
AIR FLOW @ 50PA	0.69 M^3/S	AIR FLOW @ 50PA	0.75 M^3/S	AIR FLOW @ 50 PA	0.51 M^3/S
ELA	0.08 SQM @ 10PA	ELA	0.10 SQM @ 10PA	ELA	0.07 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.42	AIR CHNGS/HRS @ 50PA	3.73	AIR CHNGS/HRS @ 50PA	2.52

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Retrospectors

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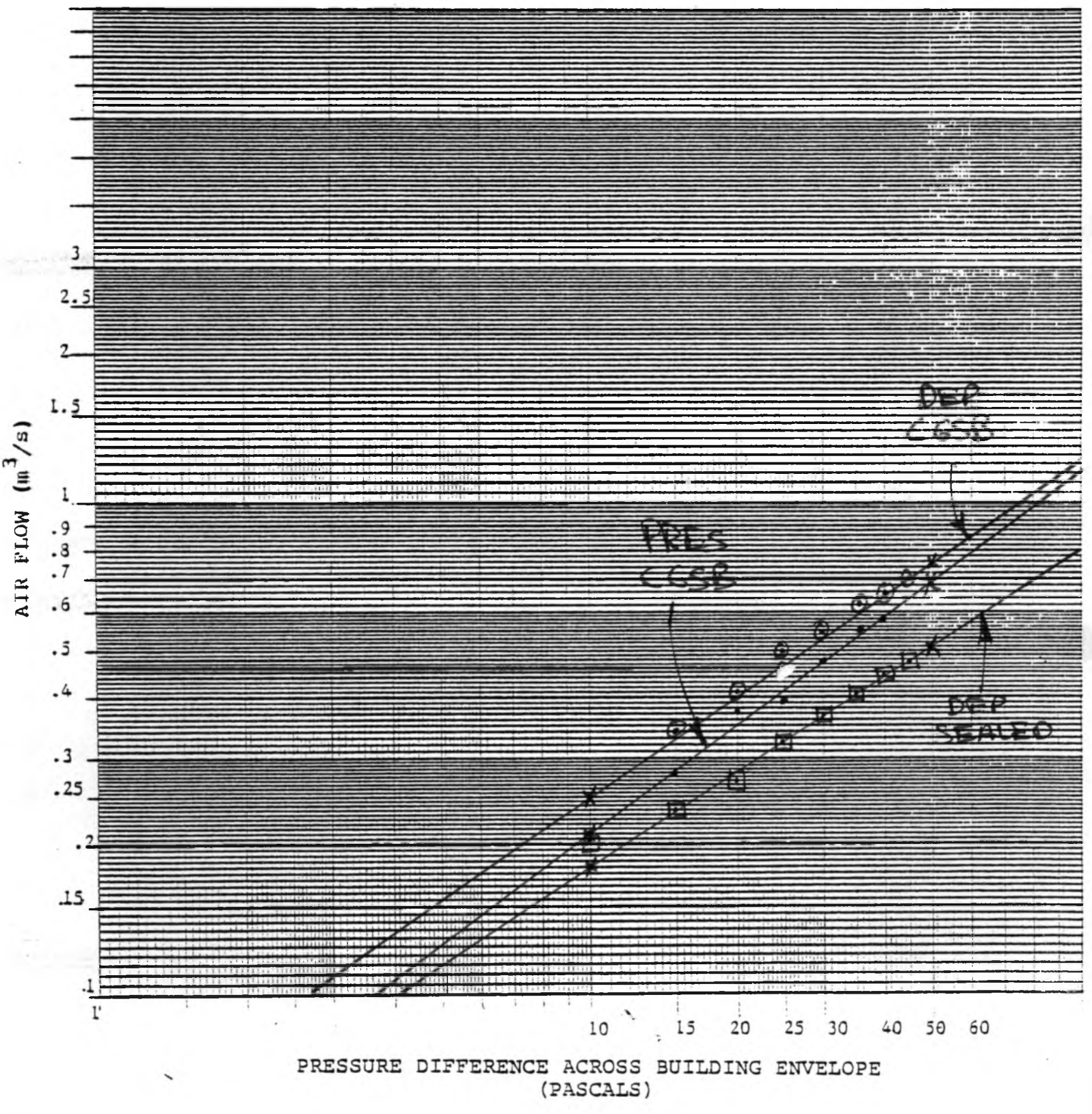
HOUSE # 6

PHASE 1

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JUNE 17/82
TIME	12:30-13:15
TEST HOUSE	6
TECHNICIAN	SETON/EUGLER
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	24.0°C	23.9°C
REL. HUM	56%	59%
WIND(SPEED&DIR)	SW@ 15KPH	
AIR PRESSURE	101.0KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP. SEALED
10	0.277	0.237	
15	0.357	0.342	
20	0.416	0.377	0.237
25	0.478	0.451	0.258
30	0.519	0.504	0.303
35	0.596	0.524	0.335
40	0.652	0.608	0.364
45		0.652	0.391
50		0.682	0.410
55			0.451
60			0.473
EXPONENT (N)	0.605	0.636	0.643
CONSTANT (C)	0.068	0.057	0.033
CORRELATION	0.9981	0.9947	0.9970
AIR FLOW @ 10PA	0.22 M^3/S	0.24 M^3/S	0.14 M^3/S
AIR FLOW @ 50PA	0.73 M^3/S	0.69 M^3/S	0.41 M^3/S
ELA	0.110 SQM @ 10PA	0.099 SQM @ 10PA	0.059 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.60	3.40	2.07

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Retrospectors

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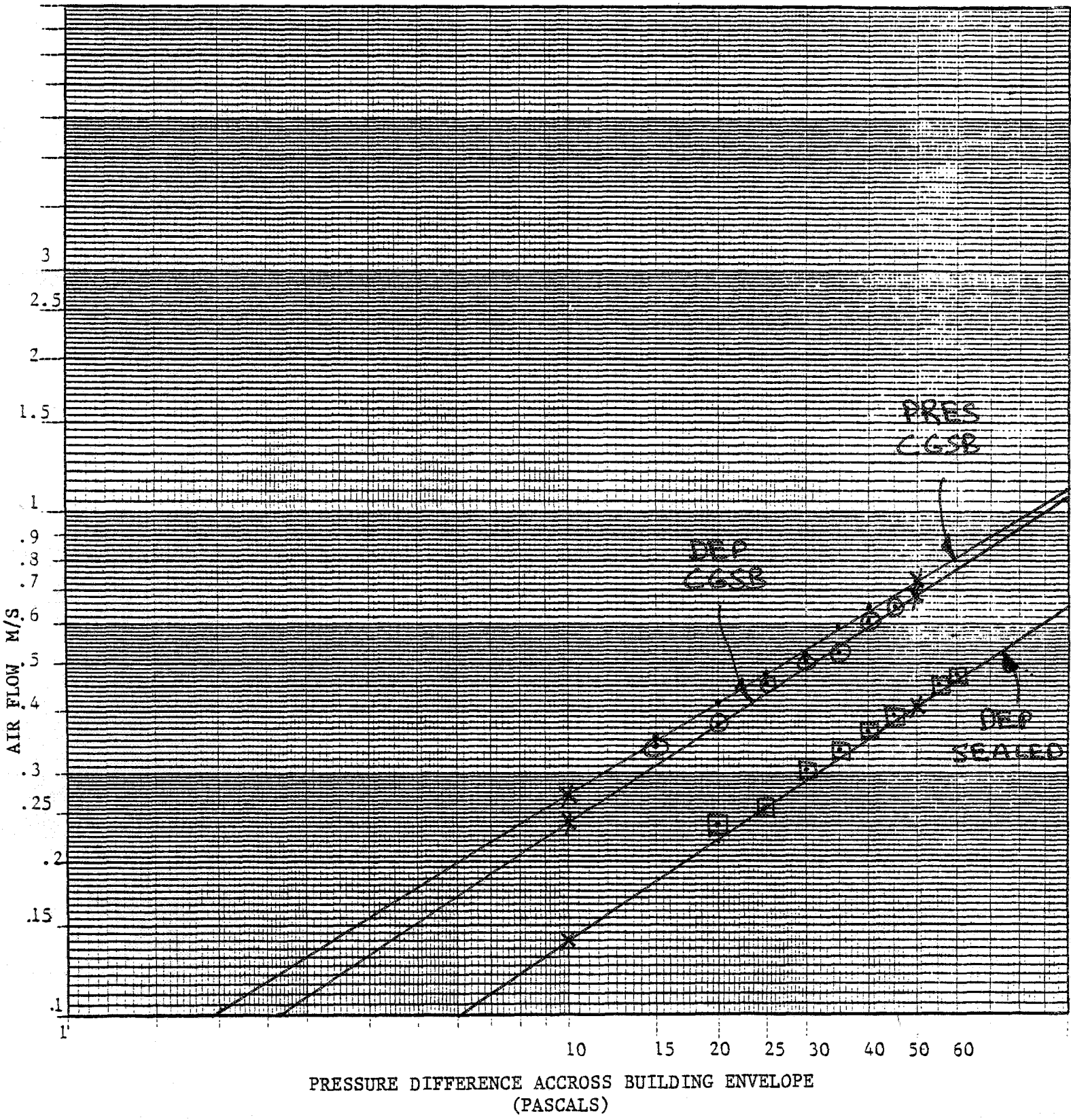
HOUSE # 6

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

IDENTIFICATION

DATE	SEPT. 20/82
TIME	14:30
TEST HOUSE	6
TECHNICIAN	Fugler/Pasquini
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	17°C	22°C
REL. HUM	59%	60%
WIND (SPEED&DIR)	SE 15 KPH	
AIR PRESSURE	101.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOME	
SKY/CLOUD COND	SOME	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.287	10	0.304	10	0.203
15	0.366	15	0.386	15	0.249
20	0.475	20	0.475	20	0.287
25	0.573	25	0.545	25	0.304
30	0.581	30	0.607	30	0.351
35	0.615	35	0.640	35	0.379
40	0.678	40	0.678	40	0.406
45		45		45	0.464
50		50		50	0.475
55		55		55	0.511
60		60		60	0.526

EXPONENT (N)	0.624	EXPONENT N	0.591	EXPONENT N	0.541
CONSTANT (C)	0.070	CONSTANT C	0.079	CONSTANT C	0.056
CORRELATION	0.9864	CORRELEATION	0.9965	CORRELATION	0.9950
AIR FLOW @ 10PA	0.294 M^3/S	AIR FLOW @ 10PA	0.308 M^3/S	AIR FLOW @ 10PA	0.197 M^3/S
AIR FLOW @ 50PA	0.804 M^3/S	AIR FLOW @ 50PA	0.800 M^3/S	AIR FLOW @ 50 PA	0.472 M^3/S
ELA	0.118 SQM @ 10PA	ELA	0.123 SQM @ 10PA	ELA	0.079 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.96	AIR CHNGS/HRS @ 50PA	3.94	AIR CHNGS/HRS @ 50PA	2.32

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Retrospectors

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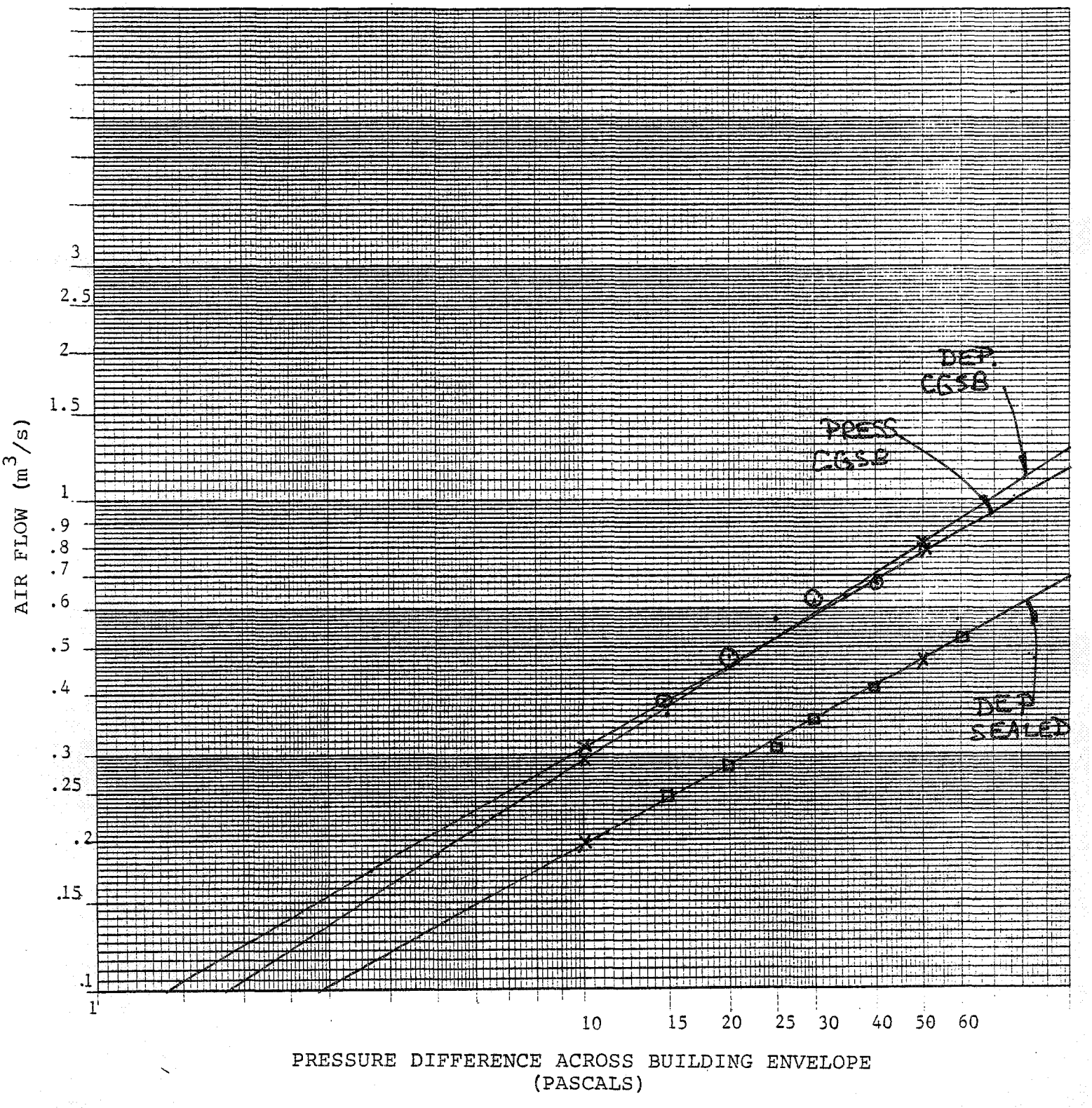
HOUSE # 6

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 10-83
TIME	10:30 - 11:15
TEST HOUSE	6
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-8.0°C	+17.0°C
REL. HUM	79%	30%
WIND (SPEED&DIR)	E @ 19 KPH	
AIR PRESSURE	102.4 KPA	
PRECIPITATION	FREEZING RAIN	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.251	10	—
15		15	0.271	15	0.192
20		20	0.382	20	0.251
25		25	0.445	25	0.289
30		30	0.479	30	0.323
35		35	0.558	35	0.368
40		40	0.611	40	0.408
45		45	0.636	45	0.421
50		50	0.720	50	0.445
55		55	0.761	55	0.468
60		60		60	0.539
EXPONENT (N)		EXPONENT N	0.689	EXPONENT N	0.689
CONSTANT (C)		CONSTANT C	0.047	CONSTANT C	0.030
CORRELATION		CORRELATION	0.9905	CORRELATION	0.9947
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.231 M^3/S	AIR FLOW @ 10PA	0.151 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.704 M^3/S	AIR FLOW @ 50 PA	0.460 M^3/S
ELA	SQM @ 10PA	ELA	0.093 SQM @ 10PA	ELA	0.060 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	3.46	AIR CHNGS/HRS @ 50PA	2.27

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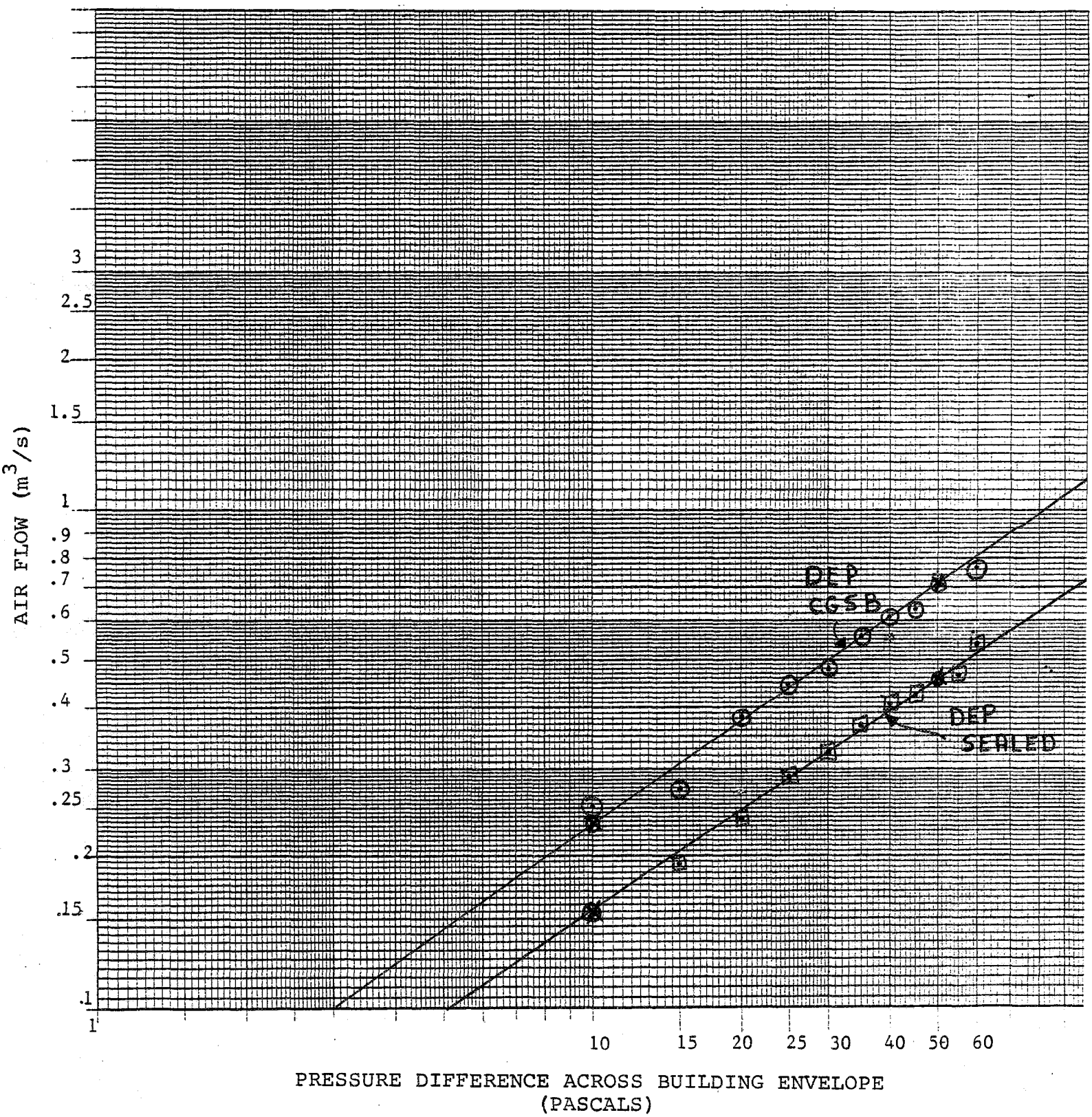
Retrospectors

HOUSE # 6

PHASE 4

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR.15/82
TIME	14:30 - 16:00
TEST HOUSE	7
TECHNICIAN	LILICO/FUGLER
ENVELOPE AREA	360m²
VOLUME	730m³
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16°C	17°C
REL. HUM	30%	
WIND(SPEED&DIR)	S@15KPH	
AIR PRESSURE	102.2KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SW SIDES	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.271	10	0.276	10	
15	0.354	15	0.338	15	
20	0.408	20	0.395	20	0.270
25	0.468	25	0.455	25	0.306
30	0.520	30	0.519	30	0.353
35	0.585	35	0.566	35	0.381
40	0.644	40	0.619	40	0.419
45	0.694	45	0.682	45	0.455
50		50	0.726	50	0.487
55		55		55	0.528
60		60		60	0.566

EXPONENT (N)	0.617	EXPONENT N	0.611	EXPONENT N	0.670
CONSTANT (C)	0.065	CONSTANT C	0.065	CONSTANT C	0.035
CORRELATION	0.9986	CORRELATION	0.9965	CORRELATION	0.9986
AIR FLOW @ 10PA	0.27 M^3/S	AIR FLOW @ 10PA	0.26 M^3/S	AIR FLOW @ 10PA	0.16 M^3/S
AIR FLOW @ 50PA	0.73 M^3/S	AIR FLOW @ 50PA	0.71 M^3/S	AIR FLOW @ 50 PA	0.49 M^3/S
ELA	0.10 SQM @ 10PA	ELA	0.10 SQM @ 10PA	ELA	0.06 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.54	AIR CHNGS/HRS @ 50PA	3.52	AIR CHNGS/HRS @ 50PA	2.43

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Retrospectors

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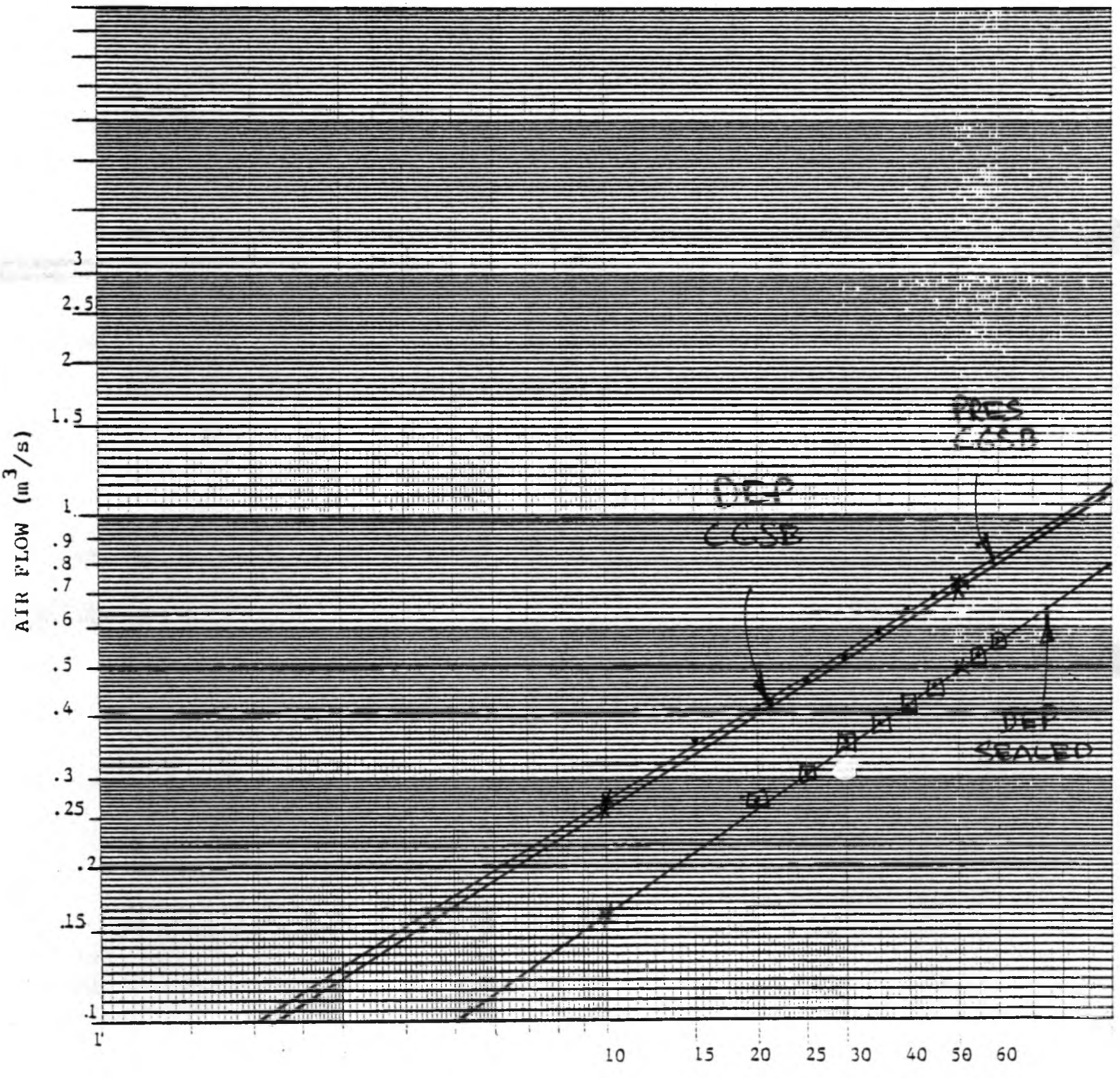
HOUSE # 7

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP" CGSB LINE OMITTED DUE TO LACK OF SPACE

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: JUNE 8/82
TIME: 9:00-9:50
TEST HOUSE: 7
TECHNICIAN: SETON/EUGLER
ENVELOPE AREA: 360 m^2
VOLUME: 730 m^3
FIREPLACE: YES
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	19°C	21°C
REL. HUM	55%	57%
WIND (SPEED&DIR)	N.E @ 6 KPH	
AIR PRESSURE	101.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL-EAST	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.229	10		10	
15	0.338	15	0.304	15	
20	0.401	20	0.393	20	0.227
25	0.455	25	0.436	25	
30	0.498	30	0.491	30	0.321
35	0.579	35	0.521	35	0.344
40	0.618	40	0.577	40	0.379
45	0.696	45	0.620	45	0.412
50	0.731	50	0.686	50	0.442
55		55		55	0.486
60		60		60	0.506

EXPONENT (N)	0.695	EXPONENT N	0.631	EXPONENT N	0.719
CONSTANT (C)	0.048	CONSTANT C	0.056	CONSTANT C	0.026
CORRELATION	0.9960	CORRELEATION	0.9955	CORRELATION	0.9978
AIR FLOW @ 10PA	0.24 M^3/S	AIR FLOW @ 10PA	0.24 M^3/S	AIR FLOW @ 10PA	0.14 M^3/S
AIR FLOW @ 50PA	0.73 M^3/S	AIR FLOW @ 50PA	0.67 M^3/S	AIR FLOW @ 50 PA	0.44 M^3/S
ELA	0.096 SQM @ 10PA	ELA	0.095 SQM @ 10PA	ELA	0.055 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.63	AIR CHNGS/HRS @ 50PA	3.31	AIR CHNGS/HRS @ 50PA	2.26

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Retrospectors

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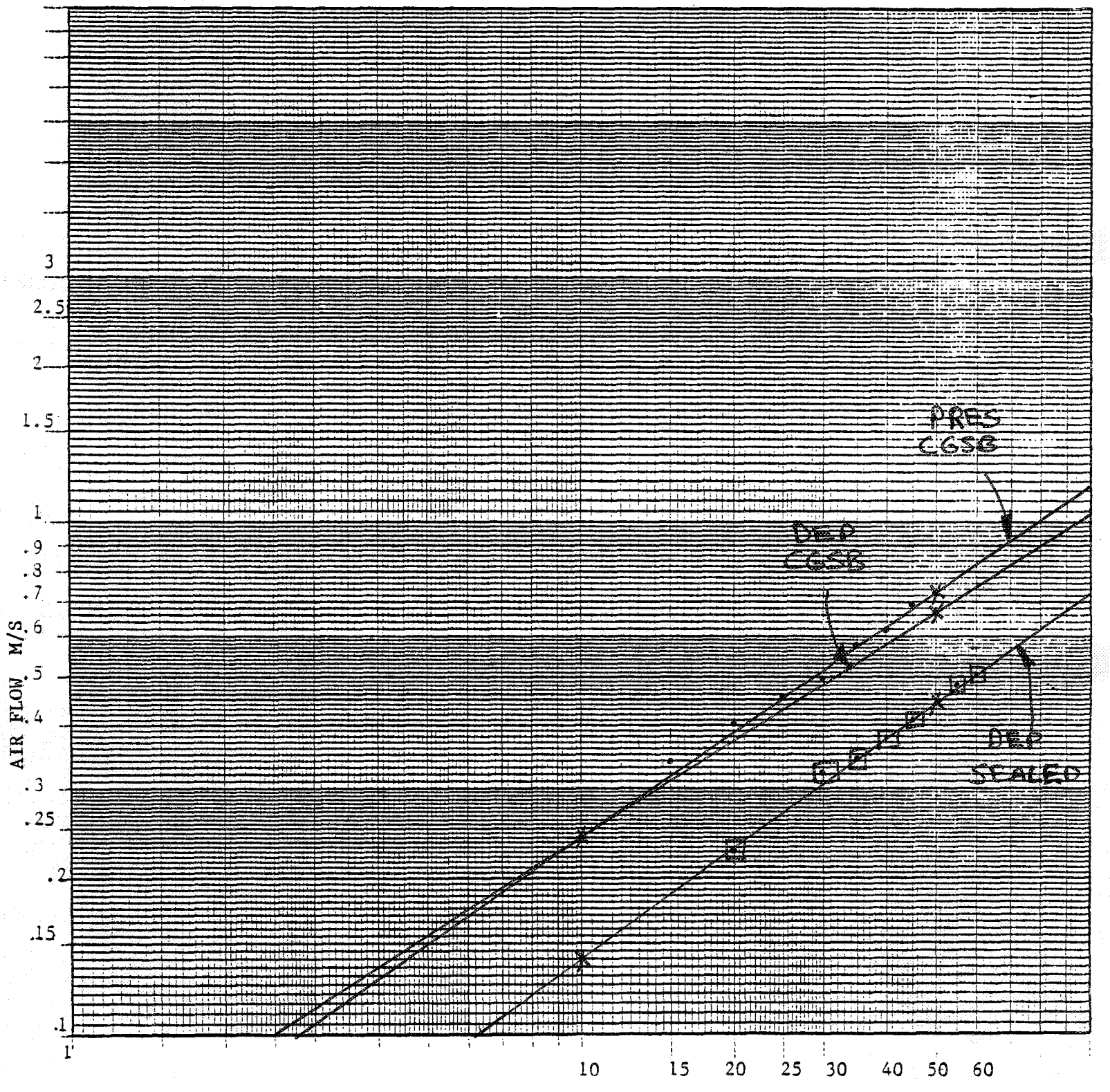
HOUSE # 7

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "CGSB" DEP LINE OMITTED DUE TO LACK OF SPACE

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Retrospectors

IDENTIFICATION

DATE	OCT. 20/82
TIME	11:40-13:00
TEST HOUSE	7
TECHNICIAN	ENGLEBA/SUNHA
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	15°C	19°C
REL. HUM	63%	56%
WIND (SPEED&DIR)	SE 20-40 KPH	
AIR PRESSURE	101.7 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SLIGHT	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.252	0.228	
15	0.324	0.322	0.204
20	0.397	0.407	0.276
25	0.439	0.455	0.306
30	0.458	0.518	0.381
35	0.579	0.583	0.407
40	0.646	0.658	0.449
45	0.708	0.681	0.466
50			0.537
55			0.556
60			0.583

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.671	0.724	0.747
CONSTANT (C)	0.052	0.044	0.028
CORRELATION	0.9883	0.9975	0.9952
AIR FLOW @ 10PA	0.245 M^3/S	0.236 M^3/S	0.157 M^3/S
AIR FLOW @ 50PA	0.723 M^3/S	0.757 M^3/S	0.524 M^3/S
ELA	0.098 SQM @ 10PA	0.094 SQM @ 10PA	0.063 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.57	3.73	2.58

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Retrospectors

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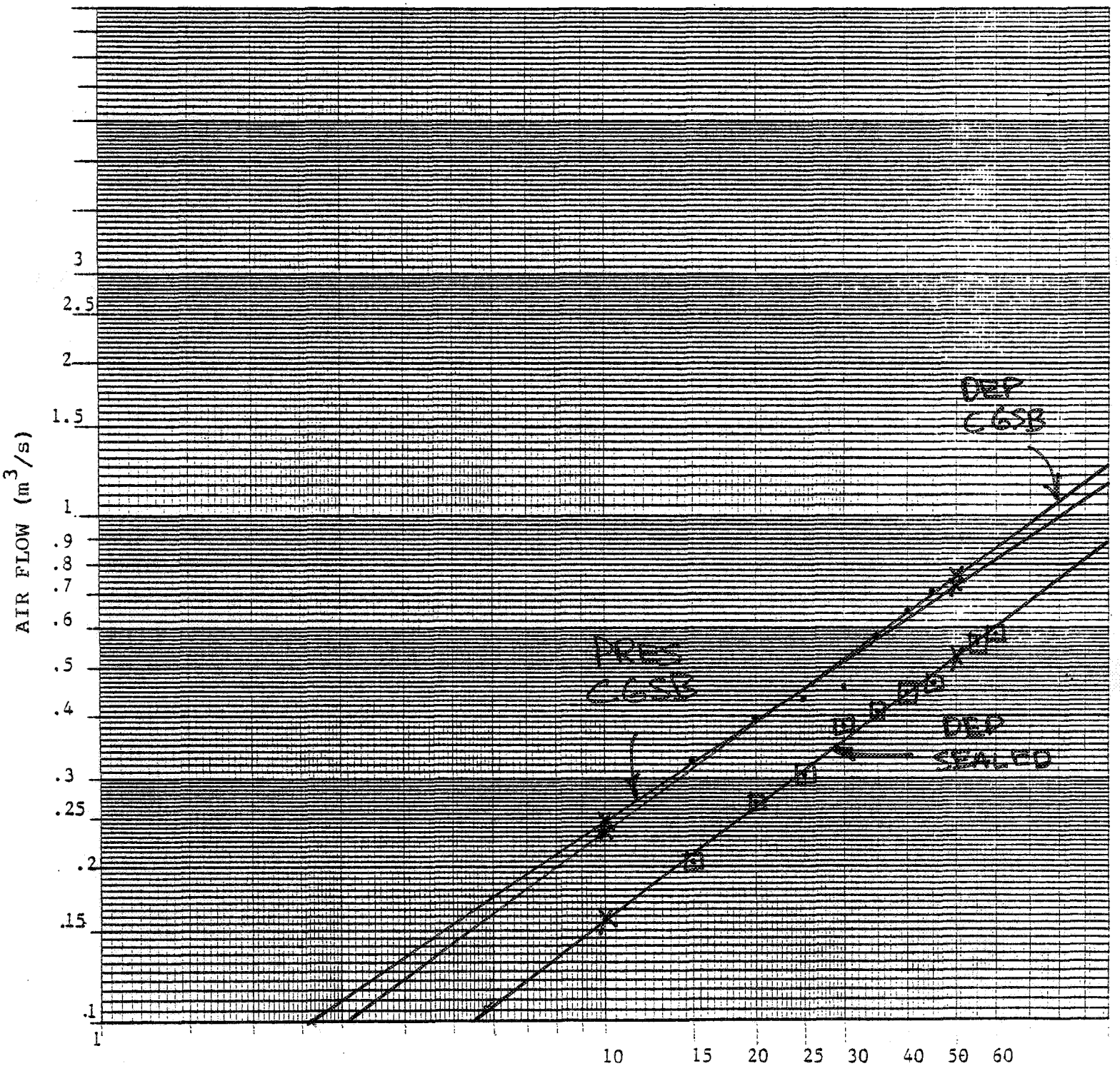
HOUSE # 7

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP" LINE OMITTED DUE TO LACK OF SPACE
CGSB

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 27/83
TIME	14:00 - 14:45
TEST HOUSE	7
TECHNICIAN	EUGLER/SINGHA
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-8°C	19°C
REL. HUM	57%	32%
WIND(SPEED&DIR)	NW @ 15KPH	
AIR PRESSURE	102.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SLIGHT	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.270	10	-
15		15	0.338	15	-
20		20	0.419	20	0.279
25		25	0.487	25	0.345
30		30	0.542	30	0.381
35		35	0.626	35	0.431
40		40	0.677	40	0.477
45		45	0.728	45	0.523
50		50	0.785	50	0.575
55		55	-	55	0.622
60		60	-	60	0.646
EXPONENT (N)		EXPONENT N	0.675	EXPONENT N	0.762
CONSTANT (C)		CONSTANT C	0.055	CONSTANT C	0.028
CORRELATION		CORRELATION	0.9990	CORRELATION	0.9986
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.263 M^3/S	AIR FLOW @ 10PA	0.166 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.782 M^3/S	AIR FLOW @ 50 PA	0.569 M^3/S
ELA	SQM @ 10PA	ELA	0.105 SQM @ 10PA	ELA	0.066 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	3.85	AIR CHNGS/HRS @ 50PA	2.81

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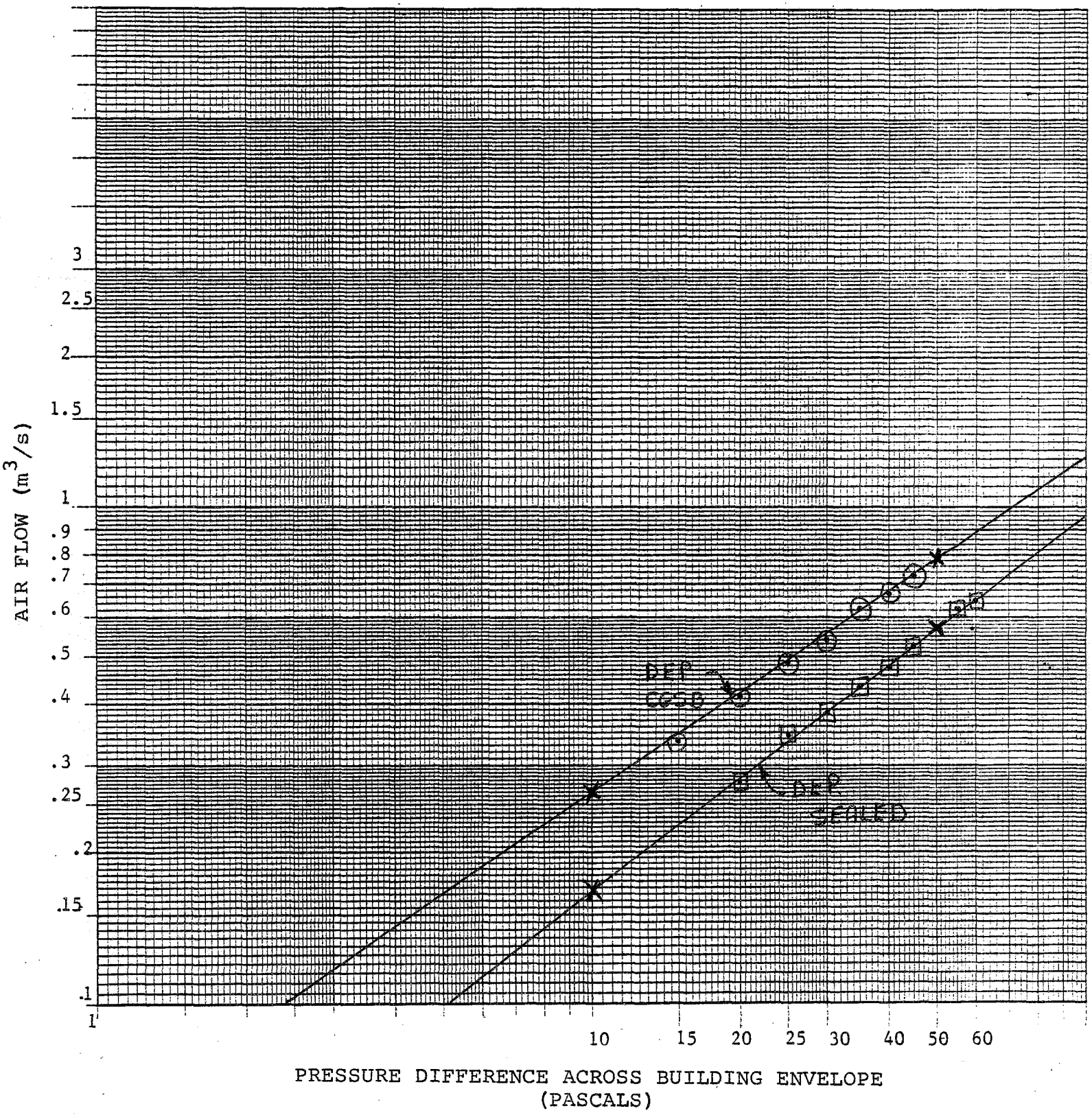
Retrospectors

HOUSE # 7

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	SEPT. 28/82
TIME	13:00
TEST HOUSE	8
TECHNICIAN	RUGGERI/PASCUIN
ENVELOPE AREA	360 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	14°C	21°C
REL. HUM	88%	70%
WIND(SPEED&DIR)	N.W. @ 28 KPH	
AIR PRESSURE	102.2 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.332	10	0.337	10	0.216
15	0.401	15	0.418	15	0.269
20	0.490	20	0.516	20	0.321
22.5	0.549	25	0.564	25	0.366
25	0.592	27.5	0.607	30	0.430
27.5	0.616	30	0.632	35	0.453
30	0.663	32.5	0.671	40	0.506
45		35	0.715	45	0.545
50		50		50	0.590
55		55		55	0.624
60		60		60	0.671
EXPONENT (N)	0643	EXPONENT N	0.590	EXPONENT N	0.637
CONSTANT (C)	0.072	CONSTANT C	0.085	CONSTANT C	0.048
CORRELATION	0.9944	CORRELATION	0.9979	CORRELATION	0.9986
AIR FLOW @ 10PA	0.322 M^3/S	AIR FLOW @ 10PA	0.334 M^3/S	AIR FLOW @ 10PA	0.209 M^3/S
AIR FLOW @ 50PA	0.908 M^3/S	AIR FLOW @ 50PA	0.866 M^3/S	AIR FLOW @ 50 PA	0.588 M^3/S
ELA	0.129 SQM @ 10PA	ELA	0.134 SQM @ 10PA	ELA	0.084 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.47	AIR CHNGS/HRS @ 50PA	4.27	AIR CHNGS/HRS @ 50PA	2.88

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Retrospectors

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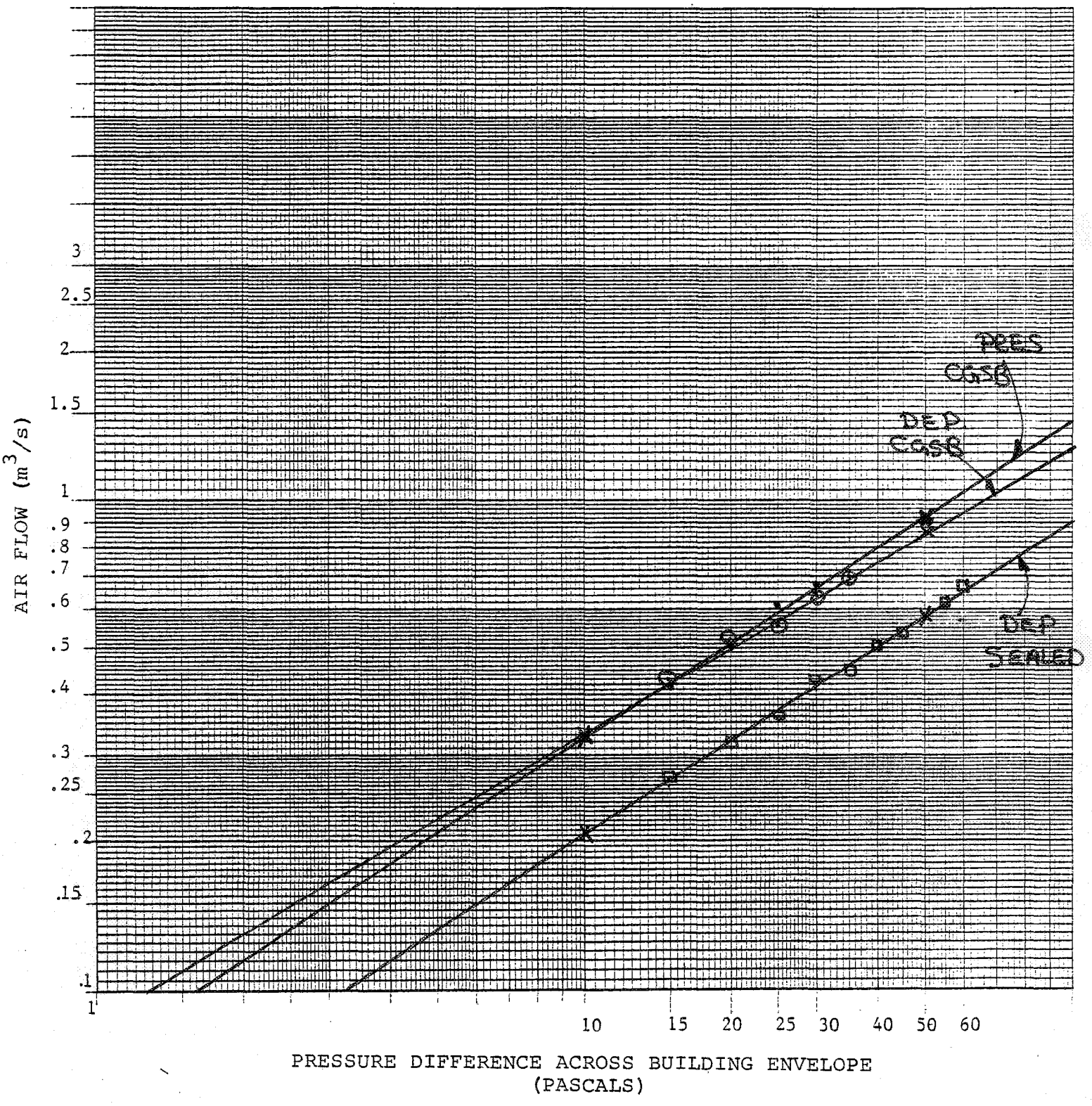
HOUSE # 8

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN.11/83
TIME	15:00 - 15:30
TEST HOUSE	8
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	360m²
VOLUME	730 m³
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	+3.0	20.0°C
REL. HUM	93%	41%
WIND(SPEED&DIR)	SW @ 15 KPH	
AIR PRESSURE	99.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.305	10	-
15		15	0.380	15	-
20		20	0.502	20	0.288
25		25	0.527	25	0.352
30		30	0.595	30	0.387
35		35	0.694	35	0.442
40		40	0.744	40	0.476
45		45		45	0.522
50		50		50	0.565
55		55		55	0.600
60		60		60	0.649
EXPONENT (N)		EXPONENT N	0.644	EXPONENT N	0.718
CONSTANT (C)		CONSTANT C	0.068	CONSTANT C	0.033
CORRELATION		CORRELATION	0.9938	CORRELATION	0.9987
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.302 M^3/S	AIR FLOW @ 10PA	0.177 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.854 M^3/S	AIR FLOW @ 50 PA	0.565 M^3/S
ELA	SQM @ 10PA	ELA	0.121 SQM @ 10PA	ELA	0.071 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	4.20	AIR CHNGS/HRS @ 50PA	2.78

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Retrospectors

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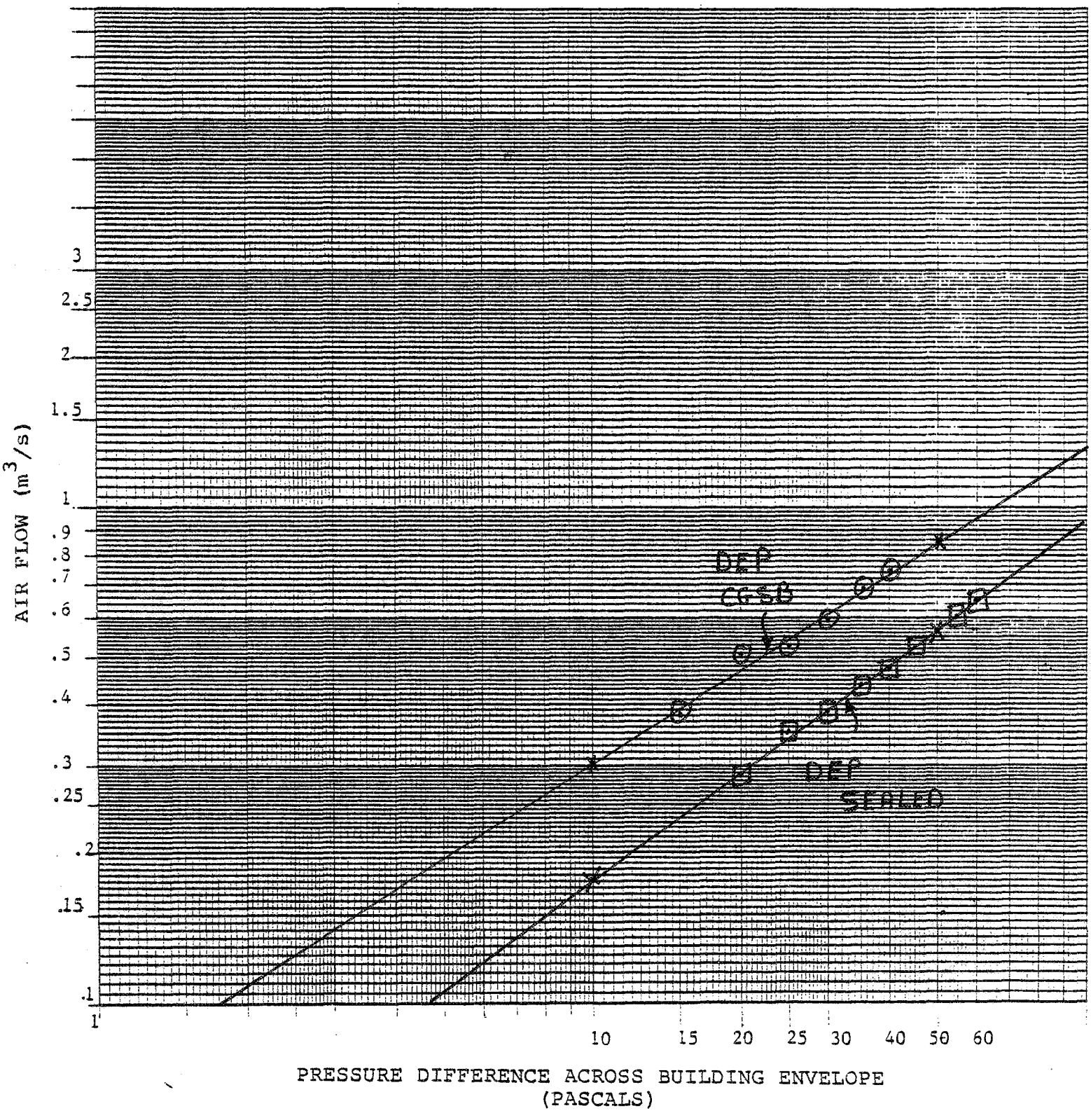
HOUSE # 8

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR.2/82
TIME	10:00
TEST HOUSE	10
TECHNICIAN	GENGE
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-5.0°C	16.8°C
REL. HUM	49%	
WIND(SPEED&DIR)	NW.@15KPH	
AIR PRESSURE	102.5KPA	
PRECIPITATION	NONE	
SOLAR RAD.	S.E	
SKY/CLOUD COND	SCATTERED CLOUD	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	0.220
15		15		15	0.286
20		20		20	0.346
25		25		25	0.396
30		30		30	0.445
35		35		35	0.512
40		40		40	0.543
45		45		45	0.603
50		50		50	0.694
55		55		55	0.666
60		60		60	
EXPONENT (N)		EXPONENT N		EXPONENT N	0.667
CONSTANT (C)		CONSTANT C		CONSTANT C	0.046
CORRELATION		CORRELATION		CORRELATION	0.9994
AIR FLOW @ 10PA ___ M^3/S		AIR FLOW @ 10PA ___ M^3/S		AIR FLOW @ 10PA 0.21 M^3/S	
AIR FLOW @ 50PA ___ M^3/S		AIR FLOW @ 50PA ___ M^3/S		AIR FLOW @ 50 PA 0.63 M^3/S	
ELA ___ SQM @ 10PA		ELA ___ SQM @ 10PA		ELA 0.08 SQM @ 10PA	
AIR CHNGS/HRS @ 50PA ___		AIR CHNGS/HRS @ 50PA ___		AIR CHNGS/HRS @ 50PA 3.63	

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR.15/82
TIME	10:20-11:30
TEST HOUSE	10
TECHNICIAN	LILICO/FUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	8.0°C	18.5°C
REL. HUM	49%	
WIND(SPEED&DIR)	S @ 8 KPH	
AIR PRESSURE	102.4 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	S.E.	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.330	0.381	
15	0.433	0.508	
20	0.521	0.592	
25	0.620	0.626	
30	0.650	0.745	
35	0.701		
40			
45			
50			
55			
60			

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.586	0.567	
CONSTANT (C)	0.090	0.106	
CORRELATION	0.9802	0.9891	
AIR FLOW @ 10PA	0.35 M^3/S	0.39 M^3/S	___ M^3/S
AIR FLOW @ 50PA	0.89 M^3/S	0.97 M^3/S	___ M^3/S
ELA	0.13 SQM @ 10PA	0.15 SQM @ 10PA	___ SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.94	5.63	___

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Retrospectors

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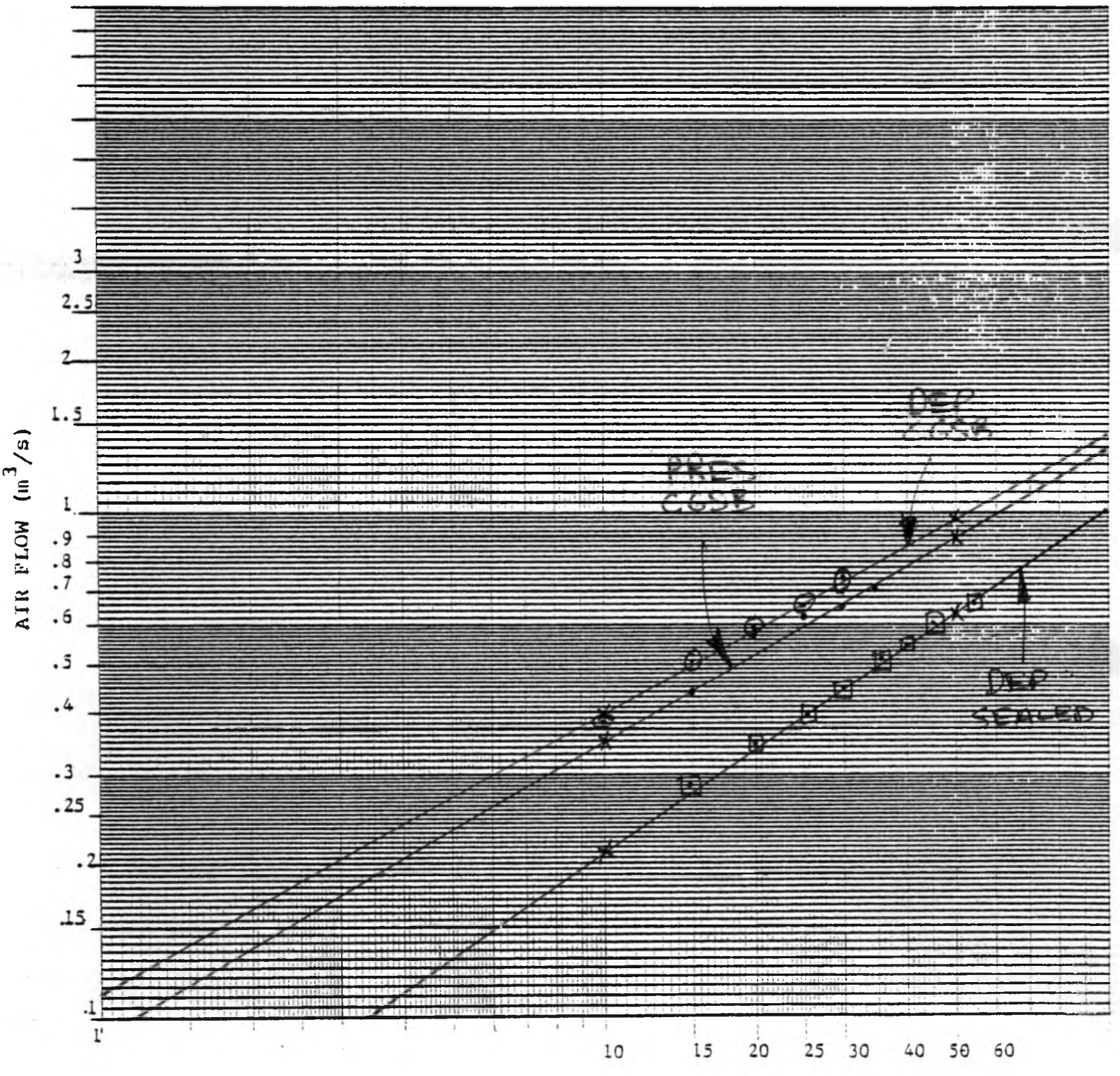
HOUSE # 10

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

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IDENTIFICATION

DATE: June 15/82
TIME: 9:15 - 10:15
TEST HOUSE: 10
TECHNICIAN: FUGLER/SETON
ENVELOPE AREA: 315 m^2
VOLUME: 626 m^3
FIREPLACE: NO
HEATING: GAS
UNFINISHED MODEL

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	15.0°C	19.8°C
REL. HUM	72%	64%
WIND(SPEED&DIR)	SSE @ 7 MPH	
AIR PRESSURE	101.3	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.332	10	0.321	10	
15	0.422	15	0.393	15	
20	0.512	20	0.487	20	0.249
25	0.587	25	0.532	25	0.296
30	0.687	30	0.620	30	0.321
35	0.704	35	0.687	35	0.366
40		40	0.737	40	0.406
45		45		45	0.425
50		50		50	0.465
55		55		55	0.507
60		60		60	0.517

EXPONENT (N)	0.625	EXPONENT N	0.609	EXPONENT N	0.673
CONSTANT (C)	0.078	CONSTANT C	0.077	CONSTANT C	0.033
CORRELATION	0.9969	CORRELEATION	0.9974	CORRELATION	0.9974
AIR FLOW @ 10PA	0.33 M^3/S	AIR FLOW @ 10PA	0.31 M^3/S	AIR FLOW @ 10PA	0.15 M^3/S
AIR FLOW @ 50PA	0.90 M^3/S	AIR FLOW @ 50PA	0.87 M^3/S	AIR FLOW @ 50 PA	0.46 M^3/S
ELA	0.133 SQM @ 10PA	ELA	0.126 SQM @ 10PA	ELA	0.062 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	5.21	AIR CHNGS/HRS @ 50PA	4.84	AIR CHNGS/HRS @ 50PA	2.68

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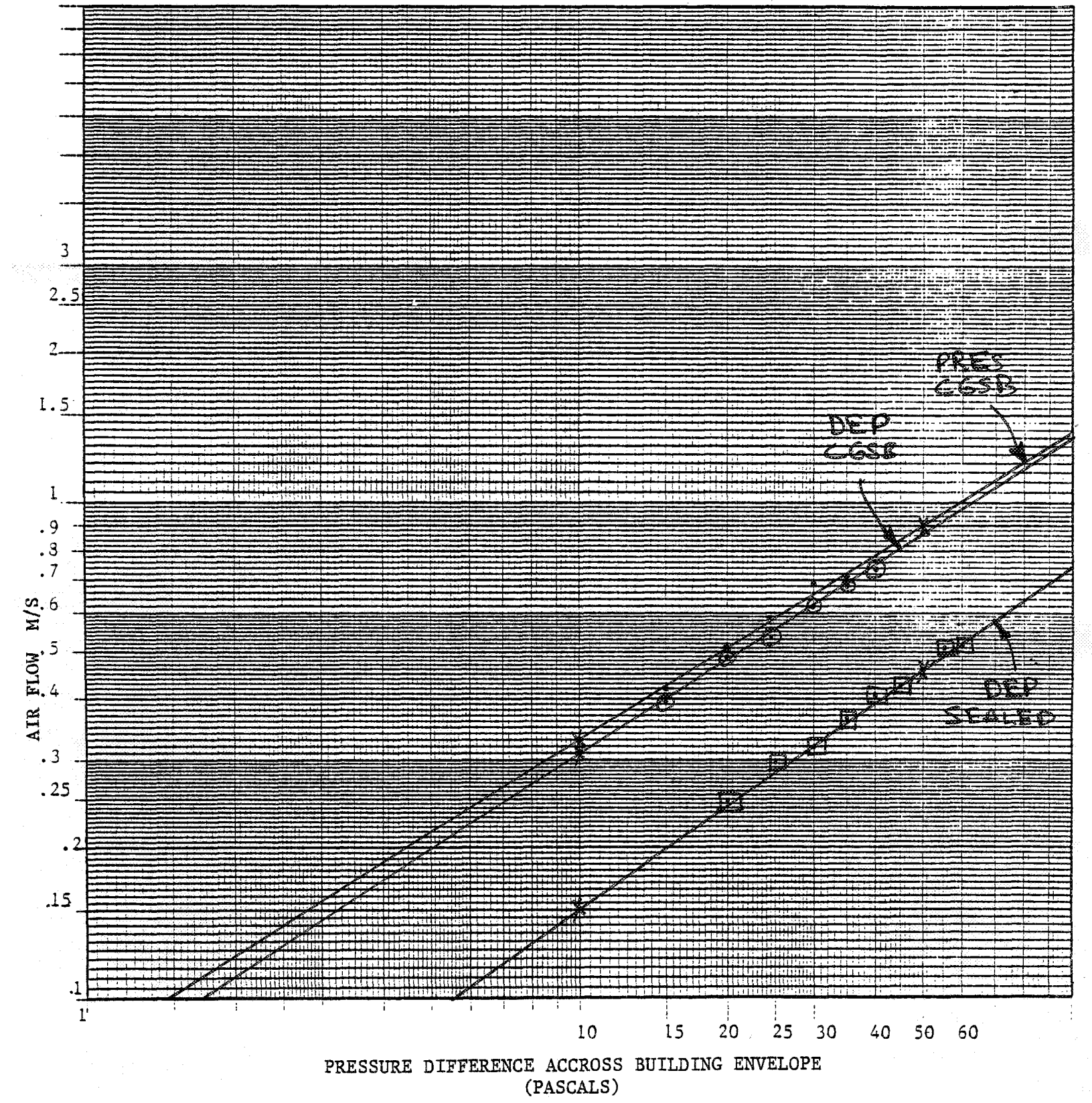
HOUSE # 10

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

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IDENTIFICATION

DATE: Oct 19-82
TIME: 15:00-16:00
TEST HOUSE: 10
TECHNICIAN: ENGLER/SINHA
ENVELOPE AREA: 315 m^2
VOLUME: 626 m^3
FIREPLACE: NO
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	19.0°C	23°C
REL. HUM	55%	62%
WIND(SPEED&DIR)	S@12 KPH	
AIR PRESSURE	102.2 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SLIGHT	
SKY/CLOUD COND	SCATTERED	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.250	10	0.248	10	0.125
15	0.321	15	0.312	15	0.170
20	0.381	20	0.378	20	0.208
25	0.455	25	0.452	25	0.238
30	0.537	30	0.494	30	0.248
35	0.575	35	0.553	35	0.286
40	0.601	40	0.597	40	0.335
45	0.703	45	0.653	45	0.364
50		50	0.705	50	0.364
55		55	0.705	55	0.404
60		60		60	0.428

EXPONENT (N)	0.676	EXPONENT N	0.640	EXPONENT N	0.676
CONSTANT (C)	0.051	CONSTANT C	0.056	CONSTANT C	0.026
CORRELATION	0.9965	CORRELEATION	0.9984	CORRELATION	0.9961
AIR FLOW @ 10PA	0.246 M^3/S	AIR FLOW @ 10PA	0.246 M^3/S	AIR FLOW @ 10PA	0.126 M^3/S
AIR FLOW @ 50PA	0.731 M^3/S	AIR FLOW @ 50PA	0.689 M^3/S	AIR FLOW @ 50 PA	0.376 M^3/S
ELA	0.098 SQM @ 10PA	ELA	0.098 SQM @ 10PA	ELA	0.050 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.20	AIR CHNGS/HRS @ 50PA	3.97	AIR CHNGS/HRS @ 50PA	2.16

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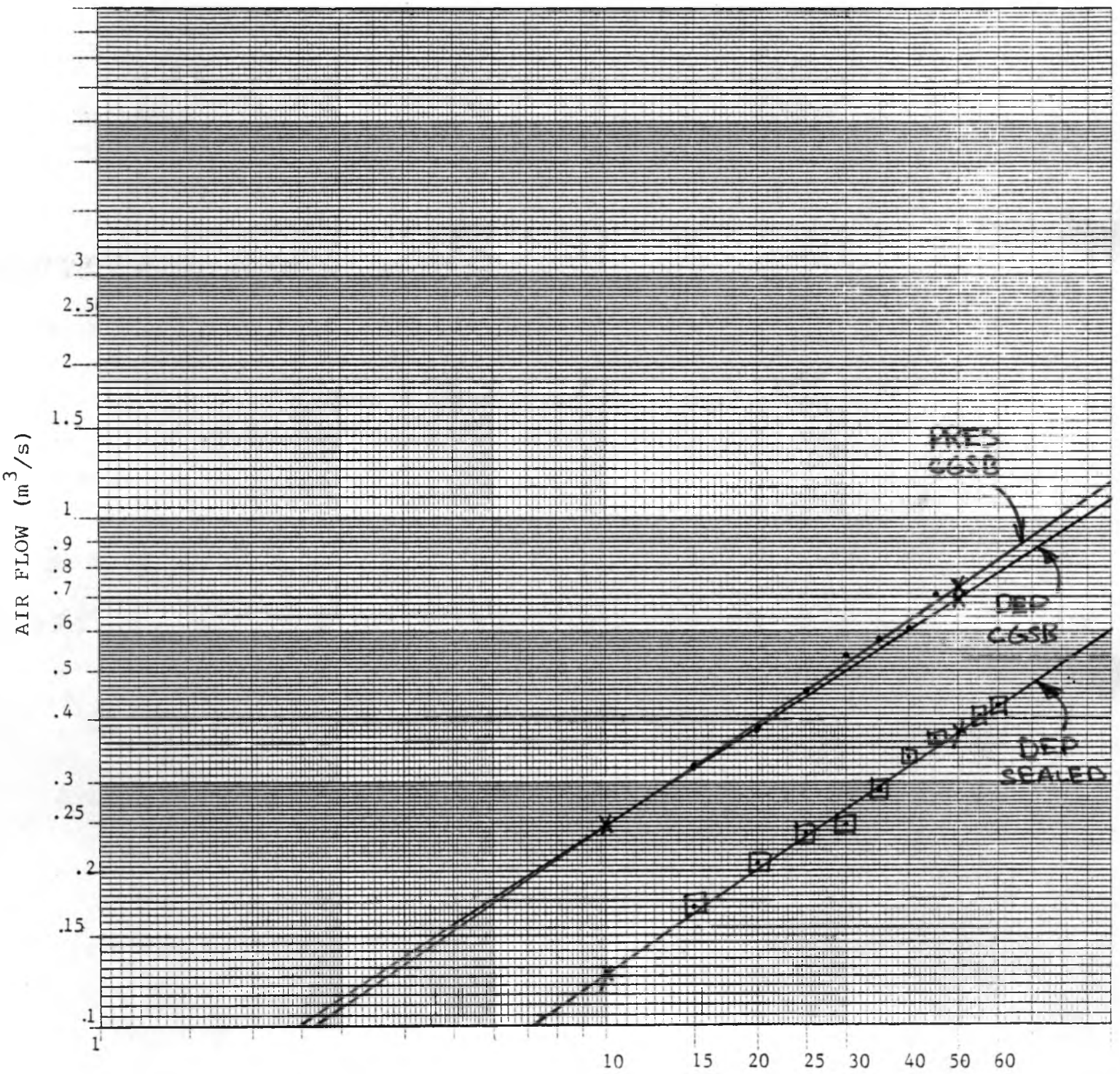
HOUSE # 10

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP" LINE OMITTED DUE TO LACK OF SPACE
CGSB

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 26-83
TIME	14:00-14:30
TEST HOUSE	10
TECHNICIAN	EUGER/SINHA
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-14.7°C	20°C
REL. HUM	50%	35%
WIND(SPEED&DIR)	SW@9KPH	
AIR PRESSURE	102.4 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.269	
15		0.337	
20		0.393	0.228
25		0.454	0.279
30		0.517	0.288
35		0.582	0.337
40		0.649	0.366
45		0.694	0.386
50		0.737	0.442
55		0.764	0.454
60			0.476
EXPONENT (N)		EXPONENT N 0.636	EXPONENT N 0.669
CONSTANT (C)		CONSTANT C 0.060	CONSTANT C 0.036
CORRELATION		CORRELATION 0.9979	CORRELATION 0.9923
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA 0.261 M^3/S	AIR FLOW @ 10PA 0.144 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA 0.718 M^3/S	AIR FLOW @ 50 PA 0.424 M^3/S
ELA	SQM @ 10PA	ELA 0.104 SQM @ 10PA	ELA 0.058 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA 4.19	AIR CHNGS/HRS @ 50PA 2.44

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Retrospectors

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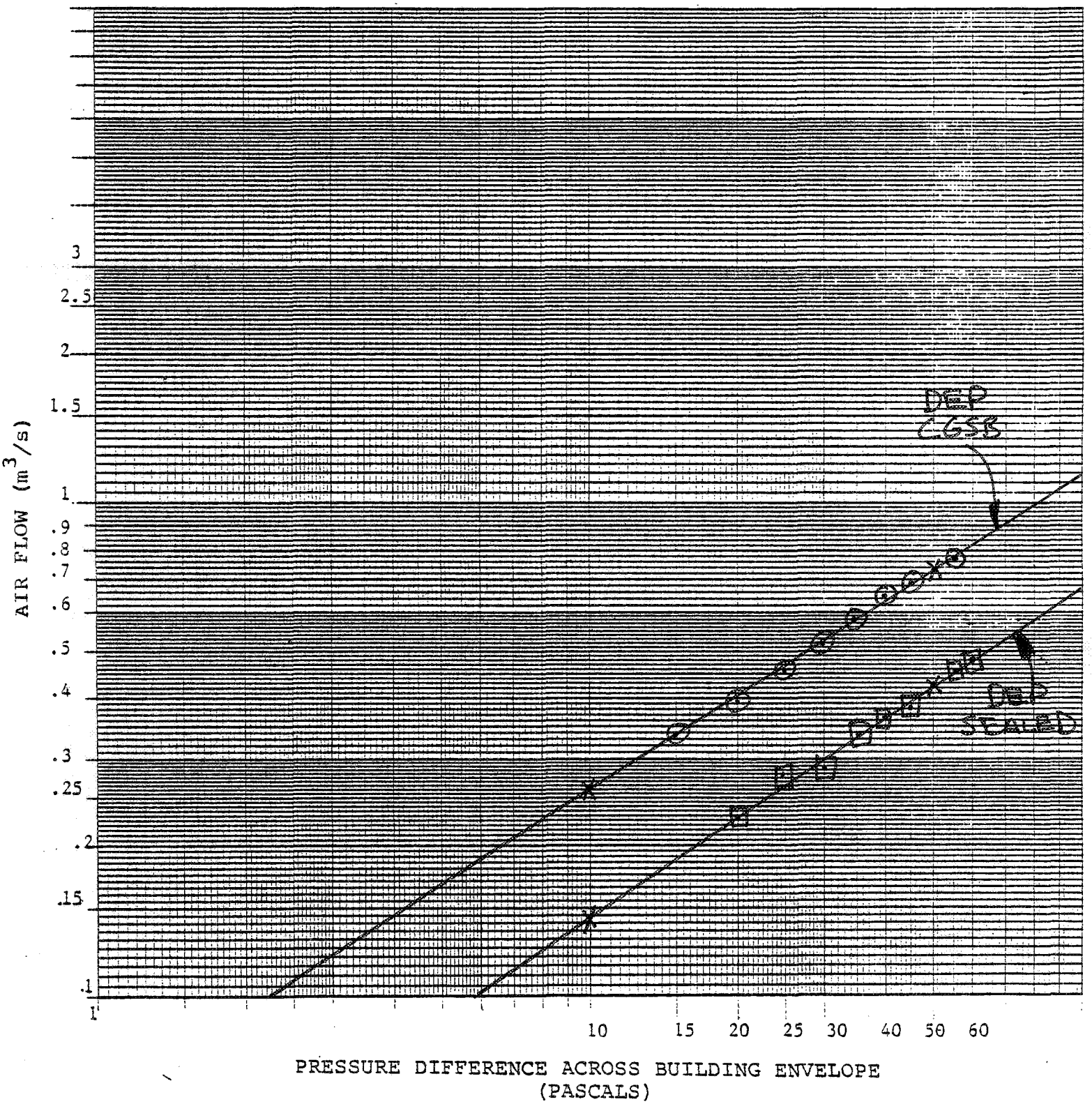
HOUSE # 10

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB 25/82
TIME	15:00
TEST HOUSE	11
TECHNICIAN	ROSENBERG
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-11.°C	20°C
REL. HUM	33%	
WIND(SPEED&DIR)	WNW @ 40-50KPH	
AIR PRESSURE	103.6 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.350	0.486	0.233
25			
30	0.496	0.644	0.381
35			
40	0.629	0.715	0.466
45			
50	0.687	0.829	0.546
55			
60			

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.753	0.566	0.926
CONSTANT (C)	0.037	0.090	0.015
CORRELATION	0.9924	0.9936	0.9890
AIR FLOW @ 10PA	0.21 M^3/S	0.33 M^3/S	0.12 M^3/S
AIR FLOW @ 50PA	0.71 M^3/S	0.82 M^3/S	0.56 M^3/S
ELA	0.08 SQM @ 10PA	0.13 SQM @ 10PA	0.05 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.11	4.77	3.28

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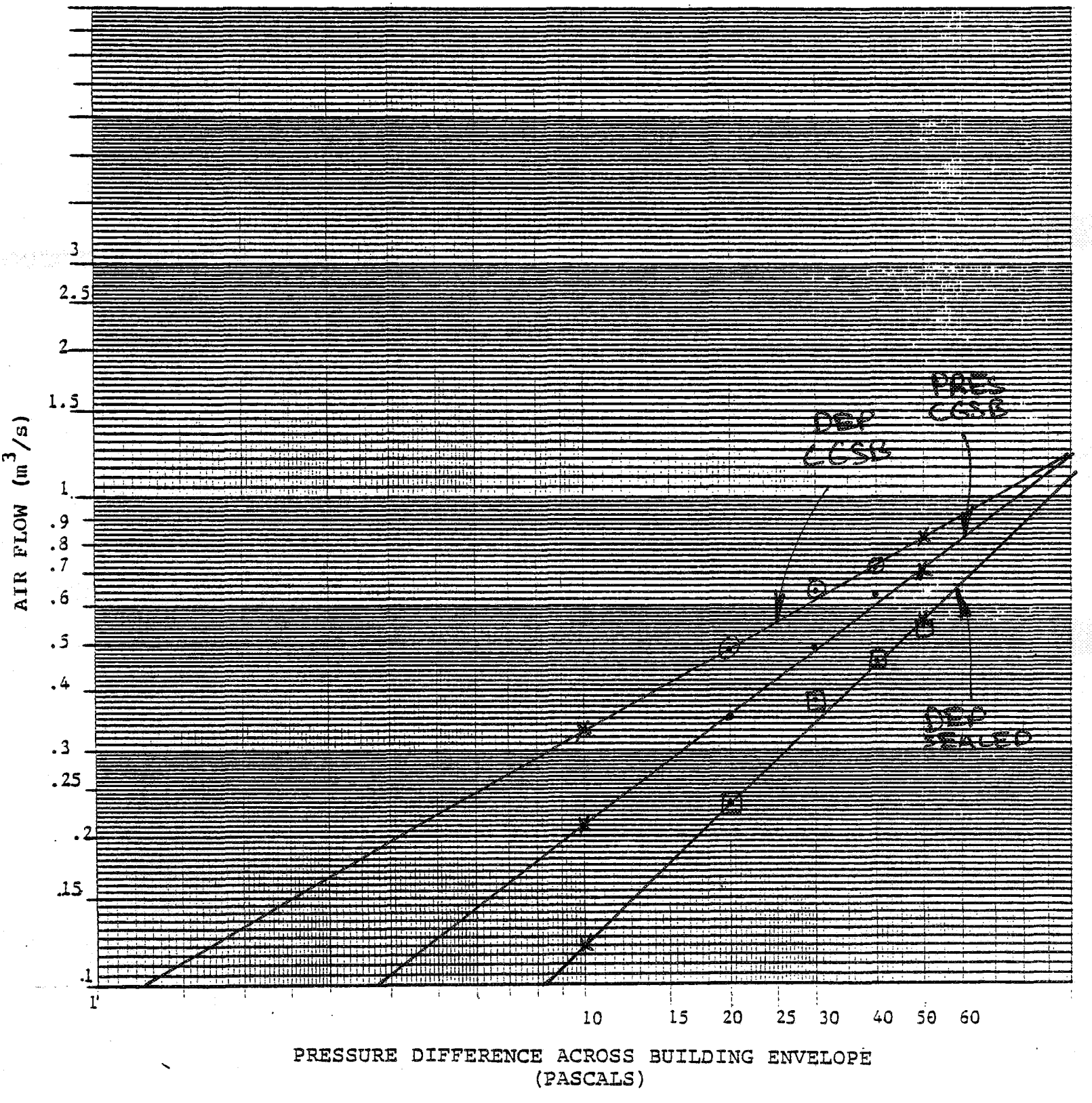
HOUSE # 11

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JUNE 10/82
TIME	13:00 - 14:00
TEST HOUSE	11
TECHNICIAN	EUGLER/SETON
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	25°C	24°C
REL. HUM	39%	61%
WIND(SPEED&DIR)	S.E @ 22 KPH	
AIR PRESSURE	101.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	DIFFUSE-SOUTH	
SKY/CLOUD COND	LIGHT CLOUD COVER	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP SEALED
10	0.214		
15	0.311	0.226	
20	0.356	0.294	
25	0.396	0.364	
30	0.450	0.404	0.258
35	0.482	0.434	0.286
40	0.523	0.483	0.319
45	0.560	0.542	0.349
50	0.611	0.570	0.371
55		0.612	0.397
60		0.660	0.422

EXPONENT (N)	0.610	EXPONENT N	0.743	EXPONENT N	0.713
CONSTANT (C)	0.055	CONSTANT C	0.031	CONSTANT C	0.022
CORRELATION	0.9946	CORRELEATION	0.9969	CORRELATION	0.9991
AIR FLOW @ 10PA	0.22 M^3/S	AIR FLOW @ 10PA	0.17 M^3/S	AIR FLOW @ 10PA	0.11 M^3/S
AIR FLOW @ 50PA	0.60 M^3/S	AIR FLOW @ 50PA	0.57 M^3/S	AIR FLOW @ 50 PA	0.37 M^3/S
ELA	0.091 SQM @ 10PA	ELA	0.070 SQM @ 10PA	ELA	0.047 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.49	AIR CHNGS/HRS @ 50PA	3.32	AIR CHNGS/HRS @ 50PA	2.14

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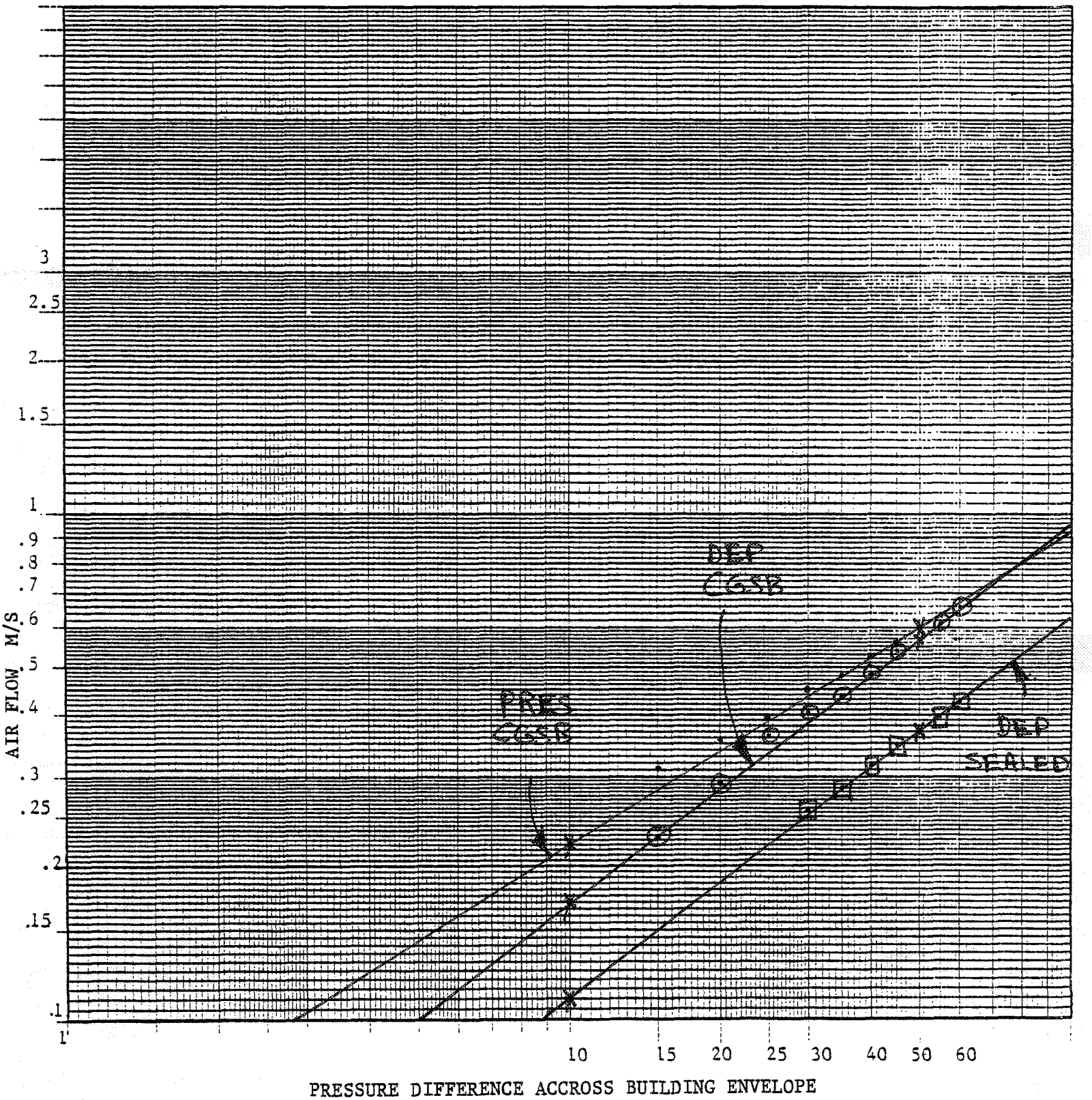
HOUSE # 11

PHASE 2

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	SEPT. 23/82
TIME	11:00
TEST HOUSE	11
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	12°C	19°C
REL. HUM	94%	70%
WIND(SPEED&DIR)	N.E @ 15KPH	
AIR PRESSURE	101.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.295	10	0.178	10	
15	0.315	15	0.252	15	0.162
20	0.359	20	0.296	20	0.177
25	0.434	25	0.340	25	0.204
30	0.478	30	0.369	30	0.256
35	0.517	35	0.416	35	0.270
40	0.571	40	0.446	40	0.306
45	0.605	45	0.480	45	0.322
50	0.666	50	0.522	50	0.353
55		55	0.560	55	0.387
60		60	0.587	60	0.394

EXPONENT (N)	0.613	EXPONENT N	0.643	EXPONENT N	0.681
CONSTANT (C)	0.058	CONSTANT C	0.042	CONSTANT C	0.024
CORRELATION	0.9985	CORRELATION	0.9982	CORRELATION	0.9938
AIR FLOW @ 10PA	0.243 M^3/S	AIR FLOW @ 10PA	0.185 M^3/S	AIR FLOW @ 10PA	0.115 M^3/S
AIR FLOW @ 50PA	0.653 M^3/S	AIR FLOW @ 50PA	0.521 M^3/S	AIR FLOW @ 50 PA	0.347 M^3/S
ELA	0.097 SQM @ 10PA	ELA	0.074 SQM @ 10PA	ELA	0.046 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.76	AIR CHNGS/HRS @ 50PA	3.00	AIR CHNGS/HRS @ 50PA	2.00

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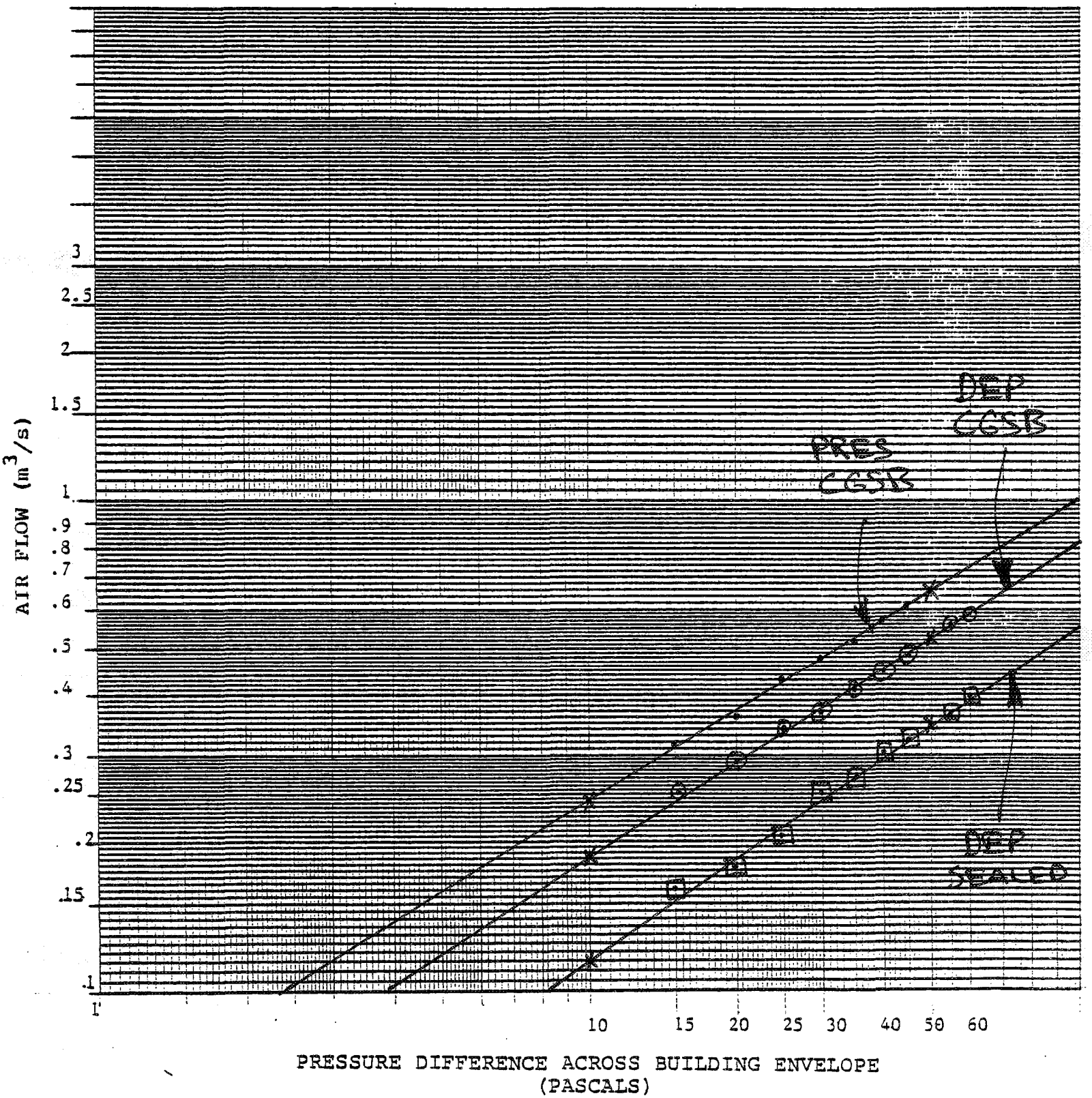
AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	DEC. 7/82
TIME	11:30-12:50
TEST HOUSE	11
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	3°C	21°C
REL. HUM	70%	60%
WIND(SPEED&DIR)	W @ 17 KPH	
AIR PRESSURE	100.9 KPA	
PRECIPITATION	SNOW	
SOLAR RAD.	LITTLE	
SKY/CLOUD COND	MOSTLY OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.210	10		10	
15	0.242	15	0.203	15	0.155
20	0.281	20	0.249	20	0.182
25	0.327	25	0.287	25	0.227
30	0.363	30	0.337	30	0.249
35	0.413	35	0.379	35	0.287
40	0.430	40	0.418	40	0.304
45	0.463	45	0.442	45	0.337
50	0.493	50	0.475	50	0.366
55	0.530	55	0.506	55	0.379
60	0.582	60	0.526	60	0.393

EXPONENT (N)	0.571	EXPONENT N	0.699	EXPONENT N	0.695
CONSTANT (C)	0.053	CONSTANT C	0.030	CONSTANT C	0.023
CORRELATION	0.9955	CORRELATION	0.9985	CORRELATION	0.9973
AIR FLOW @ 10PA	0.198 M^3/S	AIR FLOW @ 10PA	0.154 M^3/S	AIR FLOW @ 10PA	0.117 M^3/S
AIR FLOW @ 50PA	0.497 M^3/S	AIR FLOW @ 50PA	0.476 M^3/S	AIR FLOW @ 50 PA	0.358 M^3/S
ELA	0.079 SQM @ 10PA	ELA	0.061 SQM @ 10PA	ELA	0.046 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.85	AIR CHNGS/HRS @ 50PA	2.74	AIR CHNGS/HRS @ 50PA	2.06

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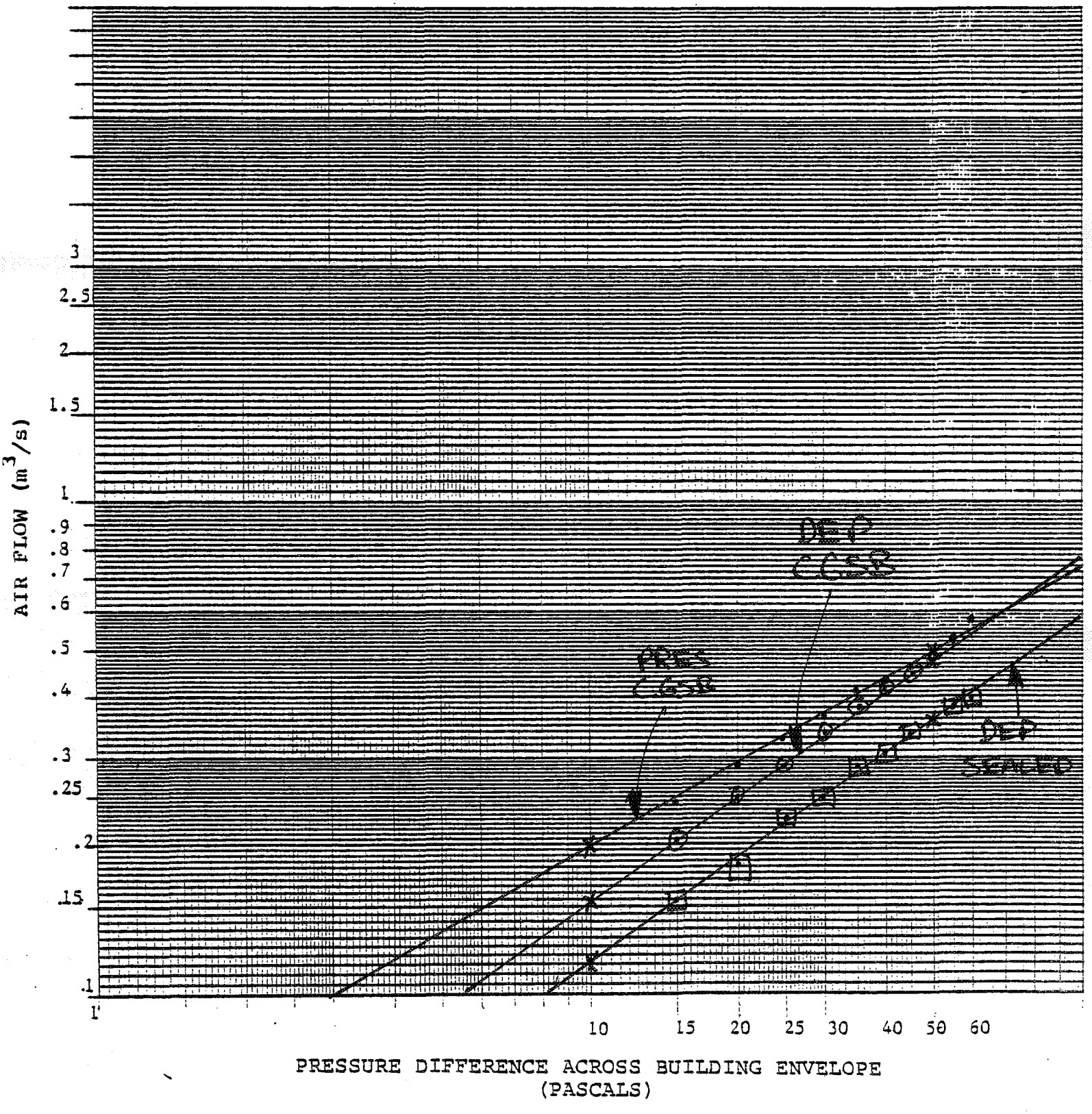
AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR.4/82
TIME	12:15
TEST HOUSE	12
TECHNICIAN	EUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-1.4°C	20.°C
REL. HUM	69%	
WIND(SPEED&DIR)	SW@26-43KPH	
AIR PRESSURE	99.0KPA	
PRECIPITATION	LIGHT SNOW	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.324	10	0.269	10	0.176
15	0.403	15	0.305	15	0.249
20	0.478	20	0.366	20	0.288
25	0.526	25	0.454	25	0.337
30	0.593	30	0.517	30	0.380
35	0.639	35	0.546	35	0.406
40		40	0.600	40	0.442
45		45	0.672	45	0.497
50		50	0.709	50	0.537
55		55		55	
60		60		60	

EXPONENT (N)	0.541	EXPONENT N	0.635	EXPONENT N	0.661
CONSTANT (C)	0.093	CONSTANT C	0.058	CONSTANT C	0.039
CORRELATION	0.9993	CORRELATION	0.9919	CORRELATION	0.9974
AIR FLOW @ 10PA	0.32 M^3/S	AIR FLOW @ 10PA	0.25 M^3/S	AIR FLOW @ 10PA	0.18 M^3/S
AIR FLOW @ 50PA	0.77 M^3/S	AIR FLOW @ 50PA	0.69 M^3/S	AIR FLOW @ 50 PA	0.52 M^3/S
ELA	0.13 SQM @ 10PA	ELA	0.10 SQM @ 10PA	ELA	0.07 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.42	AIR CHNGS/HRS @ 50PA	3.97	AIR CHNGS/HRS @ 50PA	3.00

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Retrospectors

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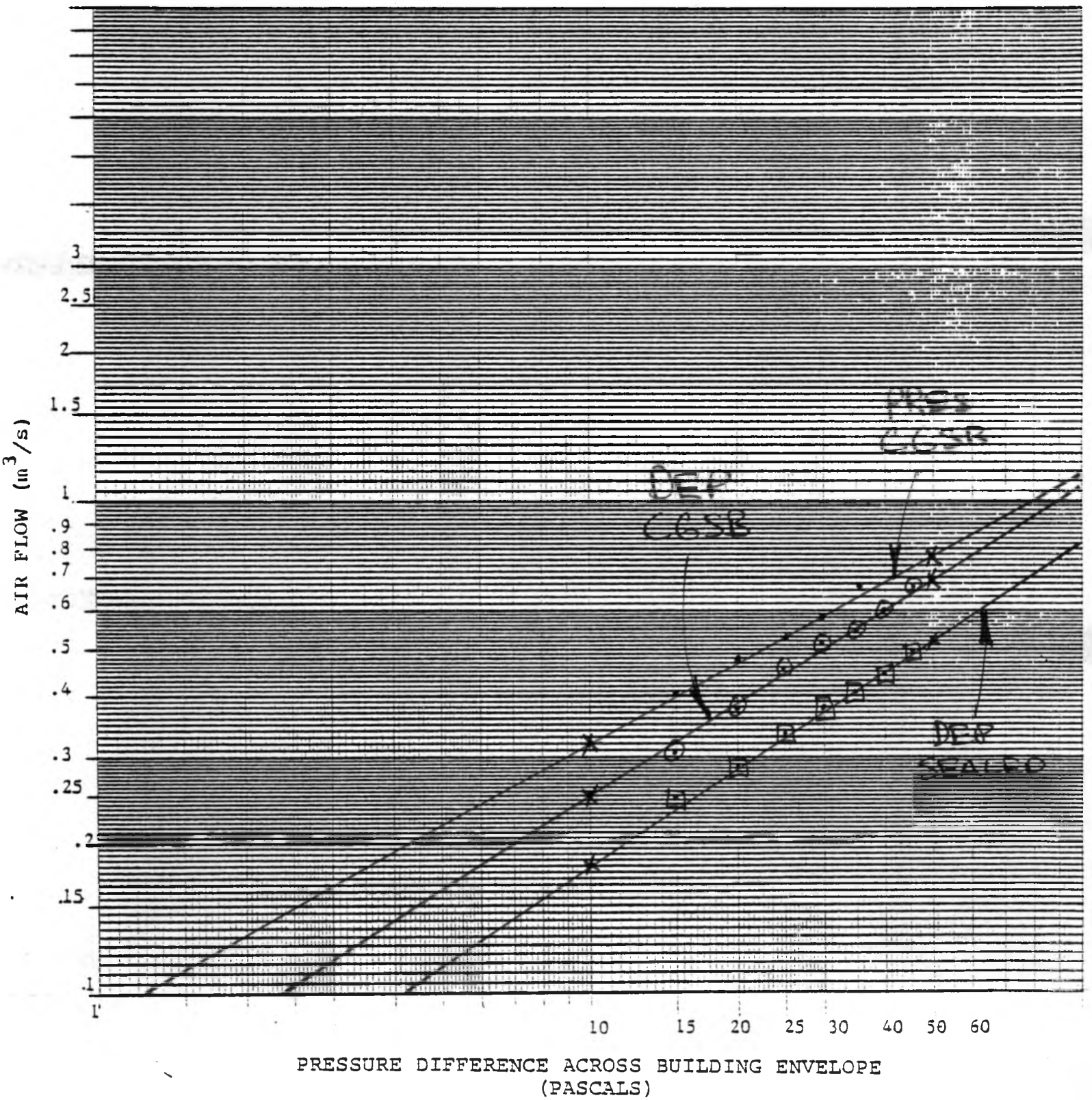
HOUSE # 12

PHASE 1

AIR LEAKAGE PROFILE



176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
(613) 234-3282

Retrospectors

AIR TIGHTNESS TEST REPORT

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IDENTIFICATION

DATE: JUNE 2/82
TIME: 9:35-10:30
TEST HOUSE: 12
TECHNICIAN: SETON/FUGLER
ENVELOPE AREA: 315 m^2
VOLUME: 626 m^3
FIREPLACE: YES
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16.°C	23.°C
REL. HUM	55%	64%
WIND(SPEED&DIR)	W @ 26 KPH	
AIR PRESSURE	101.0 KPa	
PRECIPITATION	NONE	
SOLAR RAD.	S.E.	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15	0.307		
20	0.396	0.336	0.203
25	0.434	0.405	
30	0.500	0.441	0.268
35	0.521	0.452	0.303
40	0.595	0.485	0.350
45	0.629	0.563	0.391
50	0.645	0.614	0.417
55		0.662	0.440
60			0.463

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.611	0.631	0.781
CONSTANT (C)	0.061	0.50	0.019
CORRELATION	0.9932	0.9820	0.9967
AIR FLOW @ 10PA	0.24 M^3/S	0.21 M^3/S	0.11 M^3/S
AIR FLOW @ 50PA	0.66 M^3/S	0.59 M^3/S	0.41 M^3/S
ELA	0.099 SQM @ 10PA	0.087 SQM @ 10PA	0.046 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.82	3.45	2.36

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Retrospectors

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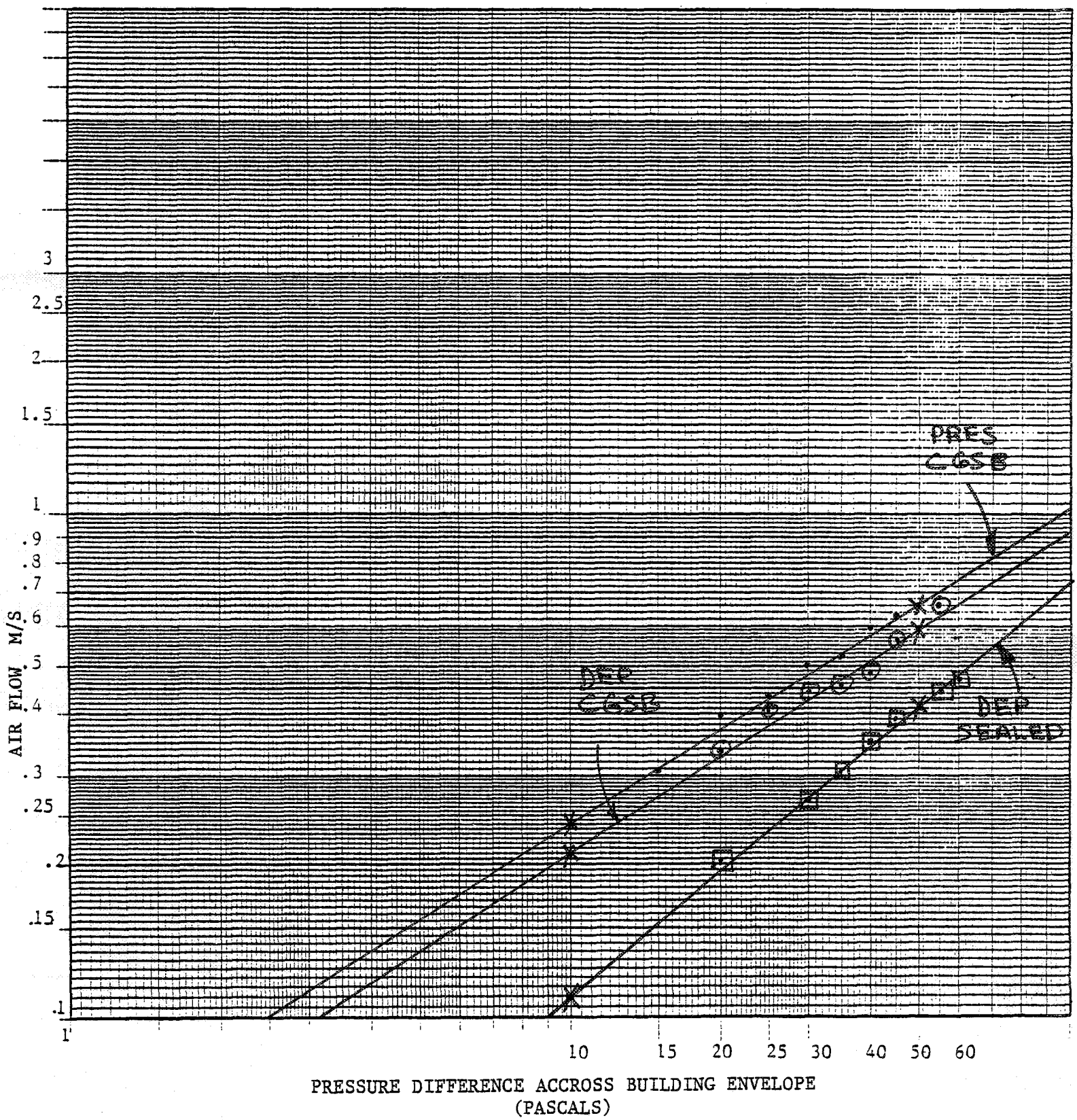
HOUSE # 12

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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(613) 234-3280

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	SEPT. 12/82
TIME	11:00
TEST HOUSE	12
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	11°C	18°C
REL. HUM	66%	60%
WIND(SPEED&DIR)	N@14KPH	
AIR PRESSURE	102.1 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.223	10	0.228	10	
15	0.331	15	0.270	15	
20	0.372	20	0.353	20	0.228
25	0.433	25	0.408	25	0.250
30	0.477	30	0.444	30	0.280
35	0.531	35	0.478	35	0.323
40	0.570	40	0.576	40	0.353
45	0.595	45	0.576	45	0.388
50	0.636	50	0.627	50	0.408
55	0.673	55	0.659	55	0.438
60		60	0.674	60	0.467

EXPONENT (N)	0.614	EXPONENT N	0.634	EXPONENT N	0.676
CONSTANT (C)	0.058	CONSTANT C	0.051	CONSTANT C	0.029
CORRELATION	0.9942	CORRELATION	0.9952	CORRELATION	0.9965
AIR FLOW @ 10PA	0.240 M^3/S	AIR FLOW @ 10PA	0.213 M^3/S	AIR FLOW @ 10PA	0.138 M^3/S
AIR FLOW @ 50PA	0.647 M^3/S	AIR FLOW @ 50PA	0.620 M^3/S	AIR FLOW @ 50 PA	0.410 M^3/S
ELA	0.096 SQM @ 10PA	ELA	0.089 SQM @ 10PA	ELA	0.055 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.72	AIR CHNGS/HRS @ 50PA	3.56	AIR CHNGS/HRS @ 50PA	2.36

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Retrospectors

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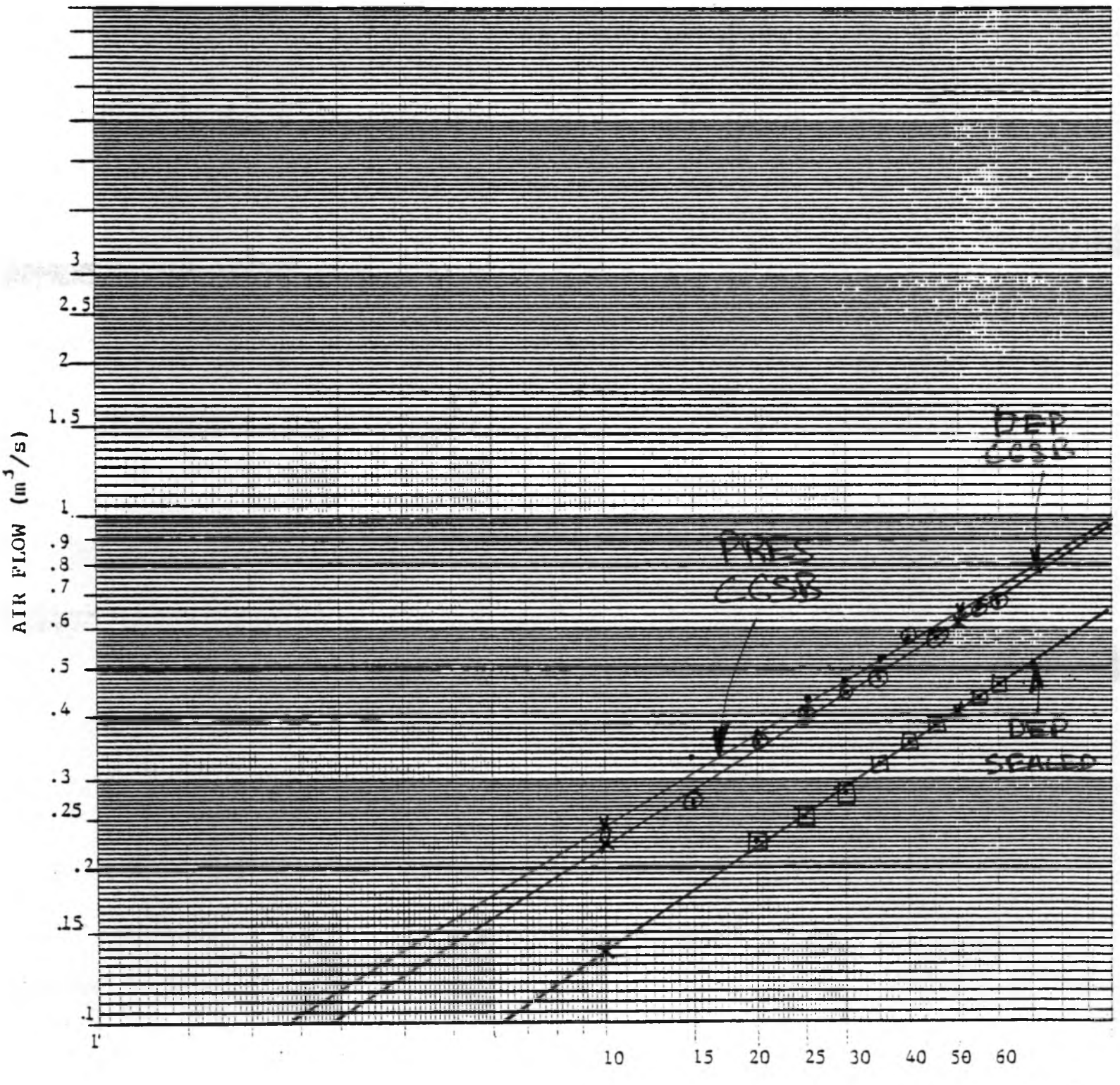
HOUSE # _____

PHASE _____

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 21-83
TIME	10:45-11:05
TEST HOUSE	12
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-11°C	19°C
REL. HUM	67%	35%
WIND(SPEED&DIR)	NW @ 12 KPH	
AIR PRESSURE	103.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.204	10	-
15		15	0.288	15	-
20		20	0.360	20	0.216
25		25	0.431	25	0.250
30		30	0.477	30	0.297
35		35	0.537	35	0.338
40		40	0.566	40	0.374
45		45	0.601	45	0.401
50		50	0.665	50	0.431
55		55	0.717	55	0.460
60		60	0.745	60	0.493
EXPONENT (N)		EXPONENT N	0.705	EXPONENT N	0.754
CONSTANT (C)		CONSTANT C	0.042	CONSTANT C	0.022
CORRELATION		CORRELATION	0.9972	CORRELATION	0.9985
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.215 M^3/S	AIR FLOW @ 10PA	0.128 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.670 M^3/S	AIR FLOW @ 50 PA	0.433 M^3/S
ELA	SQM @ 10PA	ELA	0.086 SQM @ 10PA	ELA	0.051 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	3.86	AIR CHNGS/HRS @ 50PA	2.50

176 Bronson Ave.
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Retrospectors

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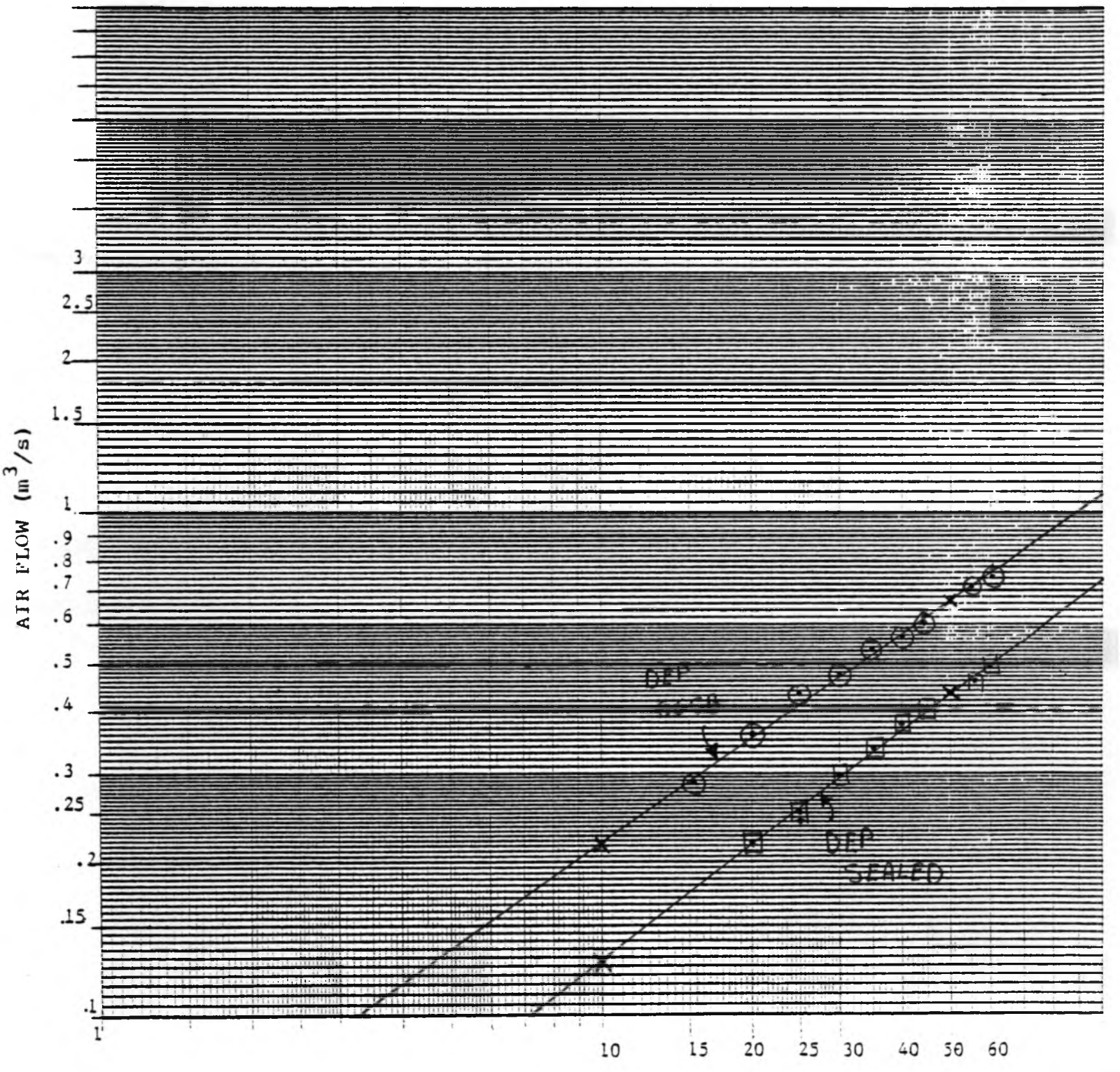
HOUSE # 12

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR. 4/82
TIME	N.A.
TEST HOUSE	13
TECHNICIAN	ROSENBERG
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-9.0°C	20°C
REL. HUM	44%	47%
WIND(SPEED&DIR)	E@20KPH	
AIR PRESSURE	101.6KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15		15	
20	0.526	20		20	0.348
25		25	0.605	25	0.396
30		30		30	0.453
35		35	0.736	35	0.519
40	0.702	40	0.762	40	0.541
45		45	0.826	45	0.588
50	0.787	50		50	0.649
55		55	0.890	55	0.684
60	0.812	60		60	0.668

EXPONENT (N)	0.467	EXPONENT N	0.490	EXPONENT N	0.639
CONSTANT (C)	0.156	CONSTANT C	0.126	CONSTANT C	0.051
CORRELATION	0.9957	CORRELATION	0.9943	CORRELATION	0.9928
AIR FLOW @ 10PA	0.40 M^3/S	AIR FLOW @ 10PA	0.39 M^3/S	AIR FLOW @ 10PA	0.22 M^3/S
AIR FLOW @ 50PA	0.77 M^3/S	AIR FLOW @ 50PA	0.85 M^3/S	AIR FLOW @ 50 PA	0.62 M^3/S
ELA	0.15 SQM @ 10PA	ELA	0.15 SQM @ 10PA	ELA	0.09 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.42	AIR CHNGS/HRS @ 50PA	4.95	AIR CHNGS/HRS @ 50PA	3.63

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Retrospectors

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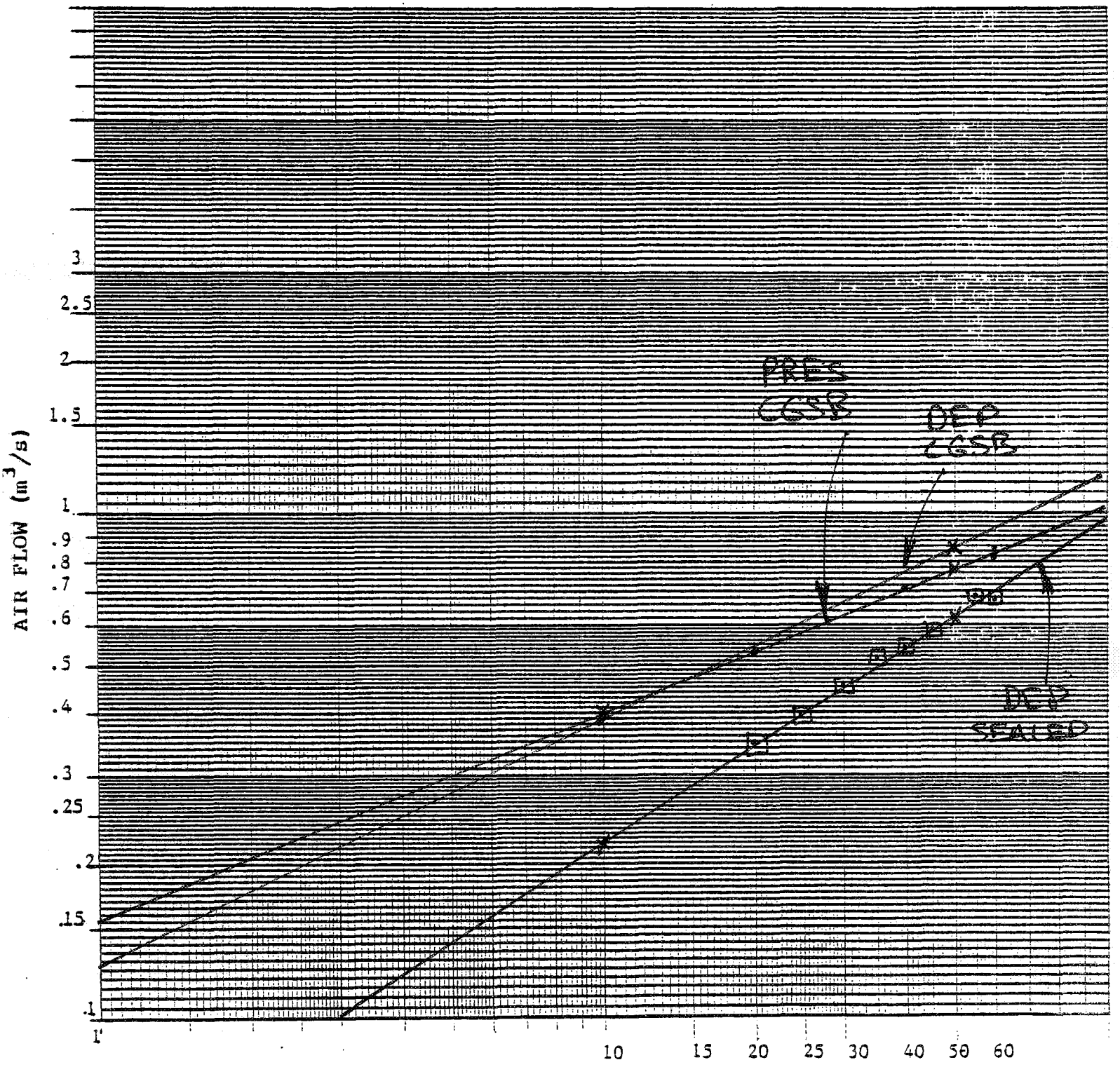
HOUSE # 13

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "CGSB" DEP LINE OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAY 31/82
TIME	9:40-10:45
TEST HOUSE	13
TECHNICIAN	FUGLER/SETON
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	No
HEATING	Gas

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	23°C	23°C
REL. HUM	83%	74%
WIND(SPEED&DIR)	SE @ 6Km	
AIR PRESSURE	100.8 KPa	
PRECIPITATION	none	
SOLAR RAD.	none	
SKY/CLOUD COND	overcast	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15	0.358	0.350	
20	0.435	0.434	0.226
25	0.500	0.474	—
30	0.539	0.520	0.277
35	0.580	0.534	0.303
40	0.647	0.617	0.343
45	0.714	0.653	0.371
50			0.391
55			0.410
60			0.428

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.577	0.589	0.603
CONSTANT (C)	0.076	0.069	0.036
CORRELATION	0.9973	0.9918	0.9960
AIR FLOW @ 10PA	0.29 M^3/S	0.27 M^3/S	0.14 M^3/S
AIR FLOW @ 50PA	0.73 M^3/S	0.69 M^3/S	0.38 M^3/S
ELA	0.116 SQM @ 10PA	0.108 SQM @ 10PA	0.057 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.23	4.03	2.23

176 Bronson Ave.
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Retrospectors

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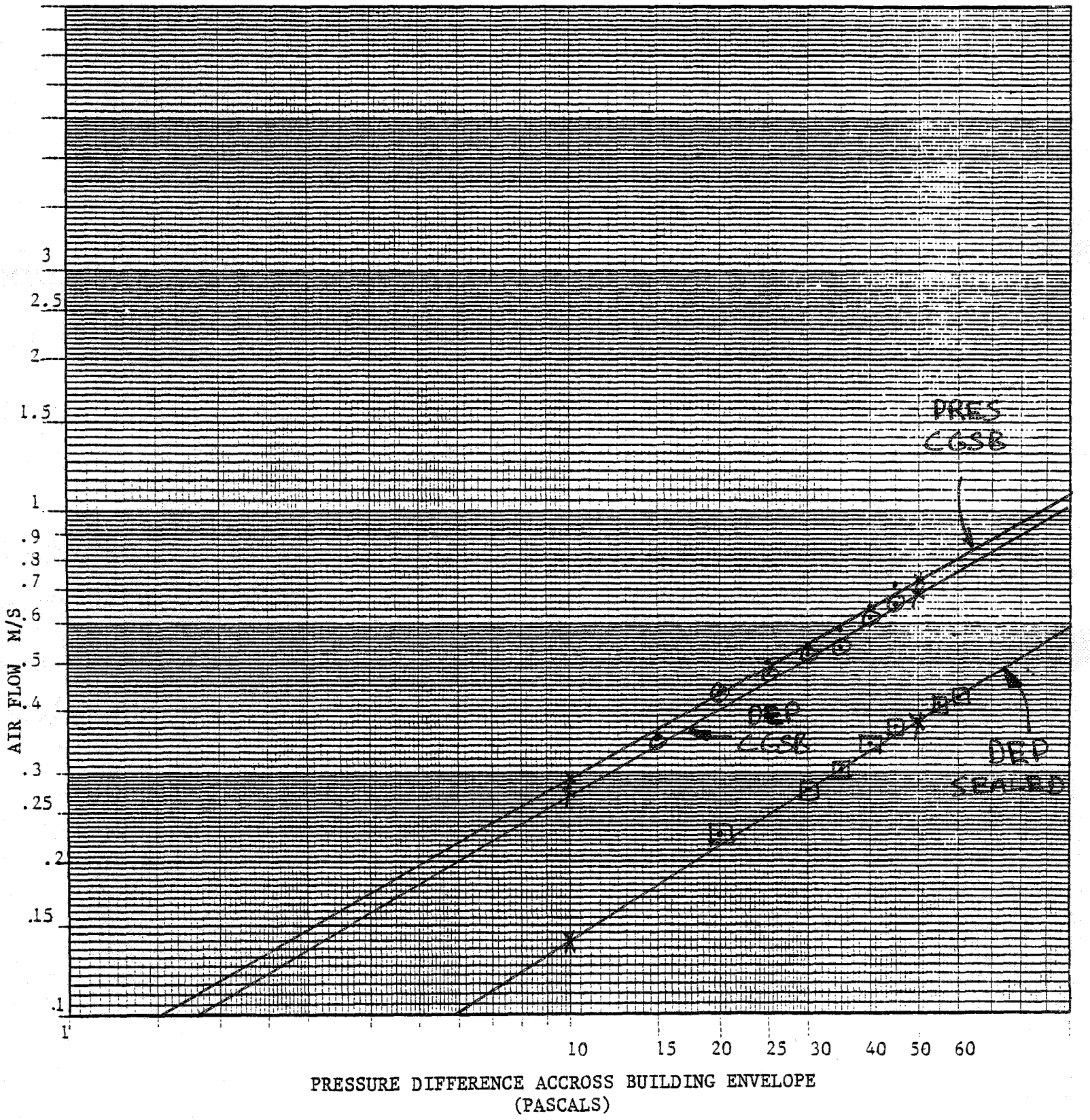
HOUSE # 13

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
(613) 234-3280

Retrospectors

IDENTIFICATION

DATE	SEPT. 21/82
TIME	14:00
TEST HOUSE	13
TECHNICIAN	Fugler/Poaquin
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	17°C	22°C
REL. HUM	72%	60%
WIND (SPEED&DIR)	NE 10 KPH	
AIR PRESSURE	101.9 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOME	
SKY/CLOUD COND	PARTLY CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.306	0.304	
15	0.367	0.351	0.203
20	0.455	0.417	0.227
25	0.498	0.474	0.268
30	0.566	0.505	0.295
35	0.618	0.544	0.320
40	0.681	0.598	0.351
45		0.639	0.379
50		0.677	0.405
55			0.429
60			0.441
EXPONENT (N)	0.579	EXPONENT N 0.505	EXPONENT N 0.585
CONSTANT (C)	0.078	CONSTANT C 0.092	CONSTANT C 0.040
CORRELATION	0.9974	CORRELEATION 0.9972	CORRELATION 0.9981
AIR FLOW @ 10PA	0.299 M^3/S	AIR FLOW @ 10PA 0.295 M^3/S	AIR FLOW @ 10PA 0.156 M^3/S
AIR FLOW @ 50PA	0.761 M^3/S	AIR FLOW @ 50PA 0.666 M^3/S	AIR FLOW @ 50 PA 0.400 M^3/S
ELA	0.120 SQM @ 10PA	ELA 0.118 SQM @ 10PA	ELA 0.062 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.37	AIR CHNGS/HRS @ 50PA 3.83	AIR CHNGS/HRS @ 50PA 2.31

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Retrospectors

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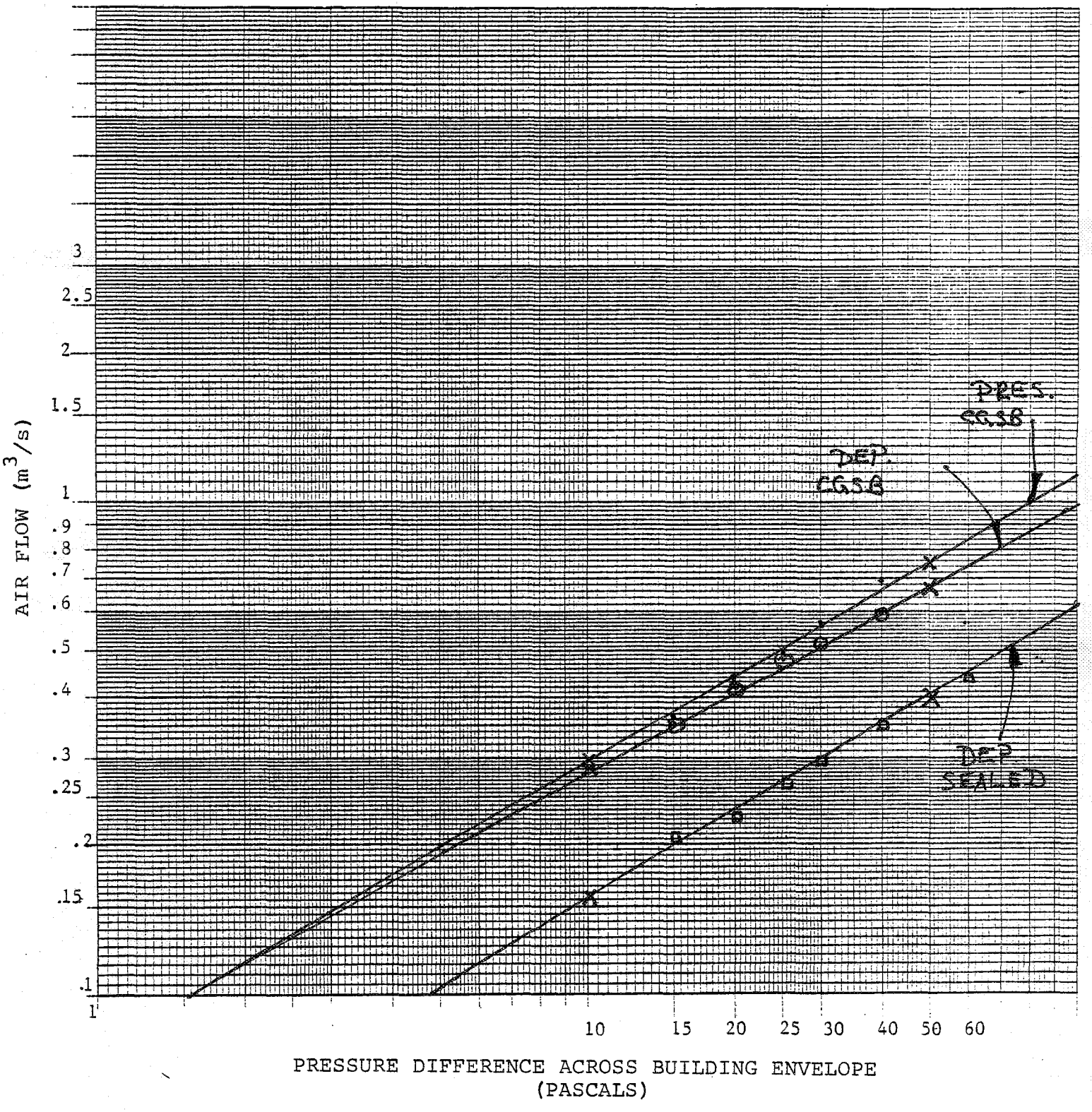
HOUSE # 13

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 07-83
TIME	13:30-14:30
TEST HOUSE	13
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	1.°C	20°C
REL. HUM	93%	55%
WIND(SPEED&DIR)	S@18KPH	
AIR PRESSURE	99.9 KPA	
PRECIPITATION	SNOW	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.227	10	
15		15	0.278	15	0.177
20		20	0.373	20	0.228
25		25	0.430	25	0.238
30		30	0.436	30	0.269
35		35	0.521	35	0.296
40		40	0.573	40	0.329
45		45	0.594	45	0.366
50		50	0.632	50	0.393
55		55	0.671	55	0.418
60		60	0.715	60	0.424
EXPONENT (N)		EXPONENT N	0.643	EXPONENT N	0.637
CONSTANT (C)		CONSTANT C	0.051	CONSTANT C	0.031
CORRELATION		CORRELATION	0.9951	CORRELATION	0.9941
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.227 M^3/S	AIR FLOW @ 10PA	0.137 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.640 M^3/S	AIR FLOW @ 50 PA	0.384 M^3/S
ELA	SQM @ 10PA	ELA	0.091 SQM @ 10PA	ELA	0.055 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	3.69	AIR CHNGS/HRS @ 50PA	2.21

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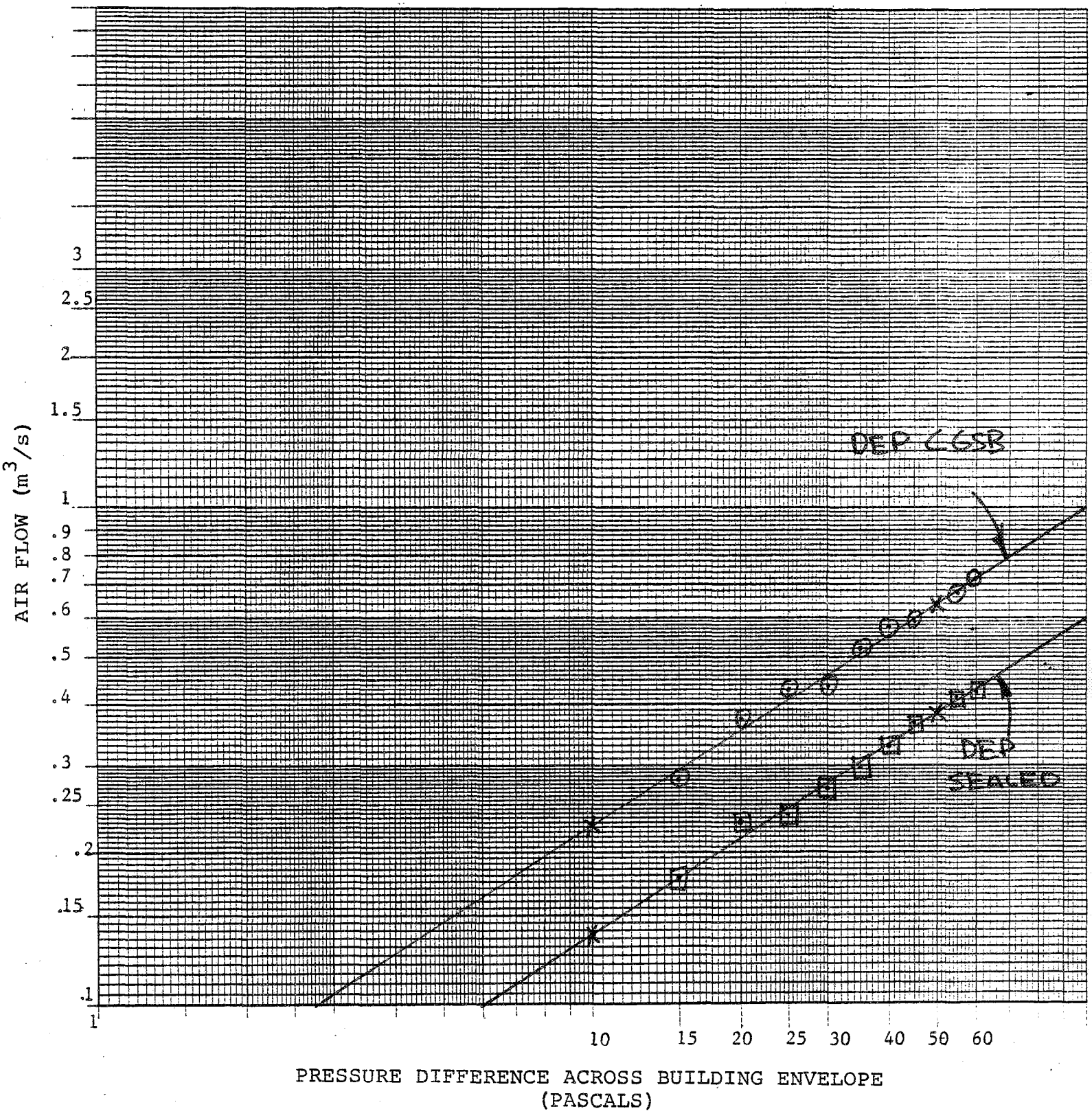
Retrospectors

HOUSE # 13

PHASE 4

AIR LEAKAGE PROFILE



176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR.11/83
TIME	15:00
TEST HOUSE	14
TECHNICIAN	ROSENBERG
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	5.°C	20°C
REL. HUM	70%	
WIND(SPEED&DIR)	SW. @ 13KPH	
AIR PRESSURE	100.9 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15		15	
20	0.541	20	0.509	20	0.486
25	0.591	25	0.584	25	0.513
30	0.627	30	0.644	30	
35	0.649	35	0.666	35	0.666
40	0.720	40	0.814	40	0.739
45	0.760	45	0.853	45	
50	0.807	50	0.907	50	0.855
55	0.896	55	1.024	55	0.893
60	0.911	60	1.015	60	0.935
EXPONENT (N)	0.486	EXPONENT N	0.663	EXPONENT N	0.637
CONSTANT (C)	0.121	CONSTANT C	0.068	CONSTANT C	0.069
CORRELATION	0.9847	CORRELATION	0.9887	CORRELATION	0.9945
AIR FLOW @ 10PA	0.37 M^3/S	AIR FLOW @ 10PA	0.31 M^3/S	AIR FLOW @ 10PA	0.30 M^3/S
AIR FLOW @ 50PA	0.82 M^3/S	AIR FLOW @ 50PA	0.91 M^3/S	AIR FLOW @ 50 PA	0.84 M^3/S
ELA	0.14 SQM @ 10PA	ELA	0.12 SQM @ 10PA	ELA	0.12 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.69	AIR CHNGS/HRS @ 50PA	5.24	AIR CHNGS/HRS @ 50PA	4.84

176 Bronson Ave.
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Retrospectors

AIR LEAKAGE PROFILE

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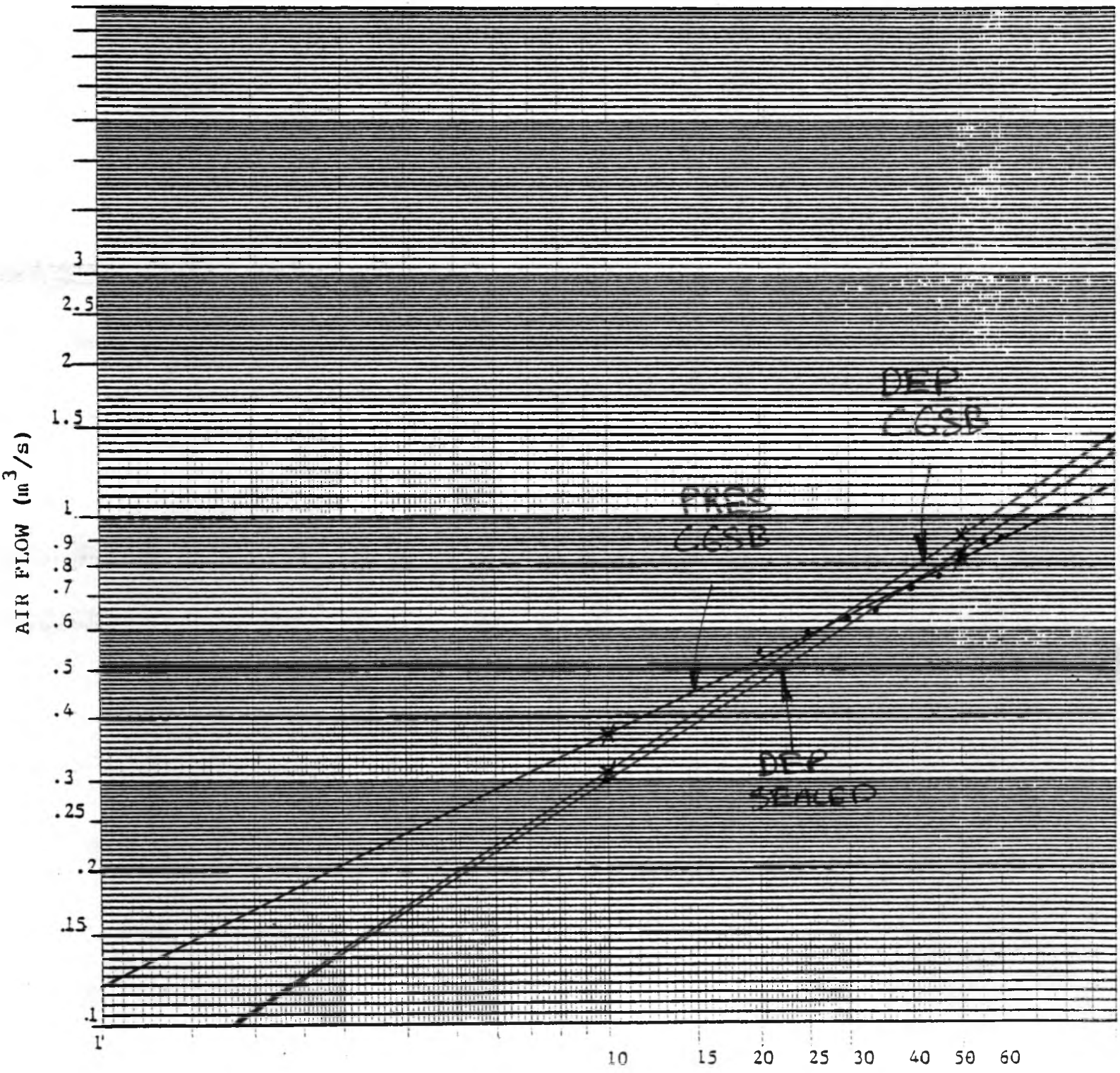
HOUSE # 14

PHASE 1



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS. ON DEP. LINES OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

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IDENTIFICATION

DATE	MAY 28/82
TIME	14:20 - 15:50
TEST HOUSE	14
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	Yes
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	21°C	22.7°C
REL. HUM	73%	61%
WIND(SPEED&DIR)	S@7 KPH	
AIR PRESSURE	101.5 KPA	
PRECIPITATION	LIGHT RAIN	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP. SEALED
10	.177	.160	.143
15	—	—	—
20	.321	.286	.189
25	—	—	—
30	.424	.378	.295
35	.453	.417	.303
40	.496	.452	.350
45	.559	.489	.371
50	.595	.553	.404
55	.624	.571	.440
60	—	.605	.463

	PRES CGSB	DEP CGSB	DEP. SEALED
EXPONENT (N)	.732	.733	.683
CONSTANT (C)	.034	.030	.027
CORRELATION	.9972	.9983	.9900
AIR FLOW @ 10PA	.18 M^3/S	.16 M^3/S	.13 M^3/S
AIR FLOW @ 50PA	.59 M^3/S	.53 M^3/S	.40 M^3/S
ELA	0.073 SQM @ 10PA	0.066 SQM @ 10PA	0.053 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.43	3.10	2.32

176 Bronson Ave.
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K1R 6H4
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Retrospectors

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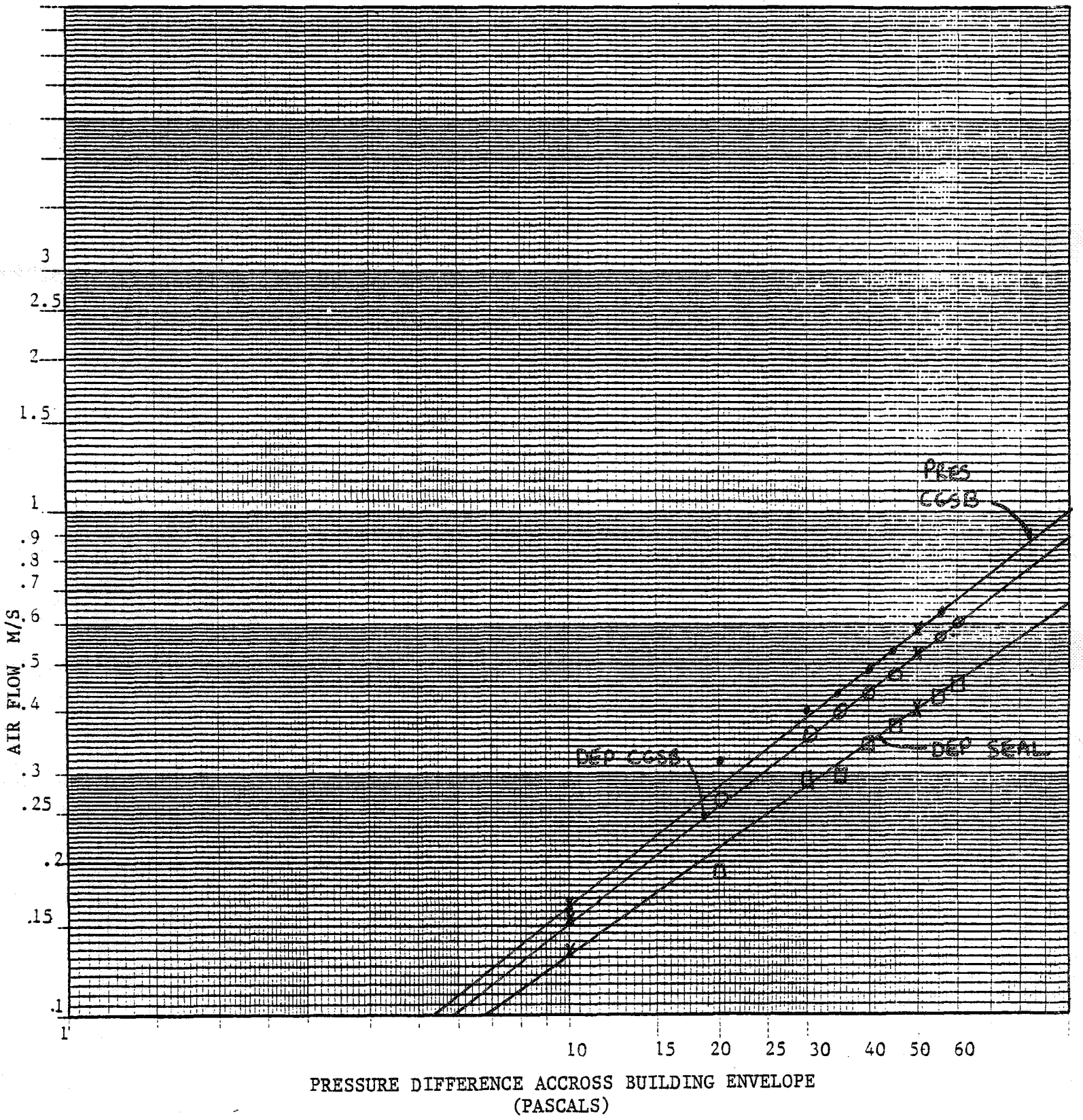
HOUSE # 14

PHASE 2

AIR LEAKAGE PROFILE



176 Bronson Ave.
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Z-126

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	OCT. 7/82
TIME	9:30-10:30
TEST HOUSE	14
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	11°C	21°C
REL. HUM	76%	65%
WIND(SPEED&DIR)	E@30KPH	
AIR PRESSURE	102.2 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.283	10	0.227	10	0.141
15	0.347	15	0.304	15	0.182
20	0.424	20	0.366	20	0.227
25	0.479	25	0.426	25	0.269
30	0.555	30	0.506	30	0.304
35	0.623	35	0.554	35	0.337
40	0.691	40	0.599	40	0.379
45	0.712	45	0.646	45	0.406
50		50	0.671	50	0.436
55		55		55	0.464
60		60		60	0.506

EXPONENT (N)	0.641	EXPONENT N	0.685	EXPONENT N	0.710
CONSTANT (C)	0.062	CONSTANT C	0.047	CONSTANT C	0.027
CORRELATION	0.9972	CORRELATION	0.9985	CORRELATION	0.9995
AIR FLOW @ 10PA	0.274 M^3/S	AIR FLOW @ 10PA	0.230 M^3/S	AIR FLOW @ 10PA	0.139 M^3/S
AIR FLOW @ 50PA	0.772 M^3/S	AIR FLOW @ 50PA	0.693 M^3/S	AIR FLOW @ 50 PA	0.437 M^3/S
ELA	0.110 SQM @ 10PA	ELA	0.092 SQM @ 10PA	ELA	0.055 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.44	AIR CHNGS/HRS @ 50PA	3.99	AIR CHNGS/HRS @ 50PA	2.52

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Retrospectors

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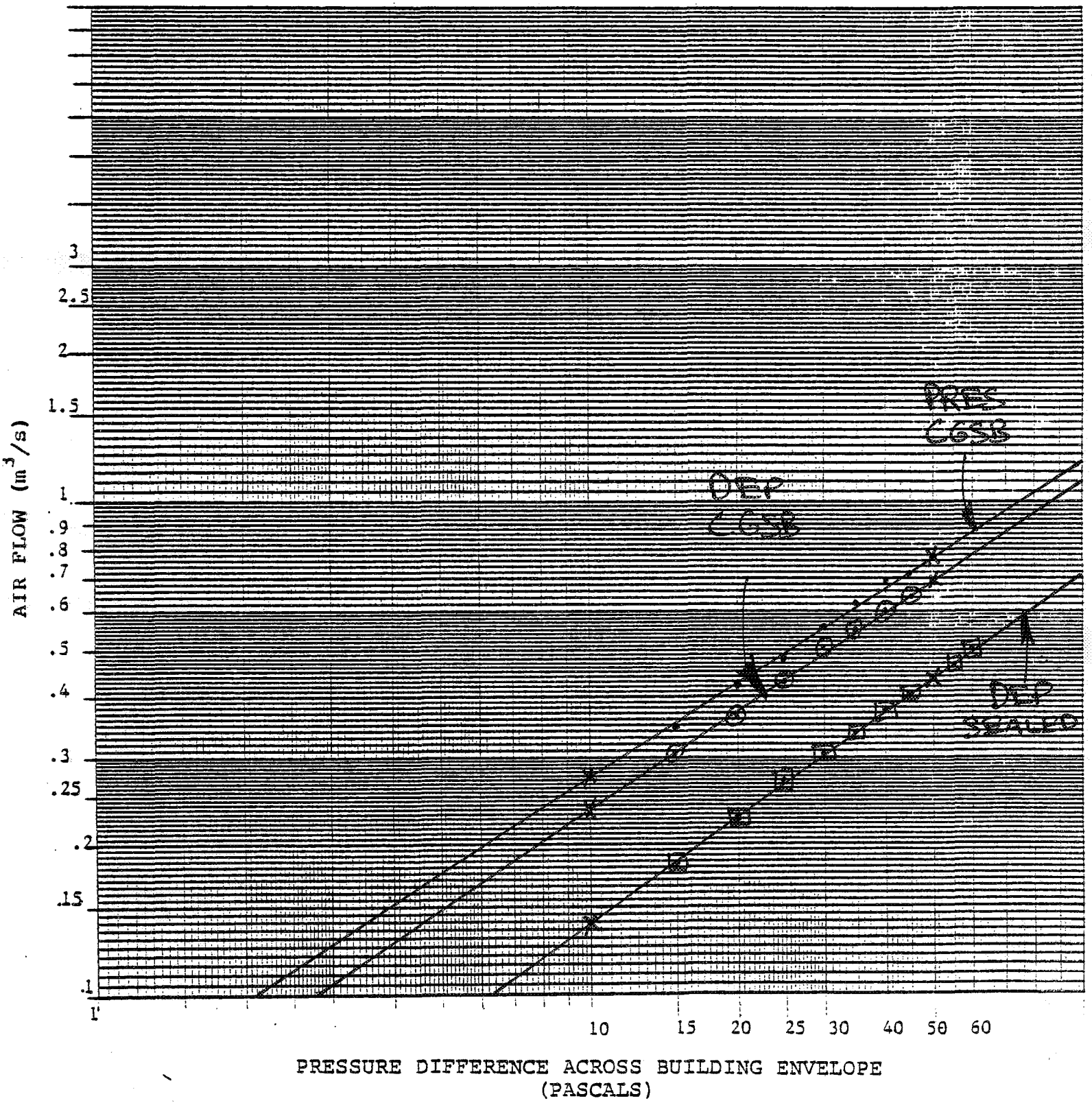
HOUSE # 14

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Z-126

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN. 26/83
TIME	10:15 - 10:45
TEST HOUSE	14
TECHNICIAN	SINHA/FUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-18.5°C	18°C
REL. HUM	65%	34%
WIND(SPEED&DIR)	SW @ 11 KPH	
AIR PRESSURE	102.6 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.191	
15		0.249	0.196
20		0.321	0.239
25		0.387	0.269
30		0.431	0.305
35		0.492	0.345
40		0.512	0.393
45		0.555	0.413
50		0.600	0.448
55		0.633	0.476
60		0.664	0.502
EXPONENT (N)		EXPONENT N 0.701	EXPONENT N 0.762
CONSTANT (C)		CONSTANT C 0.038	CONSTANT C 0.028
CORRELATION		CORRELATION 0.9975	CORRELATION 0.9987
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA 0.195 M^3/S	AIR FLOW @ 10PA 0.144 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA 0.603 M^3/S	AIR FLOW @ 50 PA 0.446 M^3/S
ELA	SQM @ 10PA	ELA 0.078 SQM @ 10PA	ELA 0.057 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA 3.47	AIR CHNGS/HRS @ 50PA 2.56

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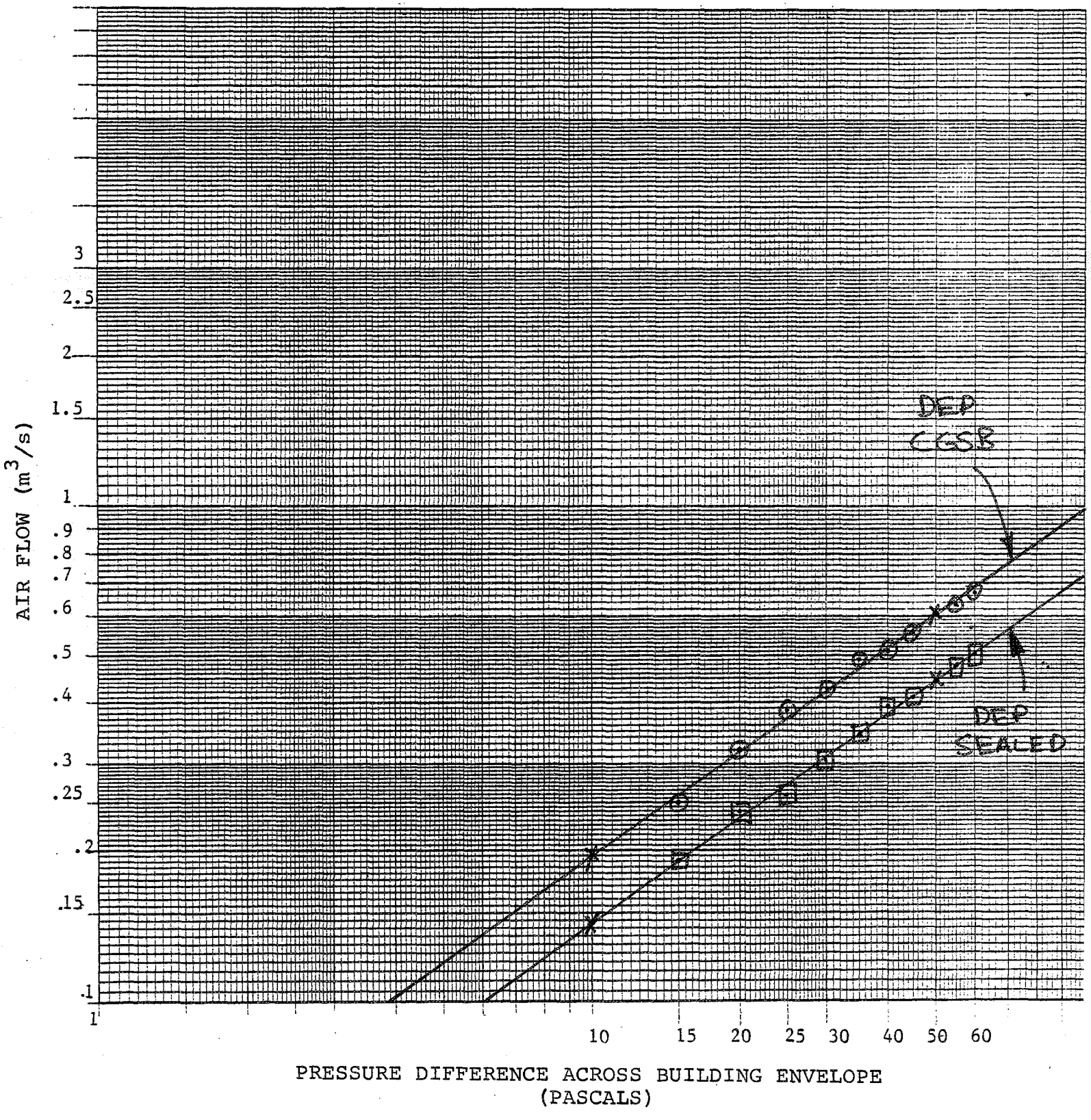
Retrospectors

HOUSE # 14

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR.29/82
TIME	19:30-21:00
TEST HOUSE	15
TECHNICIAN	FUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	ELECTRK

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16°C	22°C
REL. HUM	31%	
WIND(SPEED&DIR)	NW.@10KPH	
AIR PRESSURE	102.5KPA	
PRECIPITATION	NONE	
SOLAR RAD.	DUSK	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15		15	
20	0.317	20	0.271	20	
25	0.371	25		25	0.293
30	0.403	30	0.332	30	0.313
35	0.418	35	0.384	35	
40	0.474	40	0.414	40	0.383
45	0.512	45	0.456	45	0.413
50	0.552	50	0.482	50	0.442
55	0.588	55	0.495	55	
60	0.631	60	0.519	60	0.481

EXPONENT (N)	0.609	EXPONENT N	0.613	EXPONENT N	0.596
CONSTANT (C)	0.050	CONSTANT C	0.042	CONSTANT C	0.042
CORRELATION	0.9936	CORRELATION	0.9949	CORRELATION	0.9965
AIR FLOW @ 10PA	0.20 M^3/S	AIR FLOW @ 10PA	0.17 M^3/S	AIR FLOW @ 10PA	0.16 M^3/S
AIR FLOW @ 50PA	0.55 M^3/S	AIR FLOW @ 50PA	0.47 M^3/S	AIR FLOW @ 50 PA	0.43 M^3/S
ELA	0.08 SQM @ 10PA	ELA	0.07 SQM @ 10PA	ELA	0.06 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.12	AIR CHNGS/HRS @ 50PA	2.73	AIR CHNGS/HRS @ 50PA	2.51

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Retrospectors

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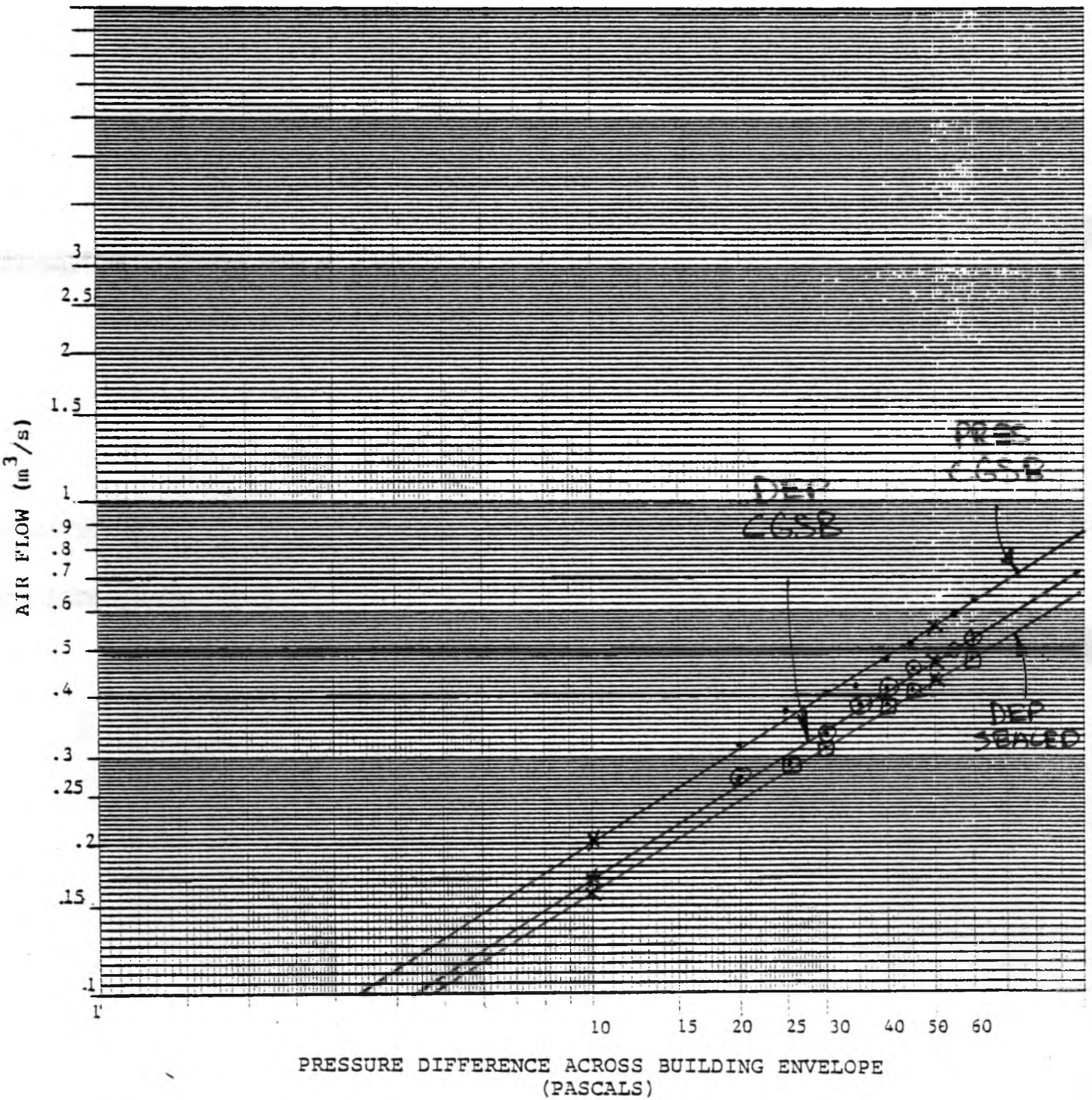
HOUSE # 15

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JUNE 16/82
TIME	9:00 - 10:15
TEST HOUSE	15
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	17.0°C	21.7°C
REL. HUM	77%	71%
WIND(SPEED&DIR)	W @ 20 KPH	
AIR PRESSURE	100.4 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	LOW CLOUD	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.261	0.227	0.190
25	0.289	0.259	—
30	0.347	0.277	0.249
35	0.375	0.304	—
40	0.395	0.358	0.304
45	0.445	0.372	0.336
50	0.484	0.405	0.365
55	0.510	0.435	0.398
60	0.539	0.452	0.405
EXPONENT (N)	0.675	0.650	0.713
CONSTANT (C)	0.034	0.031	0.022
CORRELATION	0.9965	0.9939	0.9982
AIR FLOW @ 10PA	0.16 M^3/S	0.14 M^3/S	0.11 M^3/S
AIR FLOW @ 50PA	0.47 M^3/S	0.40 M^3/S	0.36 M^3/S
ELA	0.065 SQM @ 10PA	0.056 SQM @ 10PA	0.053 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.74	2.32	2.08

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Retrospectors

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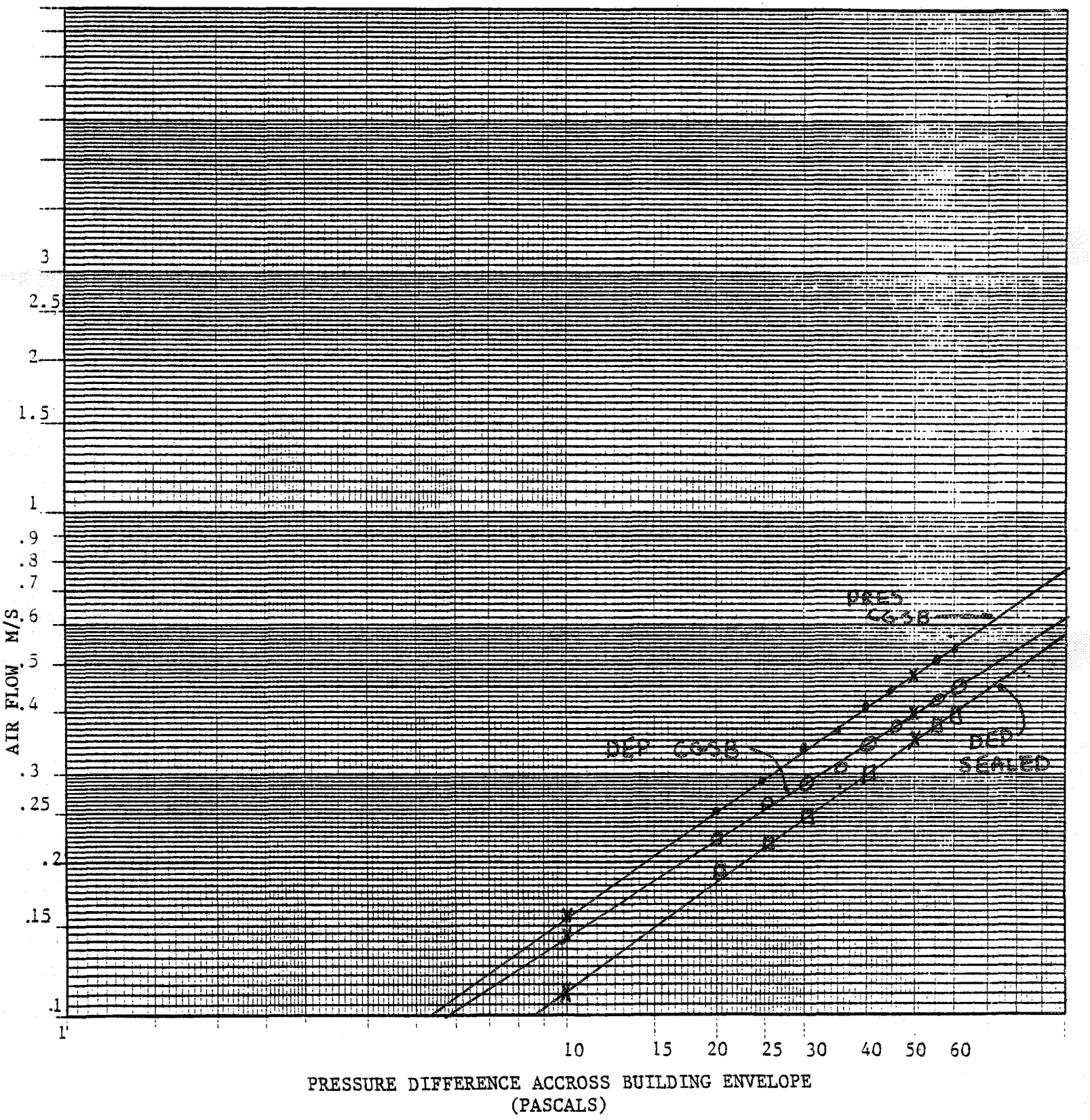
PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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12-134

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	SEPT. 16/82
TIME	10:30
TEST HOUSE	15
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	12.8°C	21°C
REL. HUM	94%	65%
WIND(SPEED&DIR)	SW @ 11 KPH	
AIR PRESSURE	101.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15	0.201	15	0.203	15	
20	0.266	20	0.249	20	0.227
25	0.301	25	0.287	25	0.242
30	0.333	30	0.320	30	0.287
35	0.361	35	0.351	35	0.328
40	0.414	40	0.392	40	0.351
45	0.448	45	0.429	45	0.383
50	0.480	50	0.464	50	0.405
55	0.500	55	0.480	55	0.435
60	0.521	60	0.495	60	0.464

EXPONENT (N)	0.674	EXPONENT N	0.658	EXPONENT N	0668
CONSTANT (C)	0.033	CONSTANT C	0.034	CONSTANT C	0.029
CORRELATION	0.9963	CORRELATION	0.9986	CORRELATION	0.9974
AIR FLOW @ 10PA	0.159 M^3/S	AIR FLOW @ 10PA	0.156 M^3/S	AIR FLOW @ 10PA	0.139 M^3/S
AIR FLOW @ 50PA	0.473 M^3/S	AIR FLOW @ 50PA	0.452 M^3/S	AIR FLOW @ 50 PA	0.409 M^3/S
ELA	0.063 SQM @ 10PA	ELA	0.062 SQM @ 10PA	ELA	0055 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.72	AIR CHNGS/HRS @ 50PA	2.60	AIR CHNGS/HRS @ 50PA	2.35

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Retrospectors

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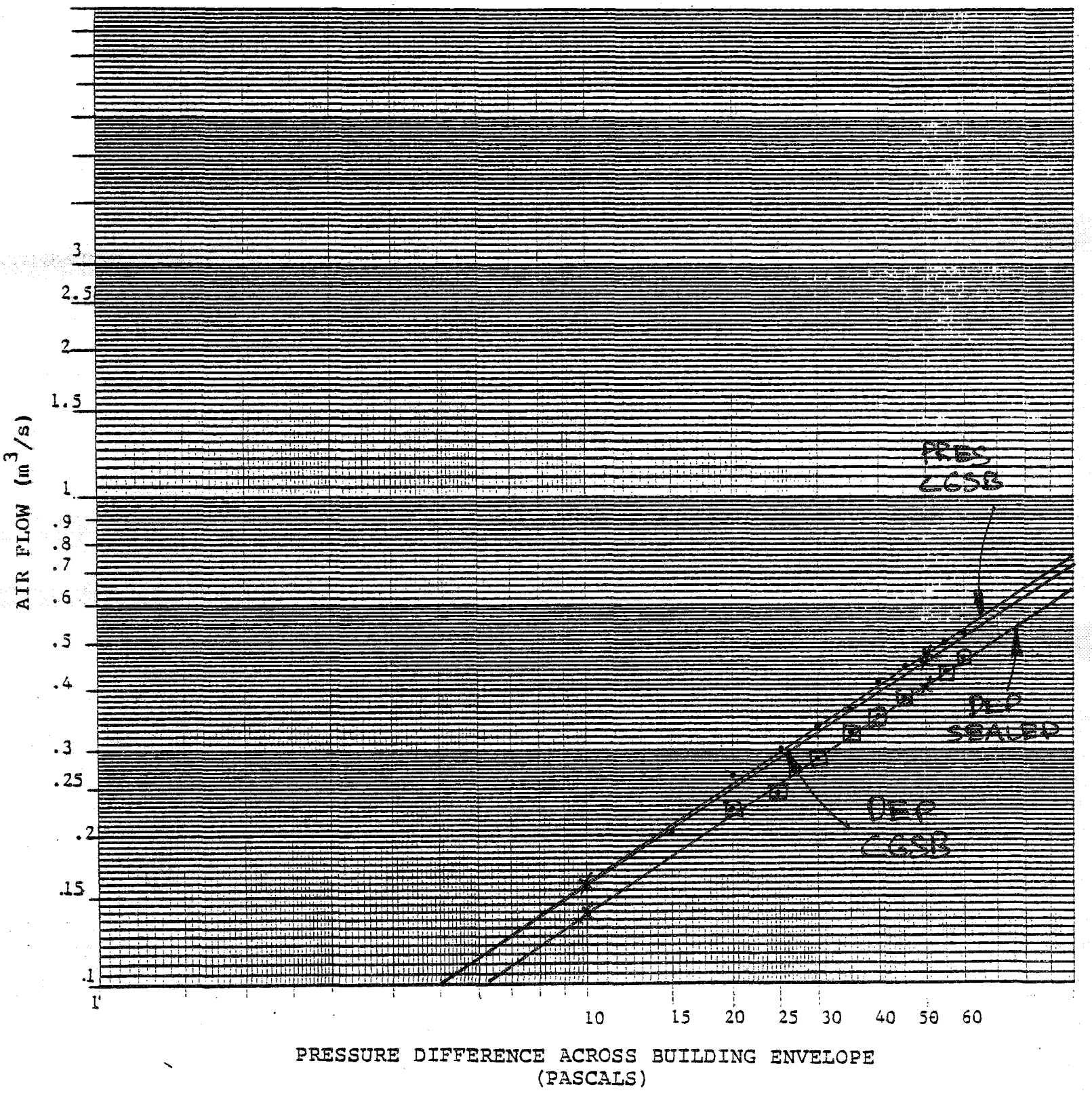
HOUSE # 15

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB 09-83
TIME	10:30-11:00
TEST HOUSE	15
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	YES
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-16°C	19
REL. HUM	50%	42%
WIND(SPEED&DIR)	NW.@22KPH	
AIR PRESSURE	102.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SLIGHT	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15		0.216	
20		0.279	0.204
25		0.322	0.270
30		0.345	0.292
35		0.394	0.314
40		0.431	0.367
45		0.466	0.401
50		0.513	0.426
55		0.561	0.455
60		0.588	0.487
EXPONENT (N)		EXPONENT N 0.701	EXPONENT N 0.755
CONSTANT (C)		CONSTANT C 0.032	CONSTANT C 0.022
CORRELATION		CORRELATION 0.9973	CORRELATION 0.9933
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA 0.165 M^3/S	AIR FLOW @ 10PA 0.126 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA 0.512 M^3/S	AIR FLOW @ 50 PA 0.427 M^3/S
ELA	SQM @ 10PA	ELA 0.066 SQM @ 10PA	ELA 0.050 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA 2.95	AIR CHNGS/HRS @ 50PA 2.46

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Retrospectors

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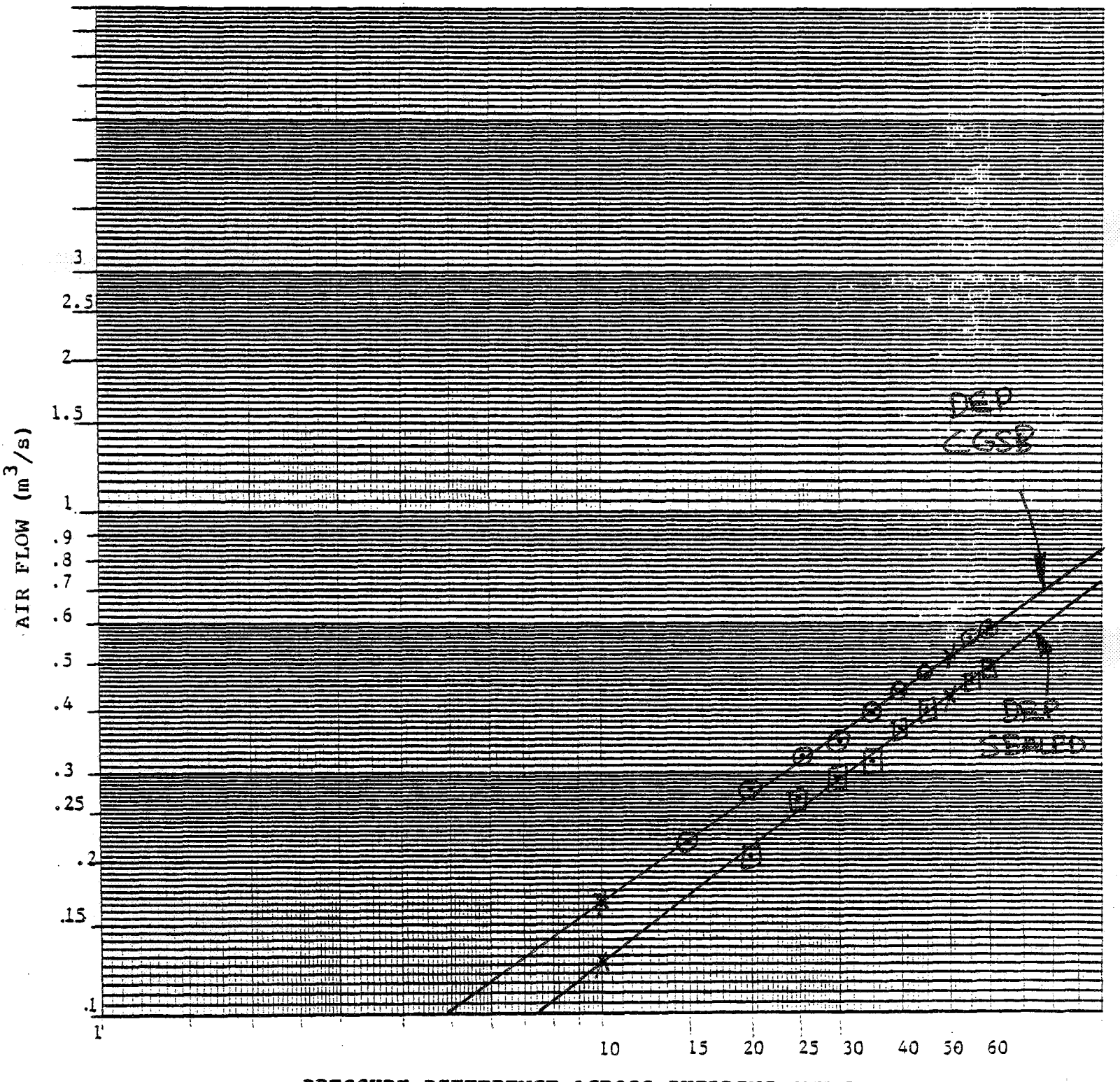
HOUSE # 15

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR. 3/82
TIME	15:00
TEST HOUSE	16
TECHNICIAN	ROSENBERG
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-13.9°C	22°C
REL. HUM	43%	38%
WIND(SPEED&DIR)	W @ 16 KPH	
AIR PRESSURE	102.6 KPA	
PRECIPITATION	N.A.	
SOLAR RAD.	NA	
SKY/CLOUD COND	NA	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
	N.A.		
10			
15			
20		0.535	0.374
25		0.588	0.423
30		0.649	0.457
35		0.719	0.500
40		0.720	0.571
45		0.786	0.618
50		0.836	0.655
55		0.900	0.691
60		0.942	0.702

EXPONENT (N)		0.509	0.616
CONSTANT (C)		0.114	0.059
CORRELATION		0.9936	0.9948
AIR FLOW @ 10PA	___ M^3/S	0.37 M^3/S	0.24 M^3/S
AIR FLOW @ 50PA	___ M^3/S	0.84 M^3/S	0.64 M^3/S
ELA	___ SQM @ 10PA	0.14 SQM @ 10PA	0.09 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	___	4.85	3.71

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Retrospectors

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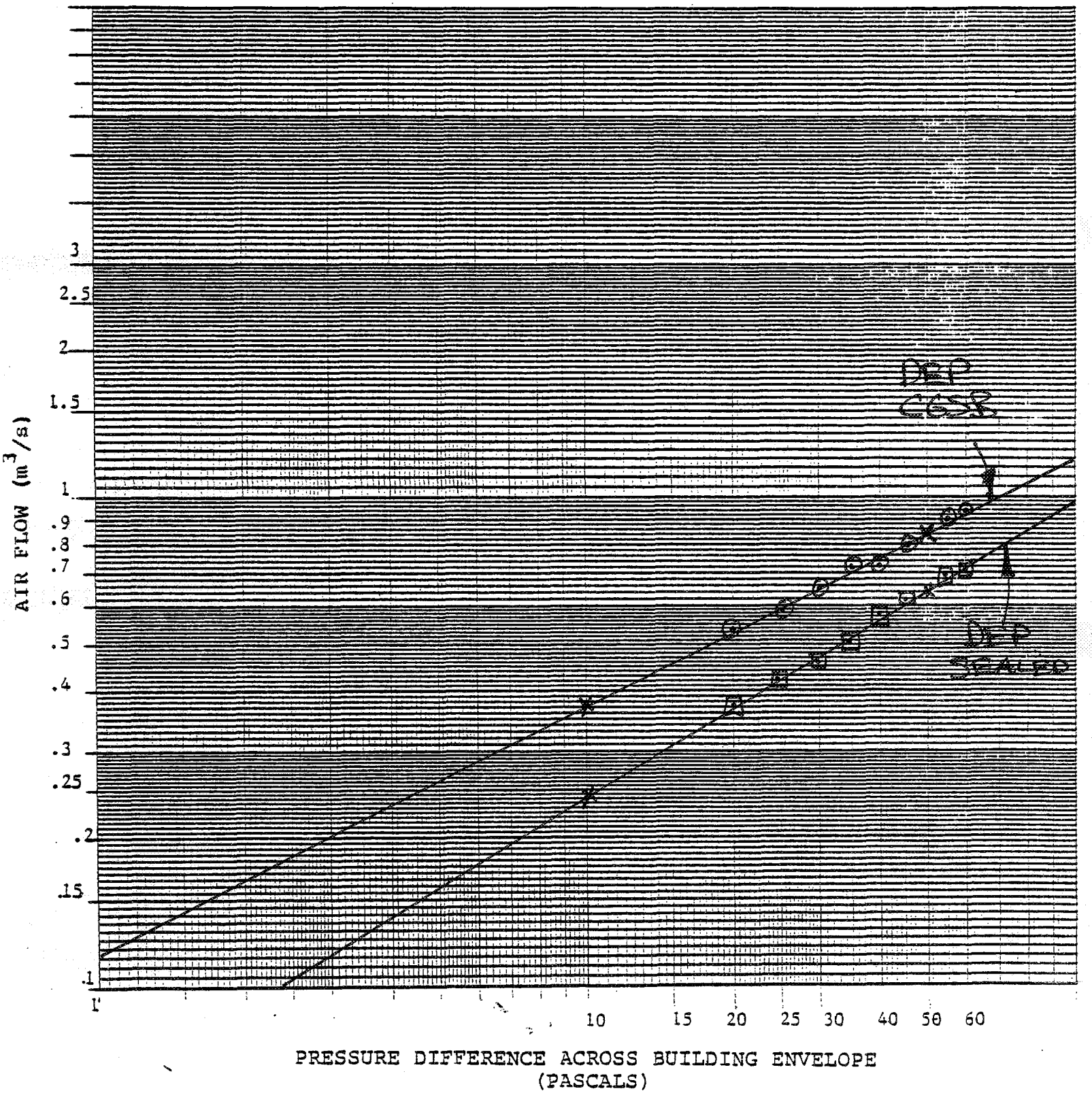
HOUSE # 16

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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2-140

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	June 24/82
TIME	13:15 - 14:05
TEST HOUSE	16
TECHNICIAN	Fugler/Seton
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	None
HEATING	Gas

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	20°C	22°C
REL. HUM	46%	64%
WIND(SPEED&DIR)	WNW@19KPH	
AIR PRESSURE	101.7 KPA	
PRECIPITATION	none	
SOLAR RAD.	FULL-SOUTH	
SKY/CLOUD COND	Scattered cloud	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.305	10	0.259	10	
15	0.387	15	0.365	15	
20	0.437	20	0.405	20	0.258
25	0.541	25	0.464	25	0.295
30	0.582	30	0.544	30	0.320
35	0.672	35	0.580	35	0.365
40		40	0.685	40	0.423
45		45		45	0.435
50		50		50	0.452
55		55		55	0.485
60		60		60	0.511
EXPONENT (N)	0.621	EXPONENT N	0.657	EXPONENT N	0.633
CONSTANT (C)	0.071	CONSTANT C	0.057	CONSTANT C	0.038
CORRELATION	0.9941	CORRELEATION	0.9929	CORRELATION	0.9939
AIR FLOW @ 10PA	0.29 M^3/S	AIR FLOW @ 10PA	0.26 M^3/S	AIR FLOW @ 10PA	0.16 M^3/S
AIR FLOW @ 50PA	0.81 M^3/S	AIR FLOW @ 50PA	0.75 M^3/S	AIR FLOW @ 50 PA	0.46 M^3/S
ELA	0.120 SQM @ 10PA	ELA	0.105 SQM @ 10PA	ELA	0.066 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.68	AIR CHNGS/HRS @ 50PA	4.37	AIR CHNGS/HRS @ 50PA	2.65

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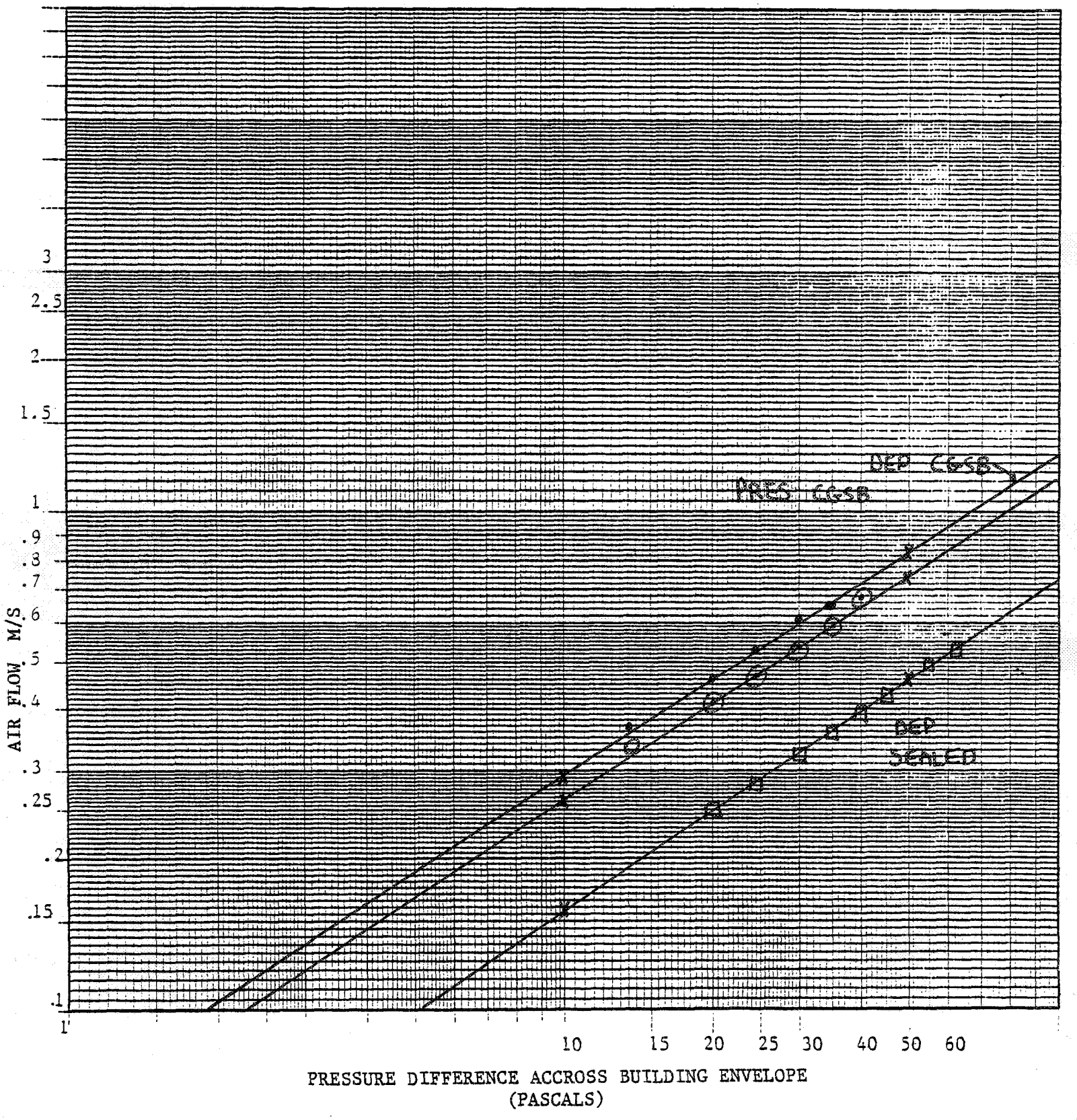
PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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2-142

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 13/83
TIME	11:00 - 11:30
TEST HOUSE	16
TECHNICIAN	SINHA/EUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-17.0°C	17.0°C
REL. HUM	60%	33%
WIND (SPEED&DIR)	W@4 KPH	
AIR PRESSURE	102.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.289	-
15		0.361	0.217
20		0.451	0.261
25		0.535	0.298
30		0.558	0.331
35		0.664	0.368
40		0.691	0.433
45		0.755	0.468
50		0.788	0.494
55		-	0.535
60		-	0.572
EXPONENT (N)		0.638	0.708
CONSTANT (C)		0.066	0.030
CORRELATION		0.9970	0.9968
AIR FLOW @ 10PA	M^3/S	0.287 M^3/S	0.158 M^3/S
AIR FLOW @ 50PA	M^3/S	0.803 M^3/S	0.495 M^3/S
ELA	SQM @ 10PA	0.115 SQM @ 10PA	0.063 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		4.62	2.86

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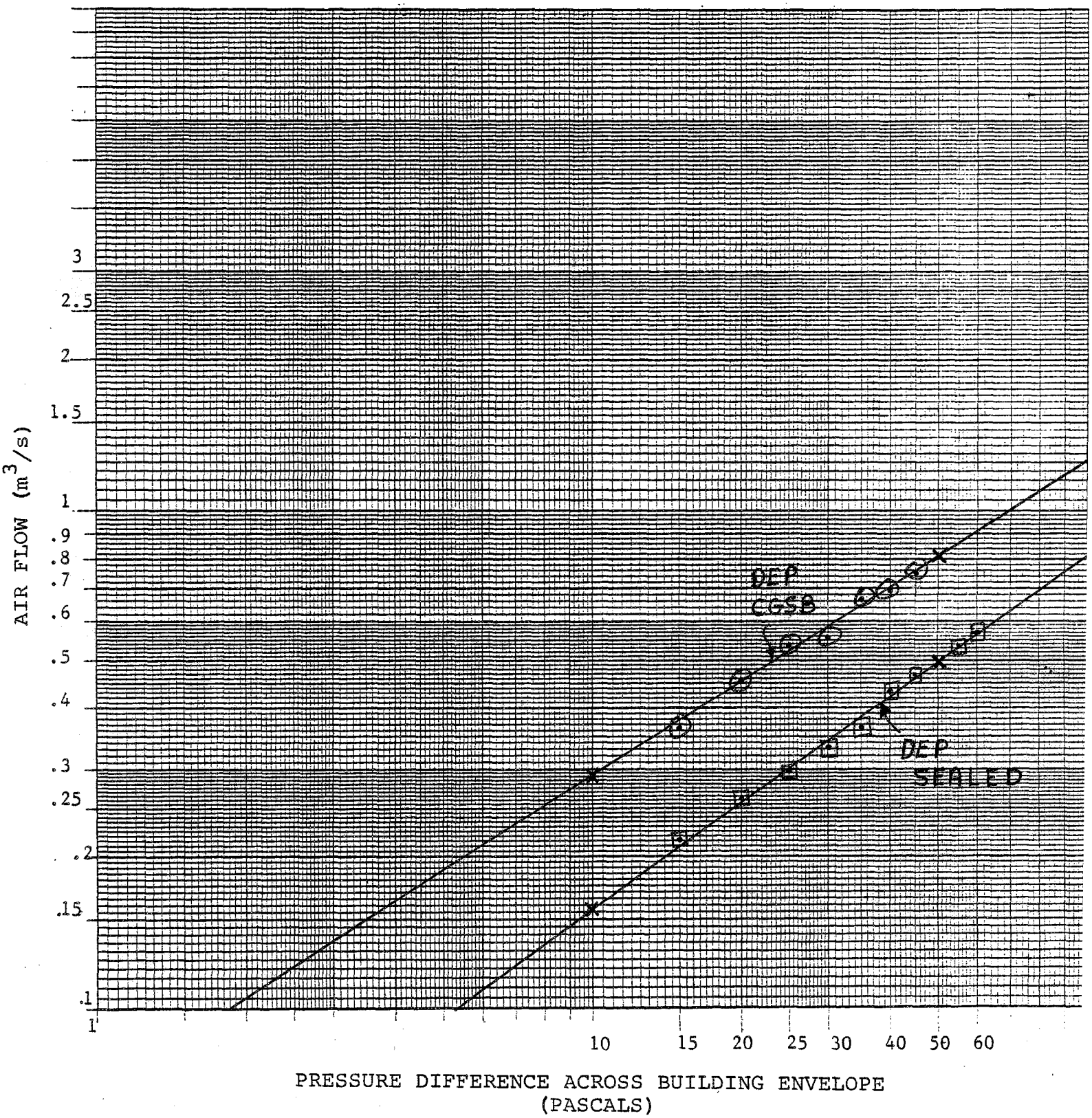
Retrospectors

HOUSE # 16

PHASE 4

AIR LEAKAGE PROFILE



176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
(613) 234-3280

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR 30/82
TIME	9:30-11:00
TEST HOUSE	17
TECHNICIAN	FUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	17°C	18°C
REL. HUM	36%	
WIND (SPEED&DIR)	W @ 17 KPH	
AIR PRESSURE	102.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	S.E.	
SKY/CLOUD COND	SCATTERED CLOUD	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15		15	
20	0.250	20	0.262	20	0.256
25		25		25	
30	0.335	30	0.316	30	0.306
35	0.353	35	0.378	35	0.335
40	0.447	40	0.402	40	0.361
45		45	0.446	45	0.394
50	0.473	50	0.466	50	0.417
55	0.499	55	0.498	55	0.446
60	0.579	60	0.568	60	0.473

EXPONENT (N)	0.730	EXPONENT N	0.689	EXPONENT N	0.584
CONSTANT (C)	0.027	CONSTANT C	0.032	CONSTANT C	0.042
CORRELATION	0.9857	CORRELATION	0.9903	CORRELATION	0.9977
AIR FLOW @ 10PA	0.15 M^3/S	AIR FLOW @ 10PA	0.15 M^3/S	AIR FLOW @ 10PA	0.16 M^3/S
AIR FLOW @ 50PA	0.48 M^3/S	AIR FLOW @ 50PA	0.47 M^3/S	AIR FLOW @ 50 PA	0.41 M^3/S
ELA	0.06 SQM @ 10PA	ELA	0.06 SQM @ 10PA	ELA	0.06 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.76	AIR CHNGS/HRS @ 50PA	2.74	AIR CHNGS/HRS @ 50PA	2.41

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Retrospectors

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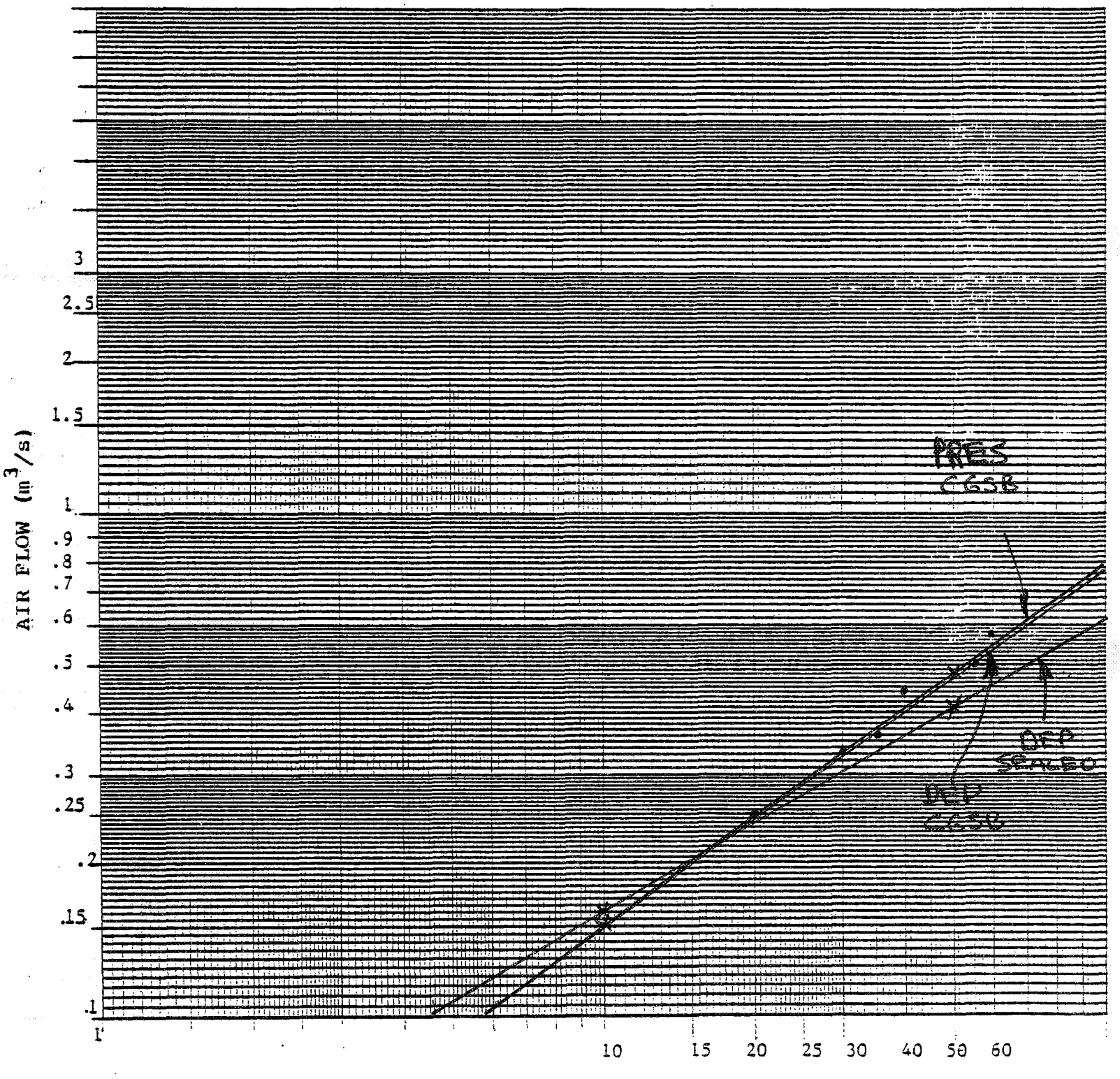
HOUSE # 17

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON DEP. LINES OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JUNE 8/82
TIME	12:15-13:00
TEST HOUSE	17
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	25°C	21°C
REL. HUM	43%	57%
WIND(SPEED&DIR)	E@7 KPH	
AIR PRESSURE	101.7 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.226	0.216	0.176
25	—	—	—
30	0.285	0.259	0.238
35	0.302	0.278	—
40	0.334	0.329	0.296
45	0.384	0.366	—
50	0.409	0.386	0.358
55	0.450	0.412	—
60	0.472	0.418	0.379
EXPONENT (N)	0.690	0.658	0.723
CONSTANT (C)	0.027	0.028	0.020
CORRELATION	0.9907	0.9860	0.9962
AIR FLOW @ 10PA	0.13 M^3/S	0.13 M^3/S	0.10 M^3/S
AIR FLOW @ 50PA	0.40 M^3/S	0.37 M^3/S	0.34 M^3/S
ELA	0.053 SQM @ 10PA	0.052 SQM @ 10PA	0.043 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.34	2.17	1.99

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Retrospectors

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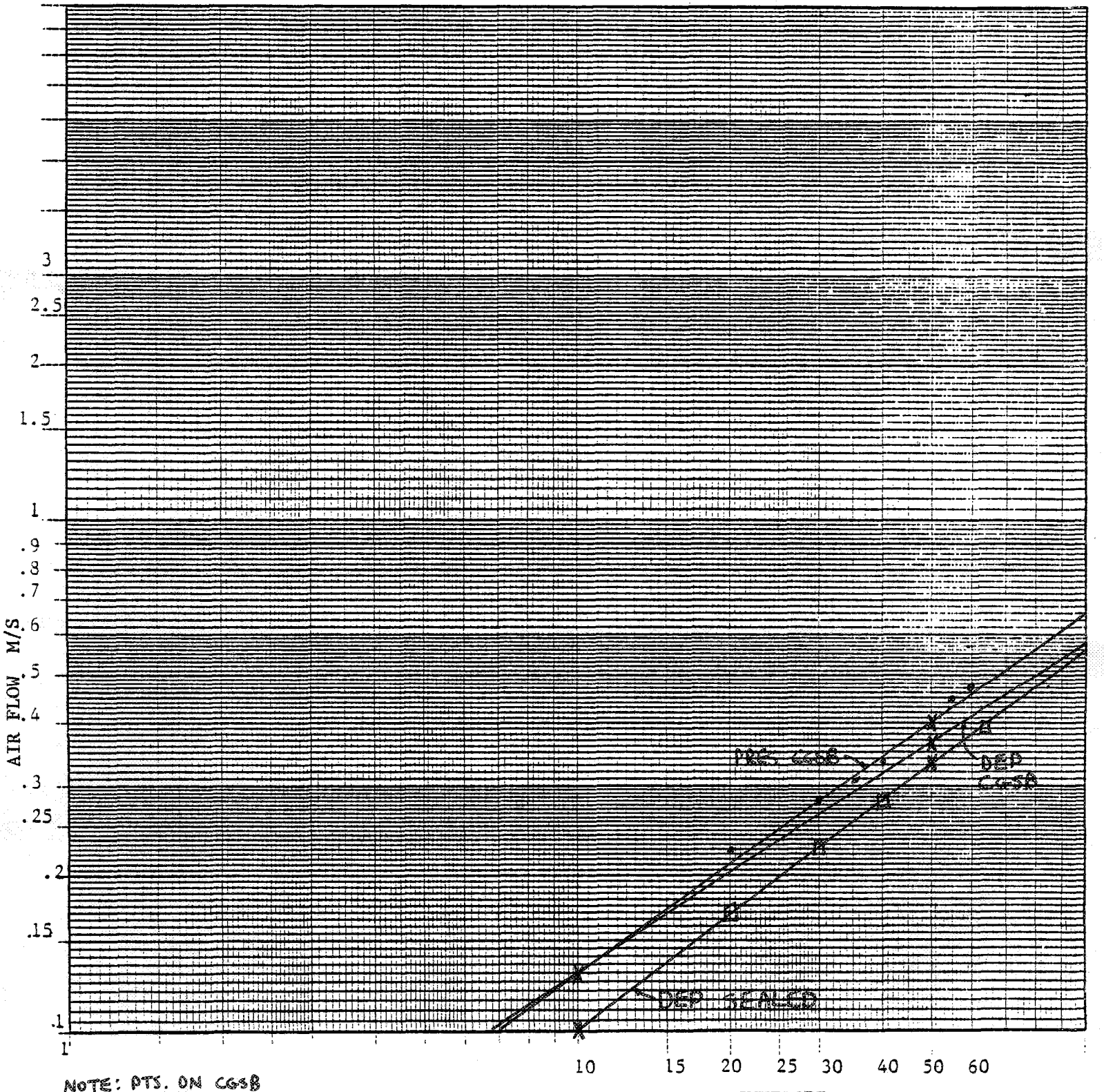
HOUSE # 17

PHASE 2

AIR LEAKAGE PROFILE



NOTE: PTS. ON CGSB LINE OMITTED

PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	OCT. 4/82
TIME	11:00
TEST HOUSE	17
TECHNICIAN	FUGLER/PASSMORE
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	12°C	18°C
REL. HUM	62%	70%
WIND(SPEED&DIR)	NW @ 15 KPH	
AIR PRESSURE	102.1 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SUNNY	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15	0.204	15	0.158
20	0.200	20	0.228	20	0.196
25	0.266	25	0.260	25	0.228
30	0.301	30	0.288	30	0.249
35	0.316	35	0.321	35	0.279
40	0.374	40	0.352	40	0.305
45	0.400	45	0.380	45	0.337
50	0.412	50	0.406	50	0.359
55	0.446	55	0.442	55	0.373
60	0.469	60	0.465	60	0.406

EXPONENT (N)	0.735	EXPONENT N	0.615	EXPONENT N	0.665
CONSTANT (C)	0.023	CONSTANT C	0.036	CONSTANT C	0.026
CORRELATION	0.9893	CORRELATION	0.9968	CORRELATION	0.9990
AIR FLOW @ 10PA	0.128 M^3/S	AIR FLOW @ 10PA	0.151 M^3/S	AIR FLOW @ 10PA	0.122 M^3/S
AIR FLOW @ 50PA	0.421 M^3/S	AIR FLOW @ 50PA	0.467 M^3/S	AIR FLOW @ 50 PA	0.357 M^3/S
ELA	0.052 SQM @ 10PA	ELA	0.060 SQM @ 10PA	ELA	0.049 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.42	AIR CHNGS/HRS @ 50PA	2.35	AIR CHNGS/HRS @ 50PA	2.05

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Retrospectors

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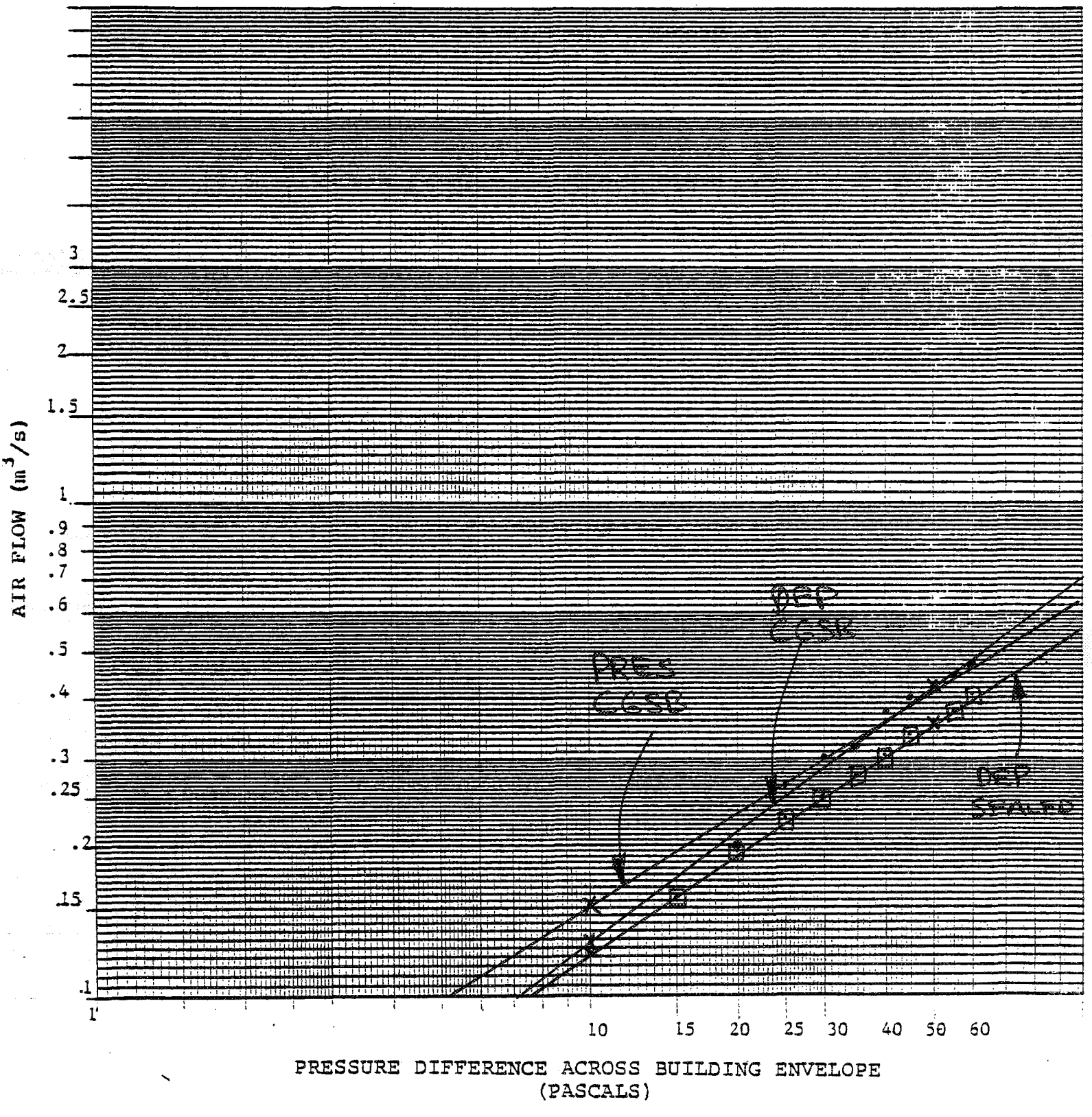
HOUSE # 17

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

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IDENTIFICATION

DATE	FEB 18/83
TIME	10:50-11:25
TEST HOUSE	17
TECHNICIAN	EAGLER/SMITH
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-5.0°C	17.0°C
REL. HUM	53%	46%
WIND (SPEED&DIR)	CALM	
AIR PRESSURE	102.4 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTHEAST	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20		0.202	
25		0.240	0.199
30		0.261	0.217
35		0.298	0.251
40		0.331	0.280
45		0.361	0.303
50		0.394	0.331
55		0.421	0.347
60		0.433	0.375
EXPONENT (N)		EXPONENT N 0.713	EXPONENT N 0.739
CONSTANT (C)		CONSTANT C 0.023	CONSTANT C 0.018
CORRELATION		CORRELEATION 0.9980	CORRELATION 0.9974
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA 0.123 M^3/S	AIR FLOW @ 10PA 0.099 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA 0.388 M^3/S	AIR FLOW @ 50 PA 0.327 M^3/S
ELA	SQM @ 10PA	ELA 0.049 SQM @ 10PA	ELA 0.039 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA 1.23	AIR CHNGS/HRS @ 50PA 1.03

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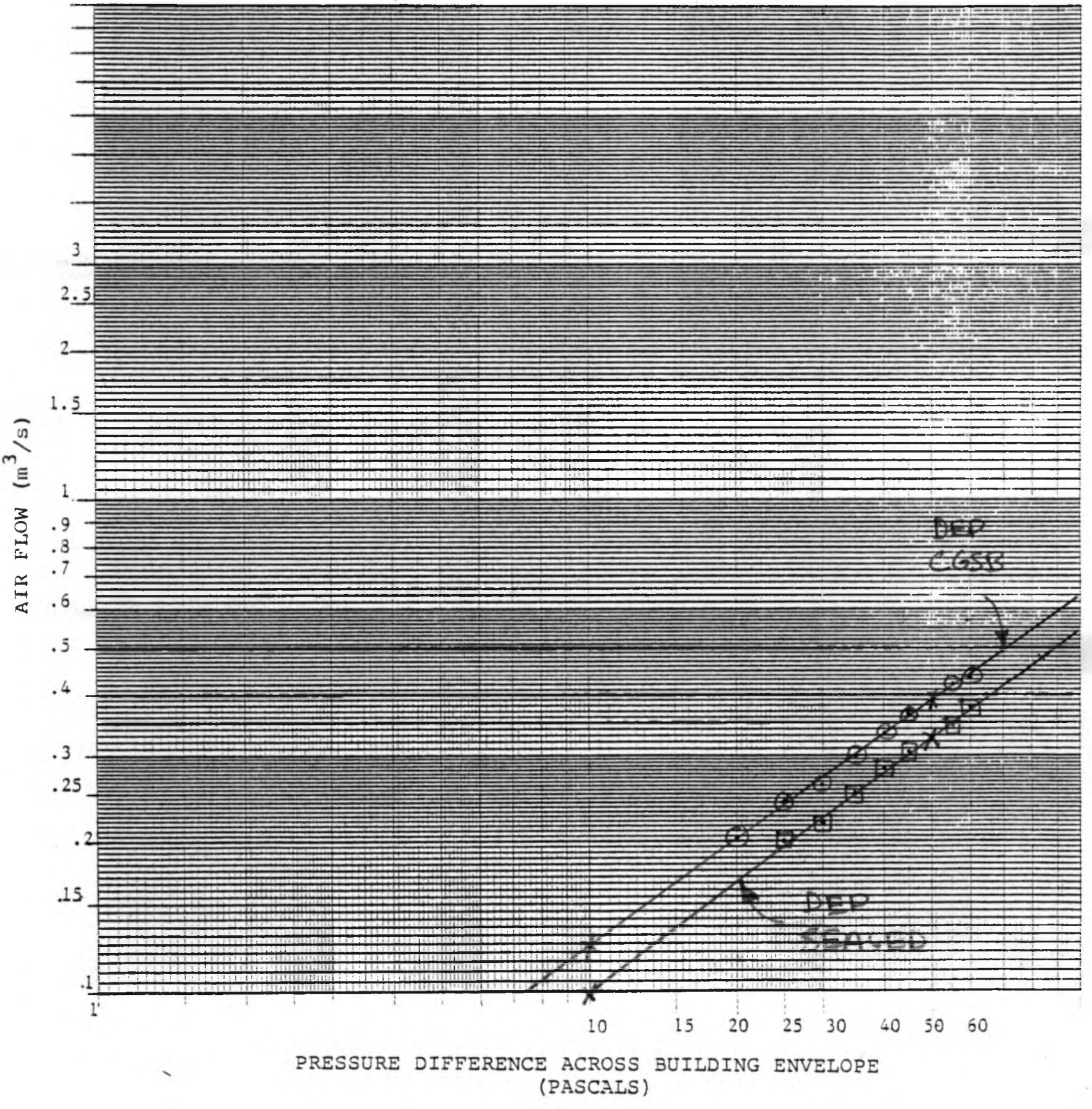
HOUSE # 17

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JULY 5/82
TIME	14:00 - 14:45
TEST HOUSE	18
TECHNICIAN	SETON/FUGGER
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	30.2°C	21.9°C
REL. HUM	59%	66%
WIND(SPEED&DIR)	S @ 22 KPH	
AIR PRESSURE	101.0 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL	
SKY/CLOUD COND	HAZY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15	0.243	15	0.238	15	
20	0.344	20	0.287	20	0.190
25	0.393	25	0.351	25	
30	0.426	30	0.392	30	0.227
35	0.473	35	0.423	35	
40	0.546	40	0.452	40	0.278
45	0.601	45	0.515	45	
50	0.648	50	0.544	50	0.336
55		55	0.598	55	0.358
60		60		60	0.371

EXPONENT (N)	0.768	EXPONENT N	0.691	EXPONENT N	0.639
CONSTANT (C)	0.031	CONSTANT C	0.036	CONSTANT C	0.027
CORRELATION	0.9922	CORRELATION	0.9974	CORRELATION	0.9931
AIR FLOW @ 10PA	0.187 M^3/S	AIR FLOW @ 10PA	0.180 M^3/S	AIR FLOW @ 10PA	0.117 M^3/S
AIR FLOW @ 50PA	0.647 M^3/S	AIR FLOW @ 50PA	0.549 M^3/S	AIR FLOW @ 50 PA	0.330 M^3/S
ELA	0.075 SQM @ 10PA	ELA	0.072 SQM @ 10PA	ELA	0.047 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.72	AIR CHNGS/HRS @ 50PA	3.16	AIR CHNGS/HRS @ 50PA	1.90

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Retrospectors

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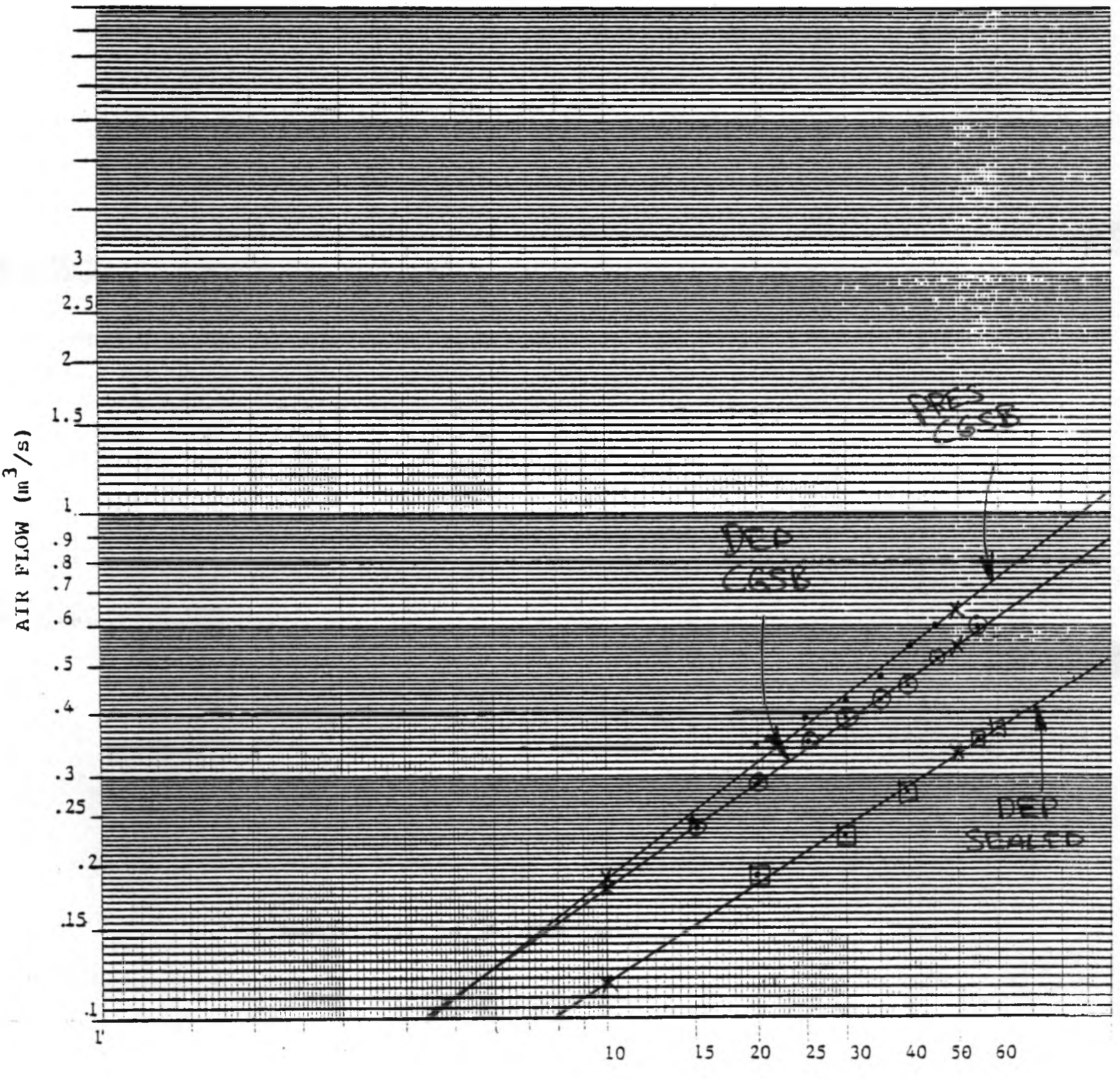
HOUSE # 18

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

IDENTIFICATION

DATE	OCT. 6/82
TIME	11:00
TEST HOUSE	18
TECHNICIAN	Fuglo/Pasquini
ENVELOPE AREA	315 m^2
VOLUME	626 m^3
FIREPLACE	NONE
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16°C	20°C
REL. HUM	68%	60%
WIND(SPEED&DIR)	W12 KPH	
AIR PRESSURE	102.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTH	
SKY/CLOUD COND	NONE	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.251	10	0.227	10	
15	0.324	15	0.304	15	0.166
20	0.396	20	0.351	20	0.216
25	0.434	25	0.405	25	0.249
30	0.511	30	0.452	30	0.268
35	0.559	35	0.495	35	0.304
40	0.612	40	0.553	40	0.336
45	0.637	45	0.585	45	0.365
50	0.660	50	0.614	50	0.379
55		55	0.654	55	0.405
60		60	0.705	60	0441
EXPONENT (N)	0.620	EXPONENT N	0.617	EXPONENT N	0.671
CONSTANT (C)	0.060	CONSTANT C	0.055	CONSTANT C	0.027
CORRELATION	0.9981	CORRELEATION	0.9992	CORRELATION	0.9973
AIR FLOW @ 10PA	0.253 M^3/S	AIR FLOW @ 10PA	0.230 M^3/S	AIR FLOW @ 10PA	0.131 M^3/S
AIR FLOW @ 50PA	0.687 M^3/S	AIR FLOW @ 50PA	0.623 M^3/S	AIR FLOW @ 50 PA	0.386 M^3/S
ELA	0.101 SQM @ 10PA	ELA	0.092 SQM @ 10PA	ELA	0.052 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.95	AIR CHNGS/HRS @ 50PA	3.58	AIR CHNGS/HRS @ 50PA	2.22

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Retrospectors

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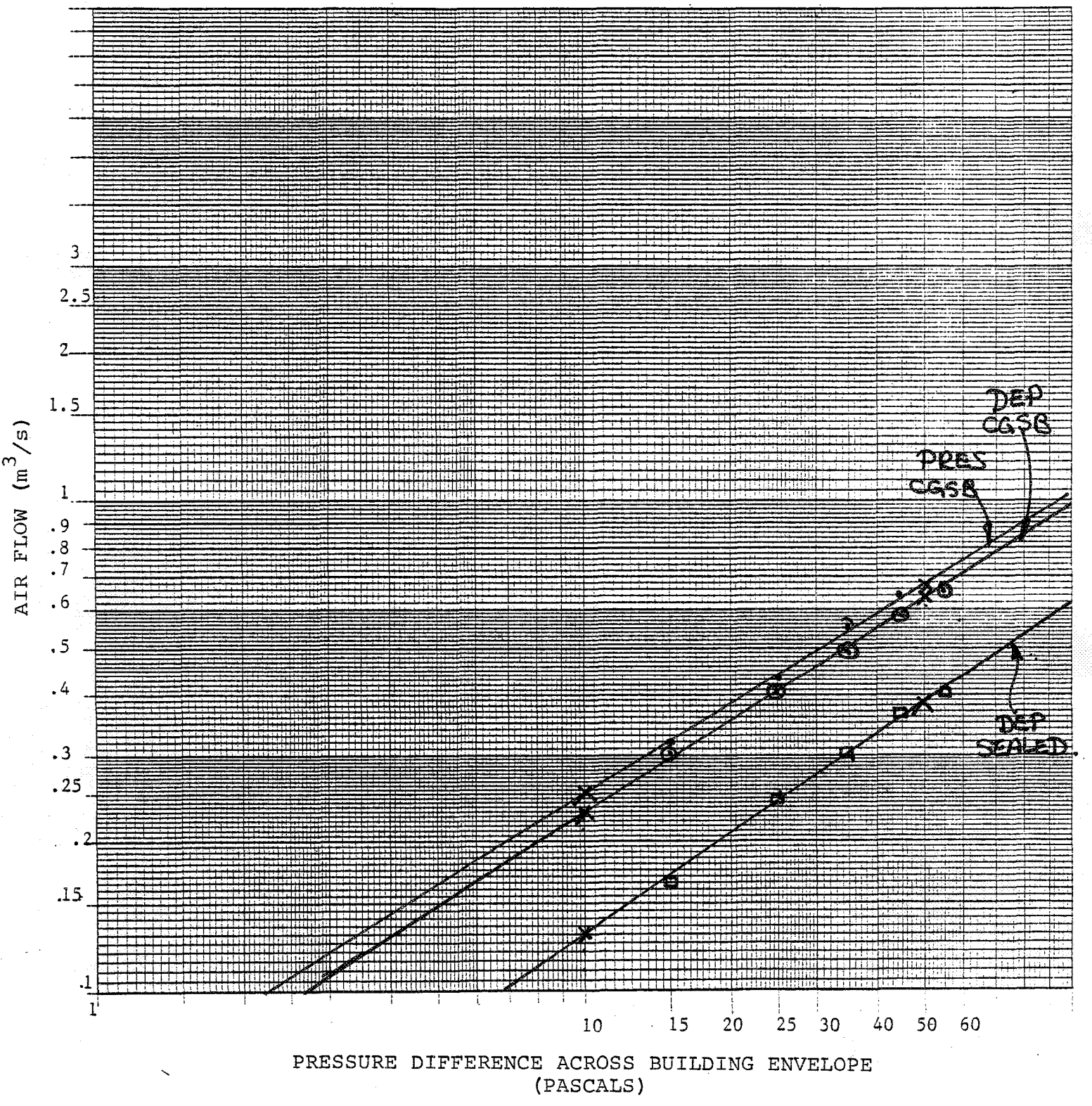
HOUSE # 18

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN.31/83
TIME	12130-13:15
TEST HOUSE	18
TECHNICIAN	EUGLER/KINH4
ENVELOPE AREA	315m²
VOLUME	626 m³
FIREPLACE	No
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	+1.7°C	19.9°C
REL. HUM	87%	42%
WIND(SPEED&DIR)	SW@16KPH	
AIR PRESSURE	101.1 KPA	
PRECIPITATION	RAIN	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		–	–
15		0.297	–
20		0.345	0.204
25		0.407	0.239
30		0.455	0.270
35		0.518	0.297
40		0.537	0.322
45		0.601	0.353
50		0.626	0.367
55		0.673	0.394
60		0.696	0419

EXPONENT (N)		0.630	0.642
CONSTANT (C)		0.053	0.030
CORRELATION		0.9983	0.9993
AIR FLOW @ 10PA	___ M^3/S	0.228 M^3/S	0.132 M^3/S
AIR FLOW @ 50PA	___ M^3/S	0.630 M^3/S	0.372 M^3/S
ELA	___ SQM @ 10PA	0.091 SQM @ 10PA	0.053 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	___	362	215

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Retrospectors

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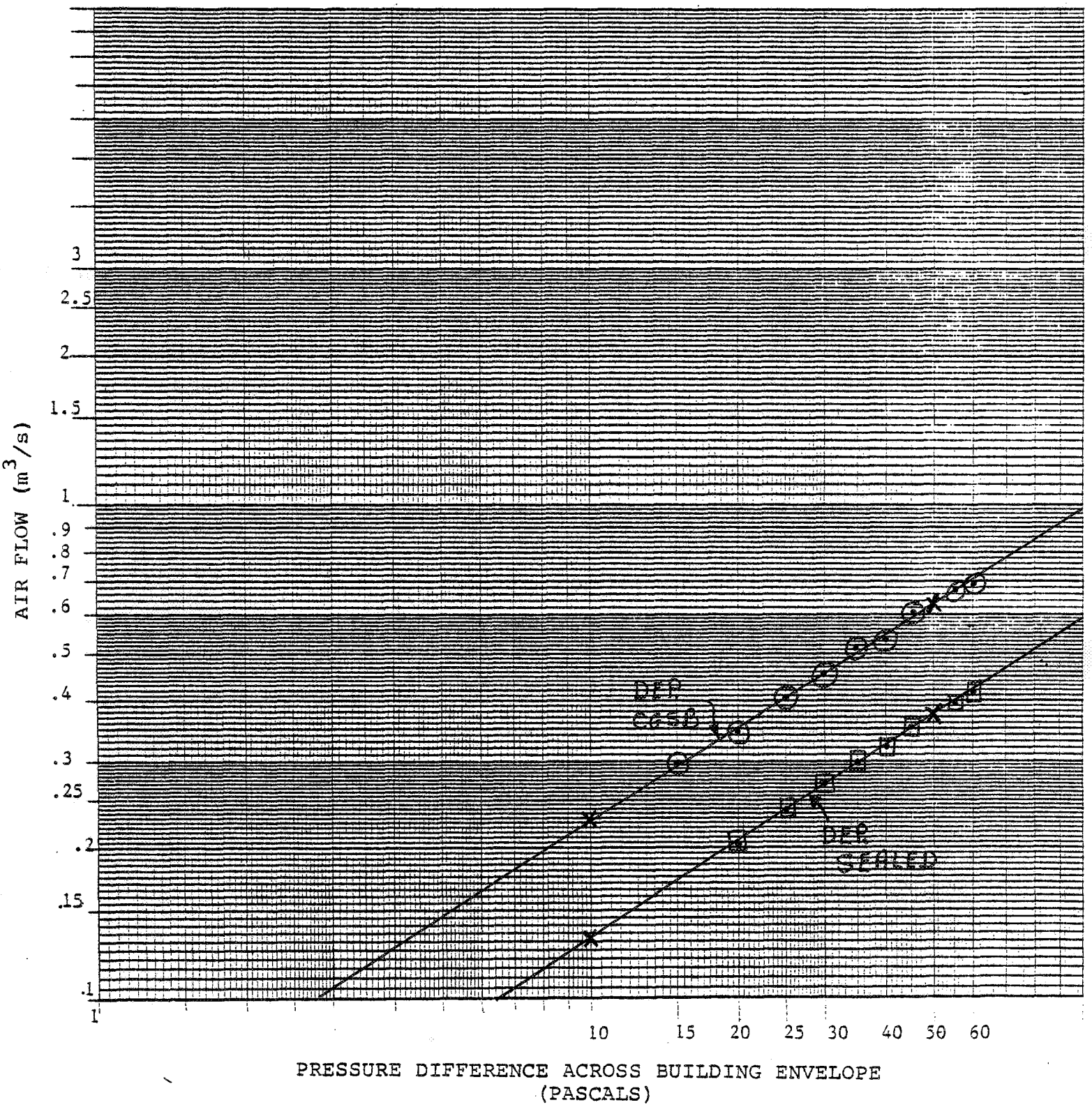
HOUSE # 18

PHASE 4

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR 15/82
TIME	13:00
TEST HOUSE	20
TECHNICIAN	ROSENBERG
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	26°C	21°C
REL. HUM	55%	
WIND(SPEED&DIR)	SW @ 15KPH	
AIR PRESSURE	102.7 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.515	0.487	0.280
25	0.588	0.586	0.374
30	0.671	0.647	0.431
35	0.692	0.717	0.449
40	0.765	0.792	0.494
45	0.780	0.831	0.567
50	0.829	0.910	0.627
55	0.917	0.949	0.661
60			

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.529	0.651	0.801
CONSTANT (C)	0.106	0.070	0.026
CORRELATION	0.9919	0.9982	0.9894
AIR FLOW @ 10PA	0.36 M^3/S	0.31 M^3/S	0.16 M^3/S
AIR FLOW @ 50PA	0.85 M^3/S	0.90 M^3/S	0.61 M^3/S
ELA	0.14 SQM @ 10PA	0.12 SQM @ 10PA	0.06 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.63	4.92	3.36

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Retrospectors

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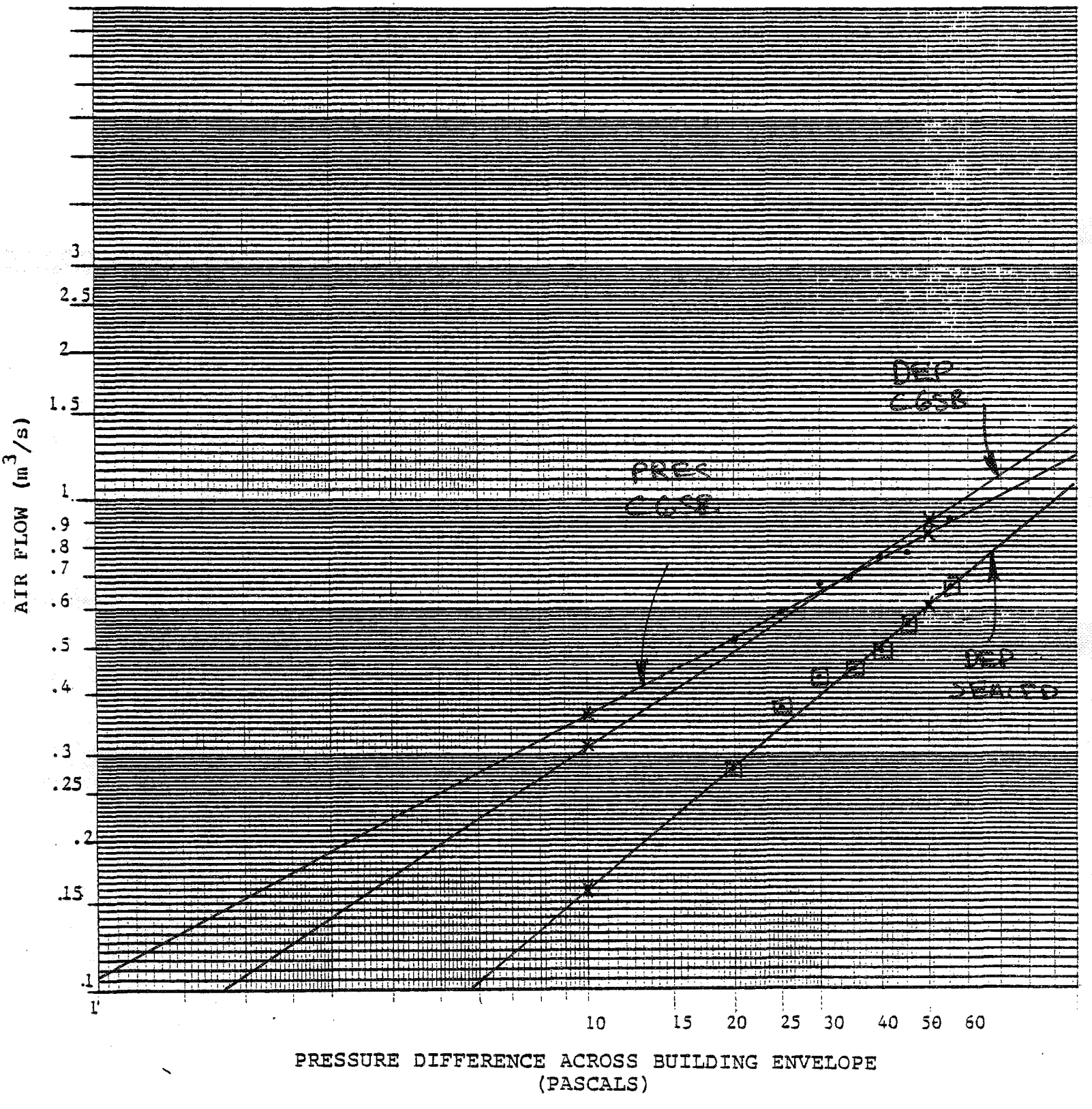
HOUSE # 20

PHASE 1

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: JUNE 22/82
TIME: 9:40-10:30
TEST HOUSE: 20
TECHNICIAN: SETON/EGGLER
ENVELOPE AREA: 305 m^2
VOLUME: 660 m^3
FIREPLACE: YES
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16.0°C	21.3°C
REL. HUM	68%	68%
WIND(SPEED&DIR)	S @ 4 KPH	
AIR PRESSURE	101.1 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FAIR-S.E.	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP SEALED
10	0.281	0.259	
15	0.396	0.337	
20	0.474	0.412	0.227
25	0.531	0.476	
30	0.586	0.521	0.268
35	0.604	0.573	0.304
40	0.692	0.640	0.337
45		0.663	0.366
50			0.399
55			0.424
60			0.436

	PRES CGSB	DEP CGSB	DEP SEALED
EXPONENT (N)	0.612	0.631	0.632
CONSTANT (C)	0.072	0.061	0.632
CORRELATION	0.9907	0.9991	0.9922
AIR FLOW @ 10PA	0.29 M^3/S	0.26 M^3/S	0.14 M^3/S
AIR FLOW @ 50PA	0.79 M^3/S	0.72 M^3/S	0.39 M^3/S
ELA	0.119 SQM @ 10PA	0.104 SQM @ 10PA	0.056 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.34	3.94	2.13

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Retrospectors

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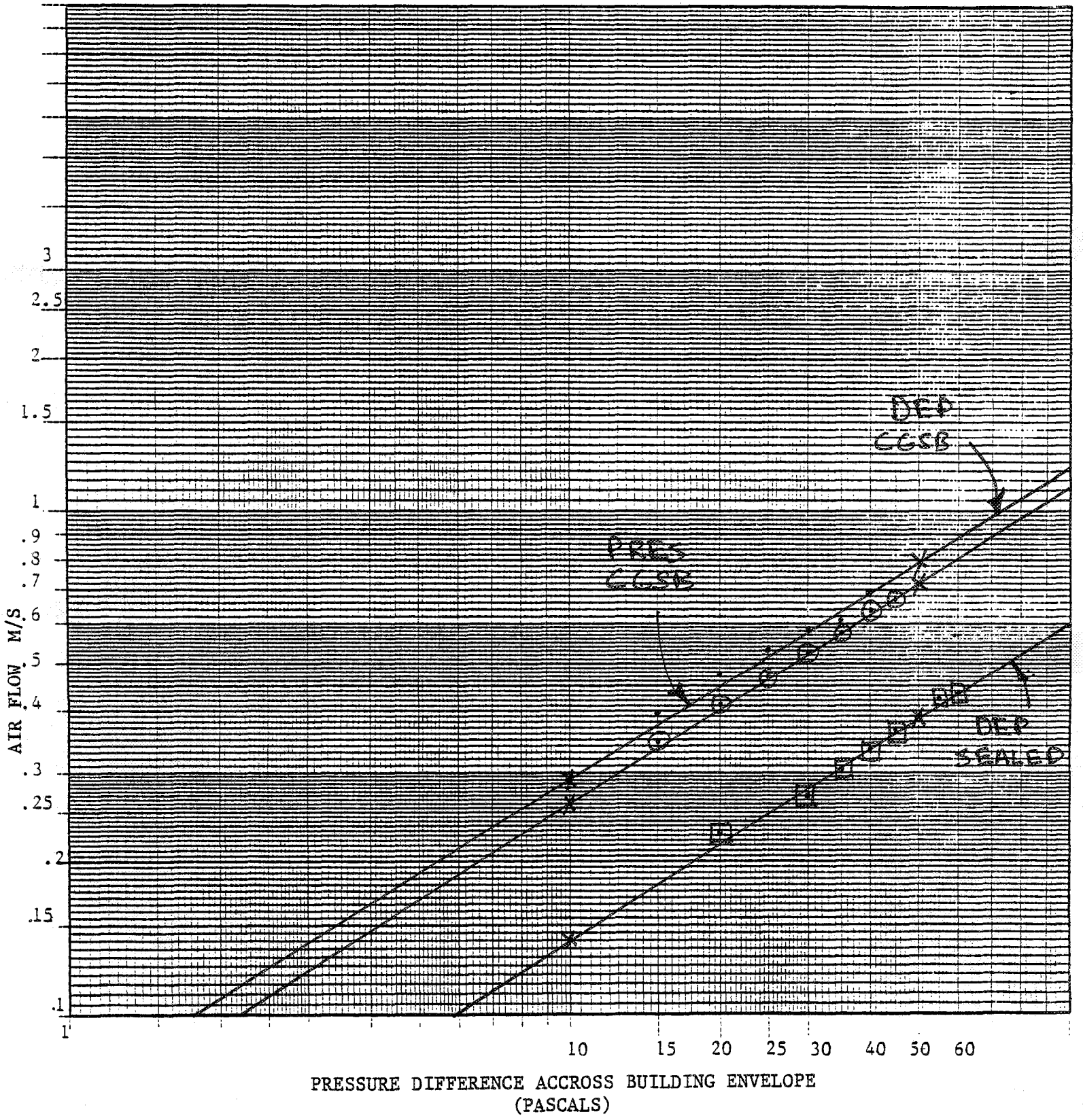
HOUSE # 20

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
(613) 234-3280

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN.6 83
TIME	14:00 - 14:30
TEST HOUSE	20
TECHNICIAN	SINHA/FUGLER
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	2.0°C	18.0°C
REL. HUM	75%	33%
WIND(SPEED&DIR)	CALM	
AIR PRESSURE	101.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.306	-
15		0.367	0.205
20		0.455	0.250
25		0.529	0.289
30		0.602	0.306
35		0.659	0.353
40		0.711	0.381
45		0.740	0.408
50		0.819	0.432
55		-	0.467
60		-	0.488
EXPONENT (N)		0.621	0.619
CONSTANT (C)		0.071	0.038
CORRELATION		0.9977	0.9984
AIR FLOW @ 10PA	M^3/S	0.298 M^3/S	0.160 M^3/S
AIR FLOW @ 50PA	M^3/S	0.812 M^3/S	0.436 M^3/S
ELA	SQM @ 10PA	0.119 SQM @ 10PA	0.064 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		4.43	2.37

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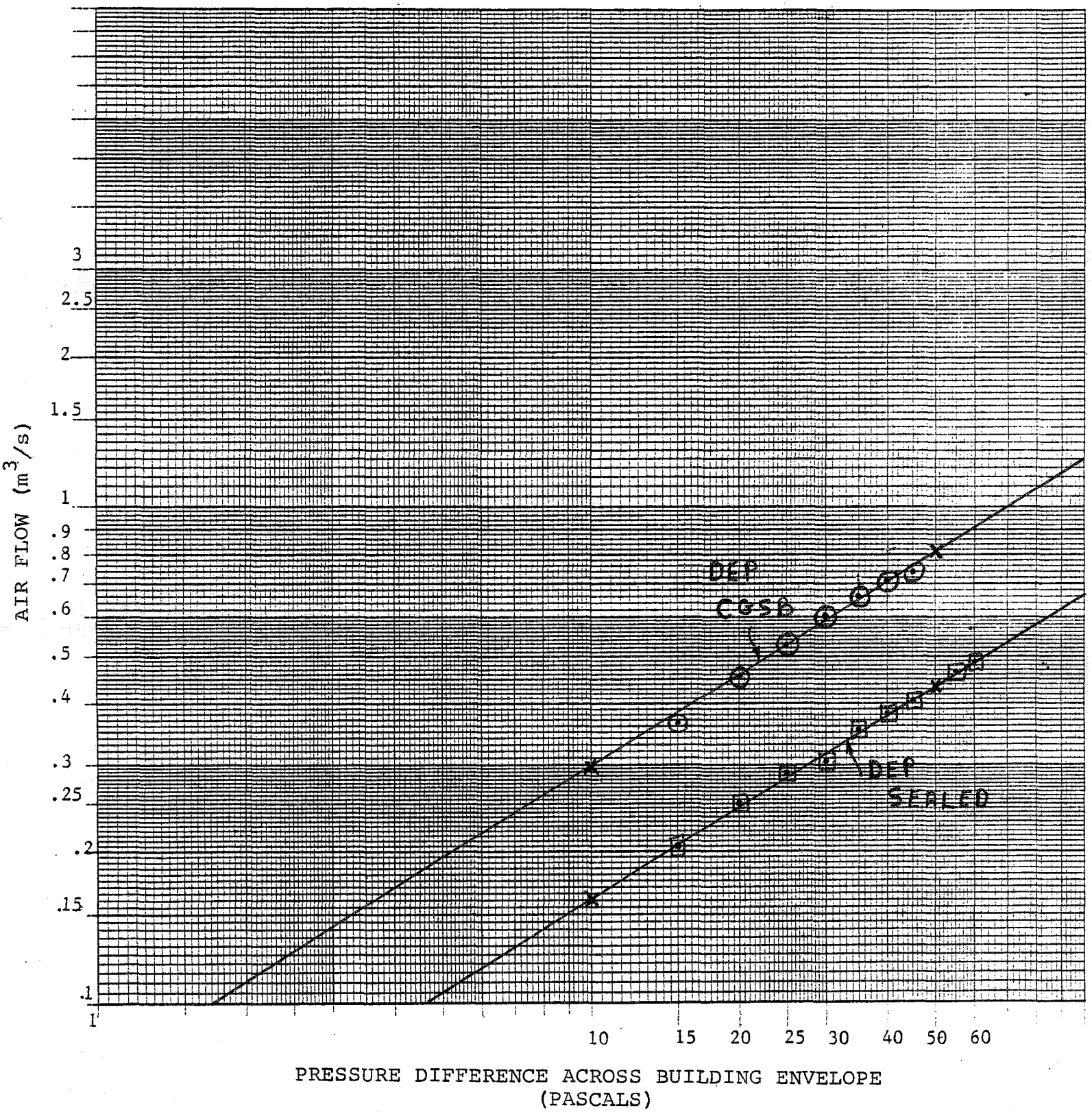
Retrospectors

HOUSE # 20

PHASE 4

AIR LEAKAGE PROFILE



176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB.24/82
TIME	15:00
TEST HOUSE	21
TECHNICIAN	ROSENBERG
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-11.0°C	18.5°C
REL. HUM	47%	40%
WIND(SPEED&DIR)	W@18KPH	
AIR PRESSURE	102.2 kPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.546	0.553	0.371
25			
30	0.654	0.690	0.501
35			
40	0.723	0.786	0.665
45			
50	0.784	0.963	0.726
55			
60			
EXPONENT (N)	0.392	0.526	0.763
CONSTANT (C)	0.170	0.114	0.037
CORRELATION	0.9980	0.9988	0.9932
AIR FLOW @ 10PA	0.41 M^3/S	0.38 M^3/S	0.21 M^3/S
AIR FLOW @ 50PA	0.79 M^3/S	0.89 M^3/S	0.75 M^3/S
ELA	0.16 SQM @ 10PA	0.15 SQM @ 10PA	0.08 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.31	4.89	4.09

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Retrospectors

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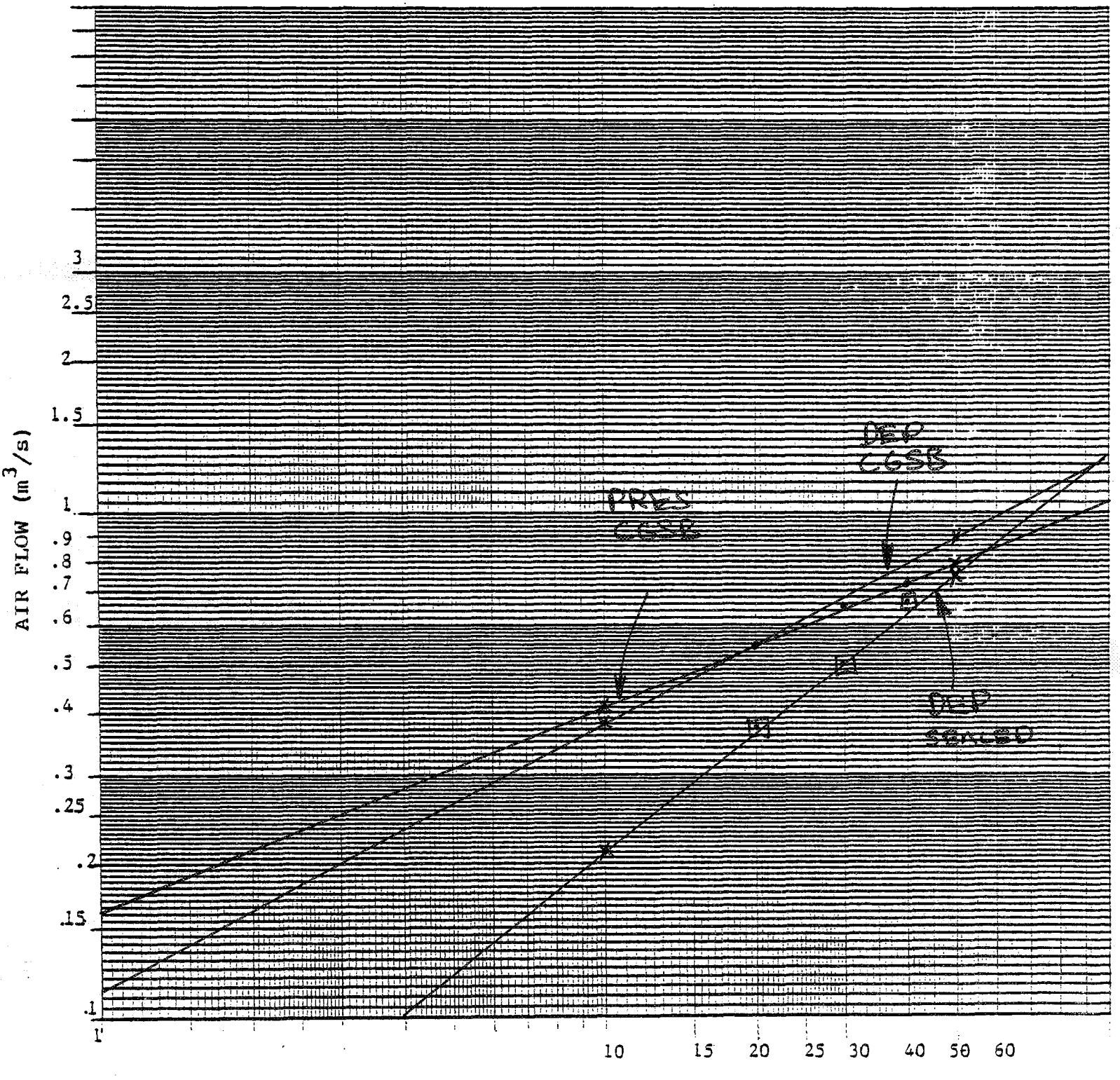
HOUSE # 21

PHASE 1

AIR LEAKAGE PROFILE



176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JUNE 4/82
TIME	13:00-13:45
TEST HOUSE	21
TECHNICIAN	FUGLER/SETON
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	15°C	18.4°C
REL. HUM	63%	54%
WIND (SPEED&DIR)	S.E. @ 4 KPH	
AIR PRESSURE	102.4 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL-SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.270	10	
15	0.369	15	0.360	15	
20	0.410	20	0.420	20	0.228
25	0.491	25	0.478	25	0.250
30	0.537	30	0.529	30	0.289
35	0.583	35	0.584	35	0.314
40	0.654	40	0.659	40	0.353
45	0.700	45	0.666	45	0.374
50	0.750	50		50	0.395
55		55		55	0.438
60		60		60	0.478

EXPONENT (N)	0.605	EXPONENT N	0.605	EXPONENT N	0.667
CONSTANT (C)	0.069	CONSTANT C	0.068	CONSTANT C	0.029
CORRELATION	0.9958	CORRELEATION	0.9978	CORRELATION	0.9950
AIR FLOW @ 10PA	0.27 M^3/S	AIR FLOW @ 10PA	0.27 M^3/S	AIR FLOW @ 10PA	0.13 M^3/S
AIR FLOW @ 50PA	0.74 M^3/S	AIR FLOW @ 50PA	0.72 M^3/S	AIR FLOW @ 50 PA	0.40 M^3/S
ELA	0.112 SQM @ 10PA	ELA	0.110 SQM @ 10PA	ELA	0.055 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.04	AIR CHNGS/HRS @ 50PA	3.97	AIR CHNGS/HRS @ 50PA	2.22

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Retrospectors

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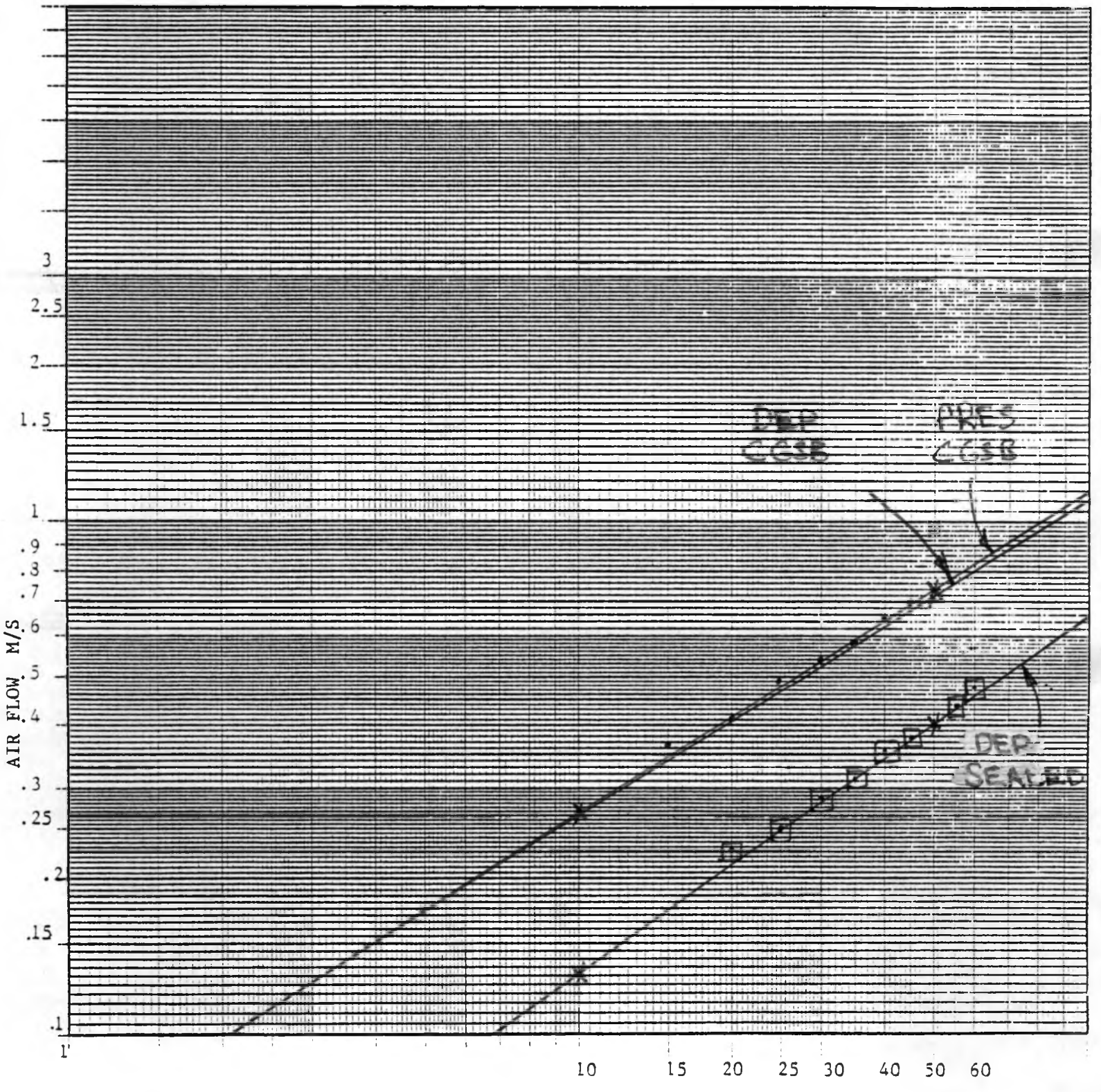
HOUSE # 21

PHASE 2

AIR LEAKAGE PROFILE



176 Bronson Ave.
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Retrospectors

IDENTIFICATION

DATE	Oct 29-82
TIME	11:15 - 12:40
TEST HOUSE	21
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16°C	20°C
REL. HUM	51%	58%
WIND (SPEED&DIR)	SW @ 20 KPH	
AIR PRESSURE	101.8 KPH	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.339	0.288	
15	0.445	0.366	0.190
20	0.540	0.431	0.249
25	0.578	0.497	0.269
30	0.621	0.537	0.288
35	0.728	0.600	0.337
40	0.770	0.649	0.352
45		0.702	0.380
50			0.406
55			0.431
60			0.442

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.573	0.586	0.590
CONSTANT (C)	0.092	0.074	0.040
CORRELATION	0.9938	0.9995	0.9940
AIR FLOW @ 10PA	0.347 M^3/S	0.287 M^3/S	0.156 M^3/S
AIR FLOW @ 50PA	0.874 M^3/S	0.739 M^3/S	0.404 M^3/S
ELA	0.139 SQM @ 10PA	0.115 SQM @ 10PA	0.062 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.77	4.03	2.21

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Retrospectors

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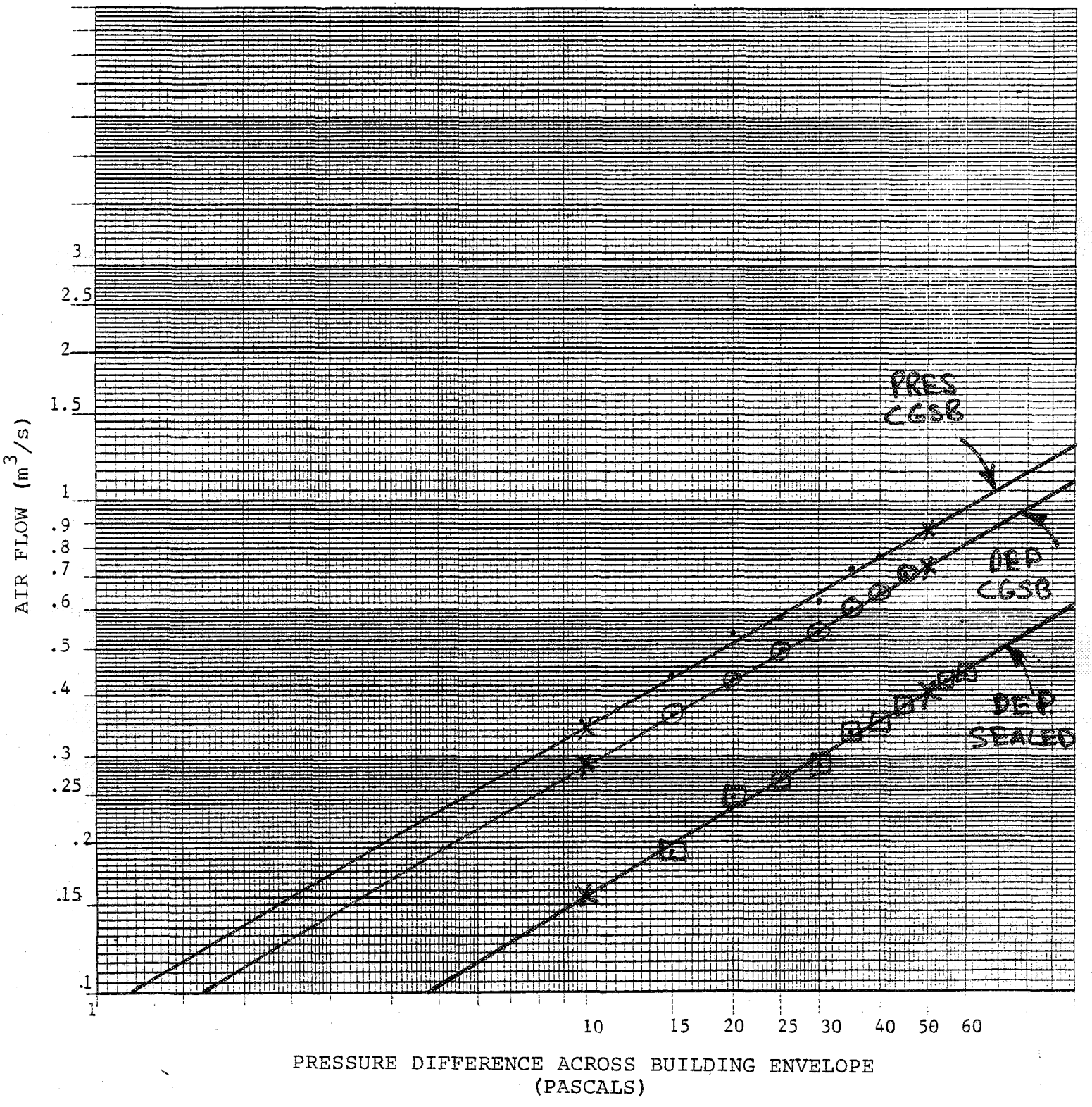
HOUSE # 21

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 25/83
TIME	12:00 - 12:30
TEST HOUSE	21
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	1°C	20°C
REL. HUM	86%	53%
WIND (SPEED&DIR)	SW @ 10 KPH	
AIR PRESSURE	100.6 KPA	
PRECIPITATION	LIGHT SNOW	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.313	10	
15		15	0.393	15	
20		20	0.487	20	0.204
25		25	0.555	25	0.239
30		30	0.600	30	0.260
35		32.5	0.657	35	0.305
40		35	0.694	40	0.329
45		37.5	0.716	45	0.359
50		50		50	0.380
55		55		55	0.400
60		60		60	0.419
EXPONENT (N)		EXPONENT N	0.629	EXPONENT N	0.669
CONSTANT (C)		CONSTANT C	0.072	CONSTANT C	0.027
CORRELATION		CORRELATION	0.9982	CORRELATION	0.9971
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.310 M^3/S	AIR FLOW @ 10PA	0.128 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.856 M^3/S	AIR FLOW @ 50 PA	0.378 M^3/S
ELA	SQM @ 10PA	ELA	0.124 SQM @ 10PA	ELA	0.051 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	4.67	AIR CHNGS/HRS @ 50PA	2.06

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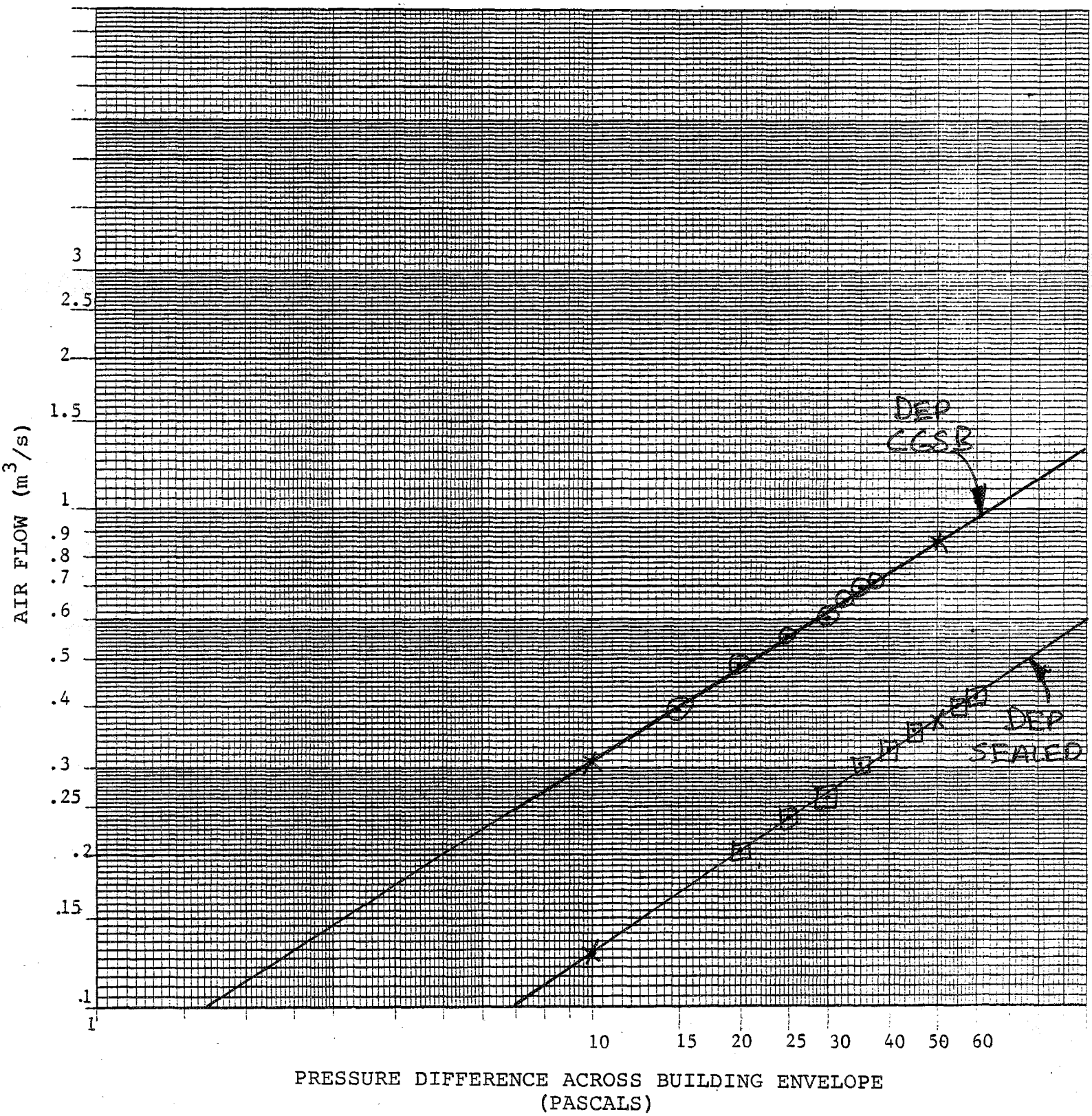
Retrospectors

HOUSE # 21

PHASE 4

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	~~APR.28/82~~
TIME	19:30-21:00
TEST HOUSE	22
TECHNICIAN	MOFFATT/EAGLER
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	13°C	19°C
REL. HUM	24%	
WIND(SPEED&DIR)	N@14KPH	
AIR PRESSURE	102.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	DUSK	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.325	10	0.322	10	
15	0.414	15	0.407	15	
20	0.511	20	0.487	20	0.270
25	0.530	25	0.547	25	0.306
30	0.601	30	0.583	30	0.322
35	0.649	35	0.642	35	0.374
40	0.678	40	0.724	40	0.401
45		45		45	0.431
50		50		50	0.471
55		55		55	0.498
60		60		60	0.528

EXPONENT (N)	0.528	EXPONENT N	0.561	EXPONENT N	0.622
CONSTANT (C)	0.099	CONSTANT C	0.088	CONSTANT C	0.040
CORRELATION	0.9936	CORRELATION	0.9974	CORRELATION	0.9954
AIR FLOW @ 10PA	0.33 M^3/S	AIR FLOW @ 10PA	0.32 M^3/S	AIR FLOW @ 10PA	0.17 M^3/S
AIR FLOW @ 50PA	0.78 M^3/S	AIR FLOW @ 50PA	0.80 M^3/S	AIR FLOW @ 50 PA	0.46 M^3/S
ELA	0.13 SQM @ 10PA	ELA	0.13 SQM @ 10PA	ELA	0.06 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.26	AIR CHNGS/HRS @ 50PA	4.37	AIR CHNGS/HRS @ 50PA	2.54

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Retrospectors

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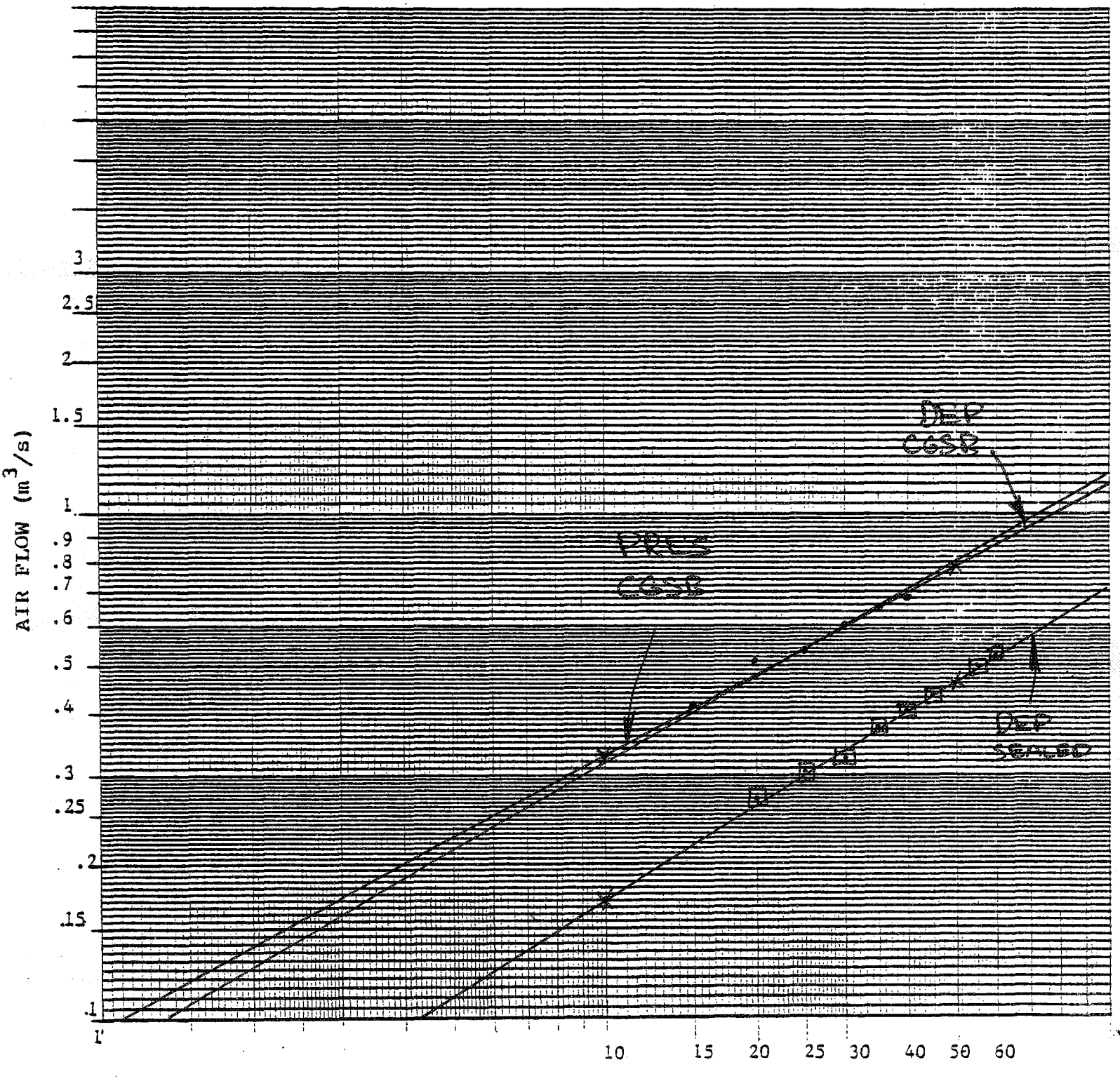
HOUSE #22

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS. ON "DEP. CGSB LINE OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JULY 12/82
TIME	13:45-14:45
TEST HOUSE	22
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	22.5°C	21.0°C
REL. HUM	57%	68%
WIND(SPEED&DIR)	SW@22-40 KPH	
AIR PRESSURE	100.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NIL	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.312	10	0.259	10	
15	0.379	15	0.336	15	
20	0.447	20	0.411	20	0.238
25	0.505	25	0.505	25	
30	0.544	30	0.572	30	0.295
35	0.622	35	0.598	35	
40	0.677	40	0.673	40	0.351
45	0.735	45		45	
50		50		50	0.405
55		55		55	
60		60		60	0.447

EXPONENT (N)	0.567	EXPONENT N	0.696	EXPONENT N	0.578
CONSTANT (C)	0.082	CONSTANT C	0.051	CONSTANT C	0.041
CORRELATION	0.9968	CORRELEATION	0.9973	CORRELATION	0.9994
AIR FLOW @ 10PA	0.304 M^3/S	AIR FLOW @ 10PA	0.257 M^3/S	AIR FLOW @ 10PA	0.158 M^3/S
AIR FLOW @ 50PA	0.758 M^3/S	AIR FLOW @ 50PA	0.791 M^3/S	AIR FLOW @ 50 PA	0.402 M^3/S
ELA	0.122 SQM @ 10PA	ELA	0.103 SQM @ 10PA	ELA	0.063 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.13	AIR CHNGS/HRS @ 50PA	4.32	AIR CHNGS/HRS @ 50PA	2.21

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Retrospectors

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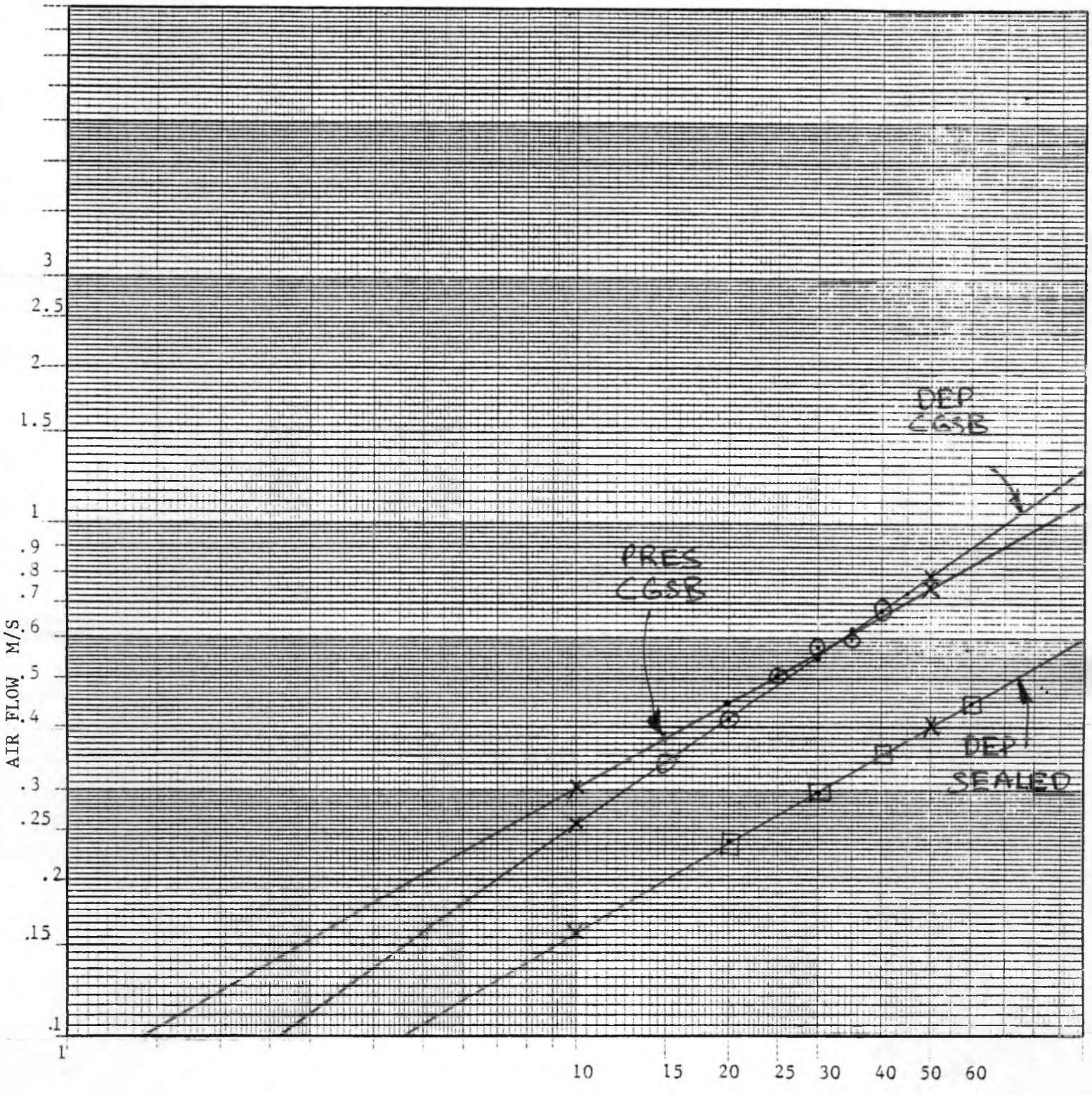
HOUSE # 22

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
(613) 234-3280

Retrospectors

IDENTIFICATION

DATE	SEPT. 28/82
TIME	10:30 - 11:00
TEST HOUSE	22
TECHNICIAN	Fugler/Penguin
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	15°C	20°C
REL. HUM	94%	70%
WIND (SPEED&DIR)	NW 12 KPH	
AIR PRESSURE	102.0 KPA	
PRECIPITATION	DRIZZLE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

NOTE: FIREPLACE WAS VERY DIFFICULT TO SEAL & HOLES STILL PRESENT.

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.324	0.322	
15	0.396	0.419	0.177
20	0.457	0.487	0.228
25	0.521	0.537	0.239
30	0.595	0.592	0.279
35	0.653	0.642	0.306
40	0.699	0.703	0.338
45			0.367
50			0.394
55			0.419
60			0.443

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.564	0.543	0.651
CONSTANT (C)	0.086	0.094	0.030
CORRELATION	0.9978	0.9982	0.9966
AIR FLOW @ 10PA	0.317 M^3/S	0.329 M^3/S	0.137 M^3/S
AIR FLOW @ 50PA	0.787 M^3/S	0.788 M^3/S	0.392 M^3/S
ELA	0.127 SQM @ 10PA	0.131 SQM @ 10PA	0.055 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.29	4.30	2.13

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Retrospectors

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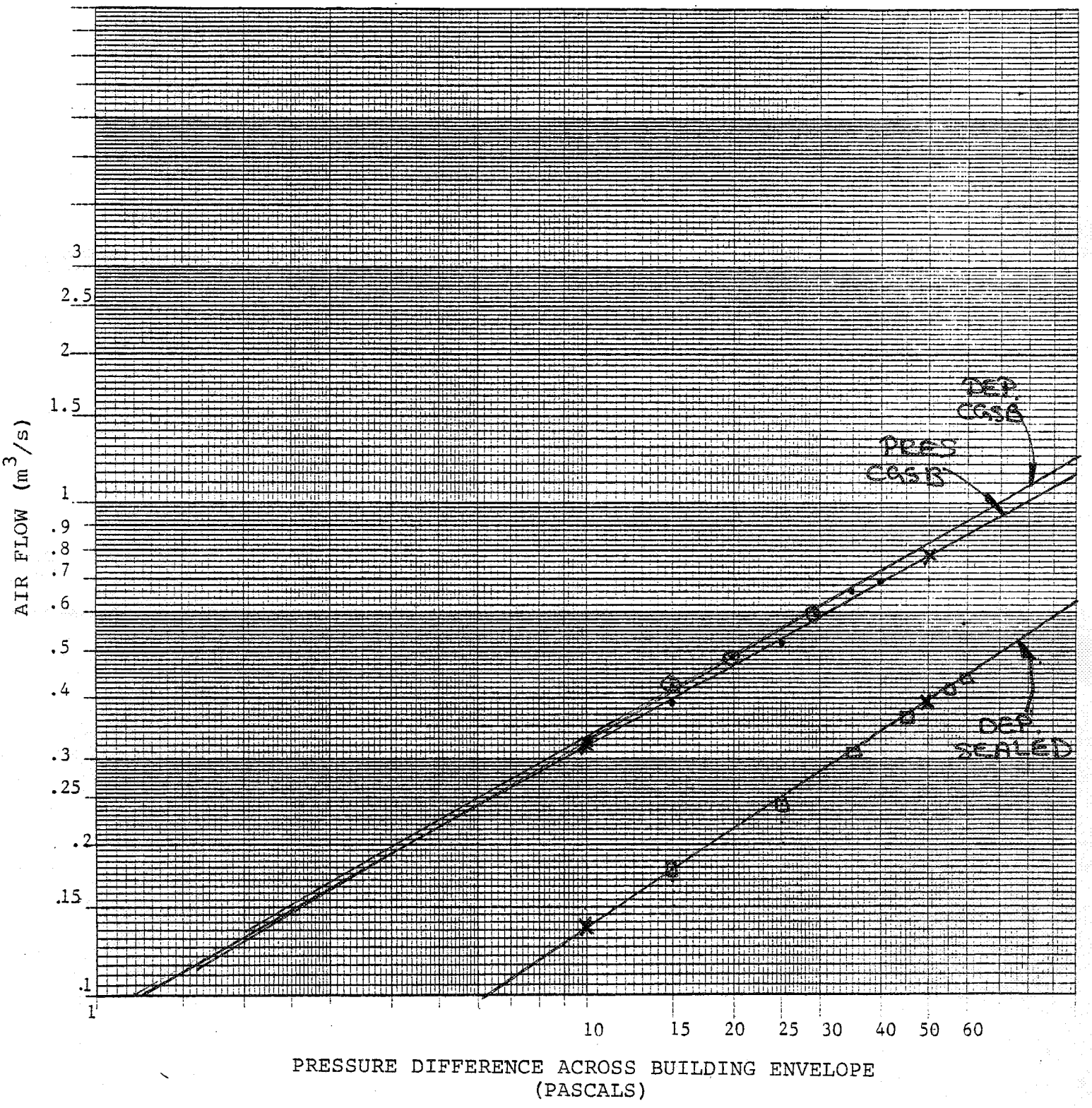
HOUSE # 22

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB. 11/83
TIME	11:15 - 11:45
TEST HOUSE	22
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-16°C	17°C
REL. HUM	42%	29%
WIND (SPEED&DIR)	N.E. @ 18KPH	
AIR PRESSURE	103.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.276	
15		0.353	
20		0.432	0.228
25		0.524	0.250
30		0.557	0.289
35		0.619	0.323
40		0.666	0.346
45		0.718	0.367
50		0.760	0.402
55			0.426
60			0.444
EXPONENT (N)		EXPONENT N 0.642	EXPONENT N 0.626
CONSTANT (C)		CONSTANT C 0.062	CONSTANT C 0.034
CORRELATION		CORRELATION 0.9979	CORRELATION 0.9979
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA 0.275 M^3/S	AIR FLOW @ 10PA 0.145 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA 0.775 M^3/S	AIR FLOW @ 50 PA 0.398 M^3/S
ELA	SQM @ 10PA	ELA 0.110 SQM @ 10PA	ELA 0.058 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA 4.22	AIR CHNGS/HRS @ 50PA 2.17

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Retrospectors

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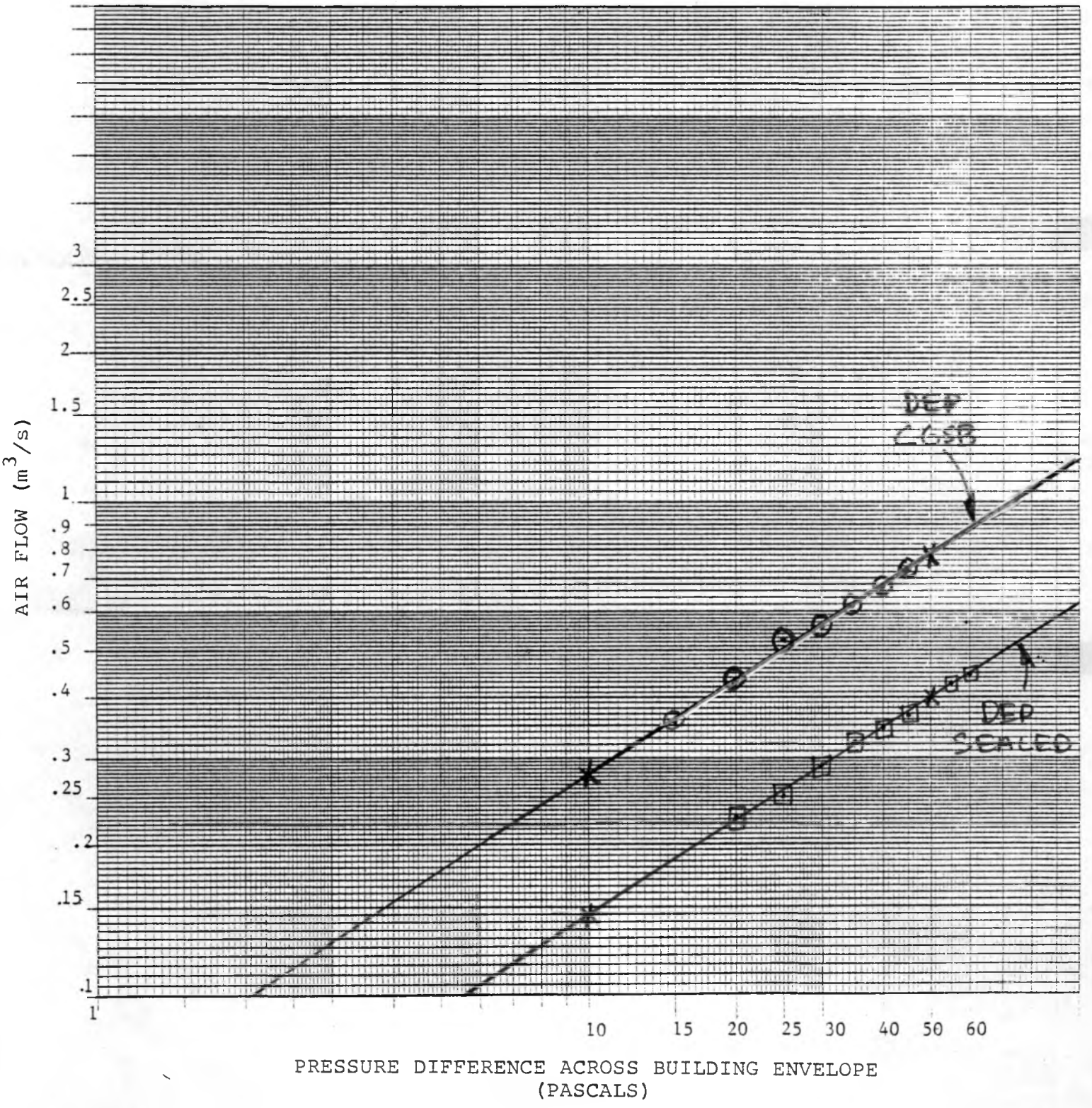
HOUSE # 22

PHASE 4

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR. 3/82
TIME	18:00
TEST HOUSE	23
TECHNICIAN	ROSENBERG
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	NO
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-12.9°C	20°C
REL. HUM	39%	52%
WIND(SPEED&DIR)	W@9KPH	
AIR PRESSURE	102.6KPA	
PRECIPITATION	NA.	
SOLAR RAD.	NA	
SKY/CLOUD COND	NA	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20		0.279	0.210
25		0.325	0.231
30		0.381	0.261
35		0.398	0.276
40		0.441	0.292
45		0.444	0.324
50		0.495	0.390
55		0.500	0.369
60			
EXPONENT (N)		EXPONENT N 0.575	EXPONENT N 0.548
CONSTANT (C)		CONSTANT C 0.051	CONSTANT C 0.040
CORRELATION		CORRELATION 0.9891	CORRELATION 0.9949
AIR FLOW @ 10PA ___ M^3/S		AIR FLOW @ 10PA 0.19 M^3/S	AIR FLOW @ 10PA 0.14 M^3/S
AIR FLOW @ 50PA ___ M^3/S		AIR FLOW @ 50PA 0.48 M^3/S	AIR FLOW @ 50 PA 0.34 M^3/S
ELA ___ SQM @ 10PA		ELA 0.07 SQM @ 10PA	ELA 0.05 SQM @ 10PA
AIR CHNGS/HRS @ 50PA ___		AIR CHNGS/HRS @ 50PA 2.66	AIR CHNGS/HRS @ 50PA 1.86

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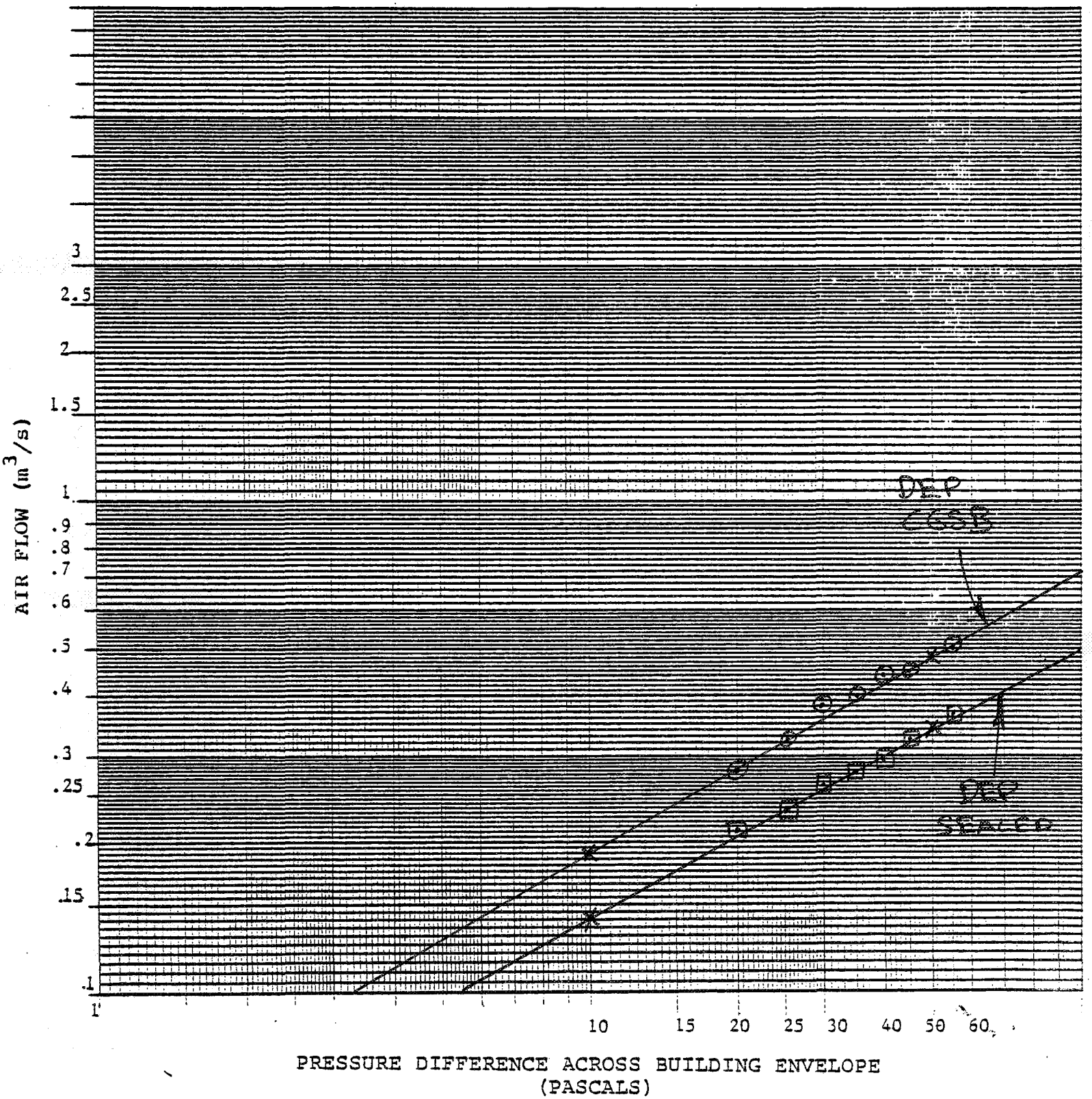
HOUSE # 23

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE JUNE 11/82
TIME 9:20 - 10:20
TEST HOUSE 23
TECHNICIAN SETON/EUGLER
ENVELOPE AREA 305m²
VOLUME 660m³
FIREPLACE NO
HEATING ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	18°C	20°C
REL. HUM	72%	70%
WIND(SPEED&DIR)	W @ 20 KPH	
AIR PRESSURE	101.6 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	STRONG SOUTH EAST	
SKY/CLOUD COND	SCATTERED, LIGHT CLOUD	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP SEALED
10			
15			
20	0.171		
25	0.217		
30	0.228	0.204	
35	0.260	0.228	0.176
40	0.289	0.249	0.198
45	0.306	0.269	0.216
50	0.330	0.278	0.239
55	0.360	0.296	—
60	0.388	0.313	0.261

	PRES CGSB	DEP CGSB	DEP SEALED
EXPONENT (N)	0.706	0.604	0.737
CONSTANT (C)	0.021	0.026	0.013
CORRELATION	0.9956	0.9966	0.9932
AIR FLOW @ 10PA	0.10 M^3/S	0.10 M^3/S	0.07 M^3/S
AIR FLOW @ 50PA	0.33 M^3/S	0.28 M^3/S	0.23 M^3/S
ELA	0.043 SQM @ 10PA	0.042 SQM @ 10PA	0.028 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	1.83	1.54	1.27

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Retrospectors

AIR LEAKAGE PROFILE

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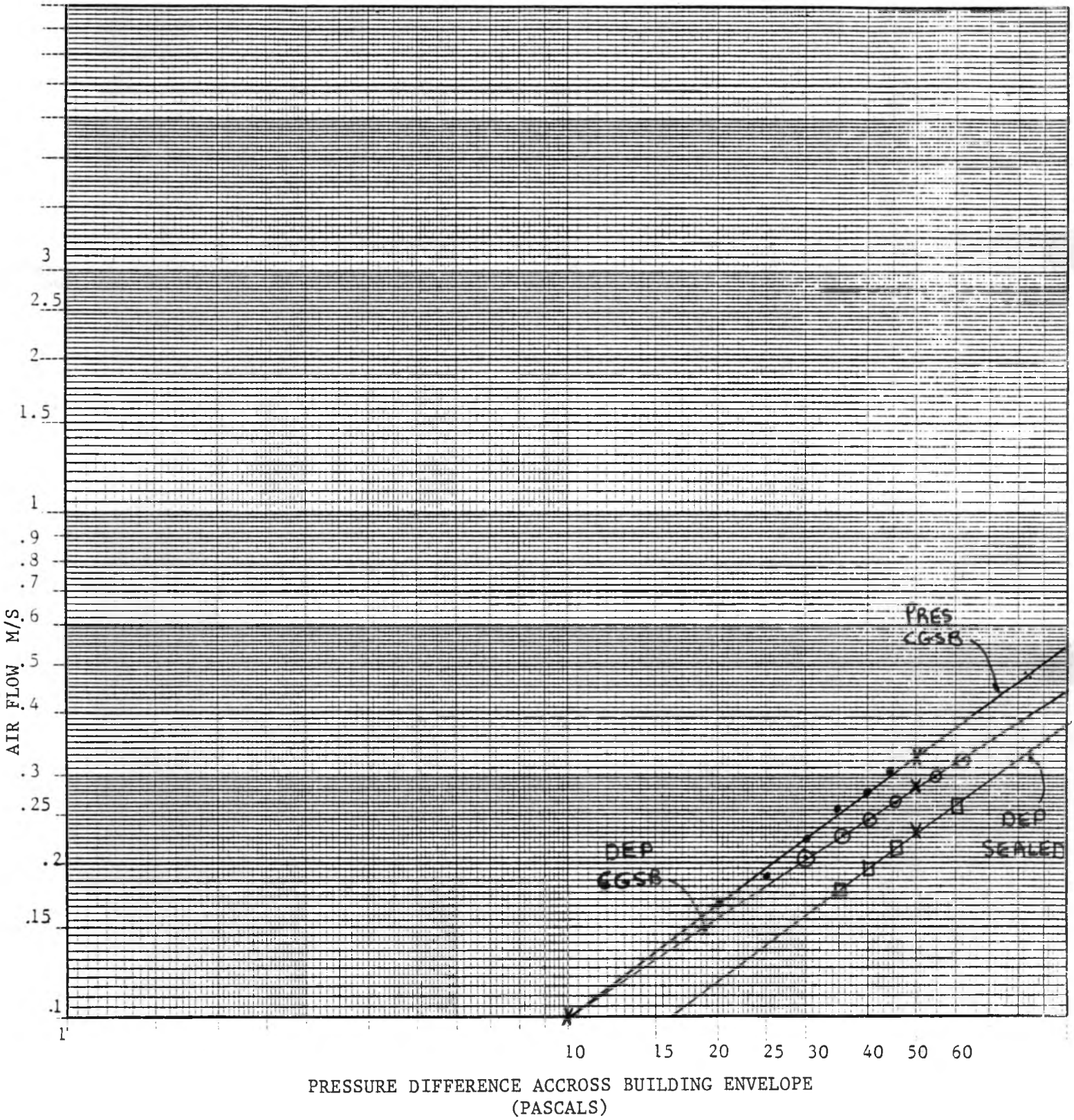
HOUSE # 23

PHASE 2



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

IDENTIFICATION

DATE	SEPT 16/82
TIME	13:45-14:25
TEST HOUSE	23
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	NO
HEATING	ELECTRIC
	LOW SPEED FAN ON

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16°C	19°C
REL. HUM	88%	60%
WIND(SPEED&DIR)	NW 22 KPH	
AIR PRESSURE	101.3 KPA	
PRECIPITATION	RECENT	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.177	0.163	0.145
25		0.192	
30	0.205	0.206	0.177
35	0.240	0.229	
40	0.261	0.251	0.216
45	0.298	0.271	0.228
50	0.324	0.290	0.250
55	0.339	0.316	0.270
60	0.369	0.331	0.279

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.698	0.641	0.613
CONSTANT (C)	0.020	0.023	0.022
CORRELATION	0.9856	0.9979	0.9965
AIR FLOW @ 10PA	0.102 M^3/S	0.104 M^3/S	0.092 M^3/S
AIR FLOW @ 50PA	0.316 M^3/S	0.292 M^3/S	0.249 M^3/S
ELA	0.041 SQM @ 10PA	0.041 SQM @ 10PA	0.037 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	1.72	1.59	1.35

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Retrospectors

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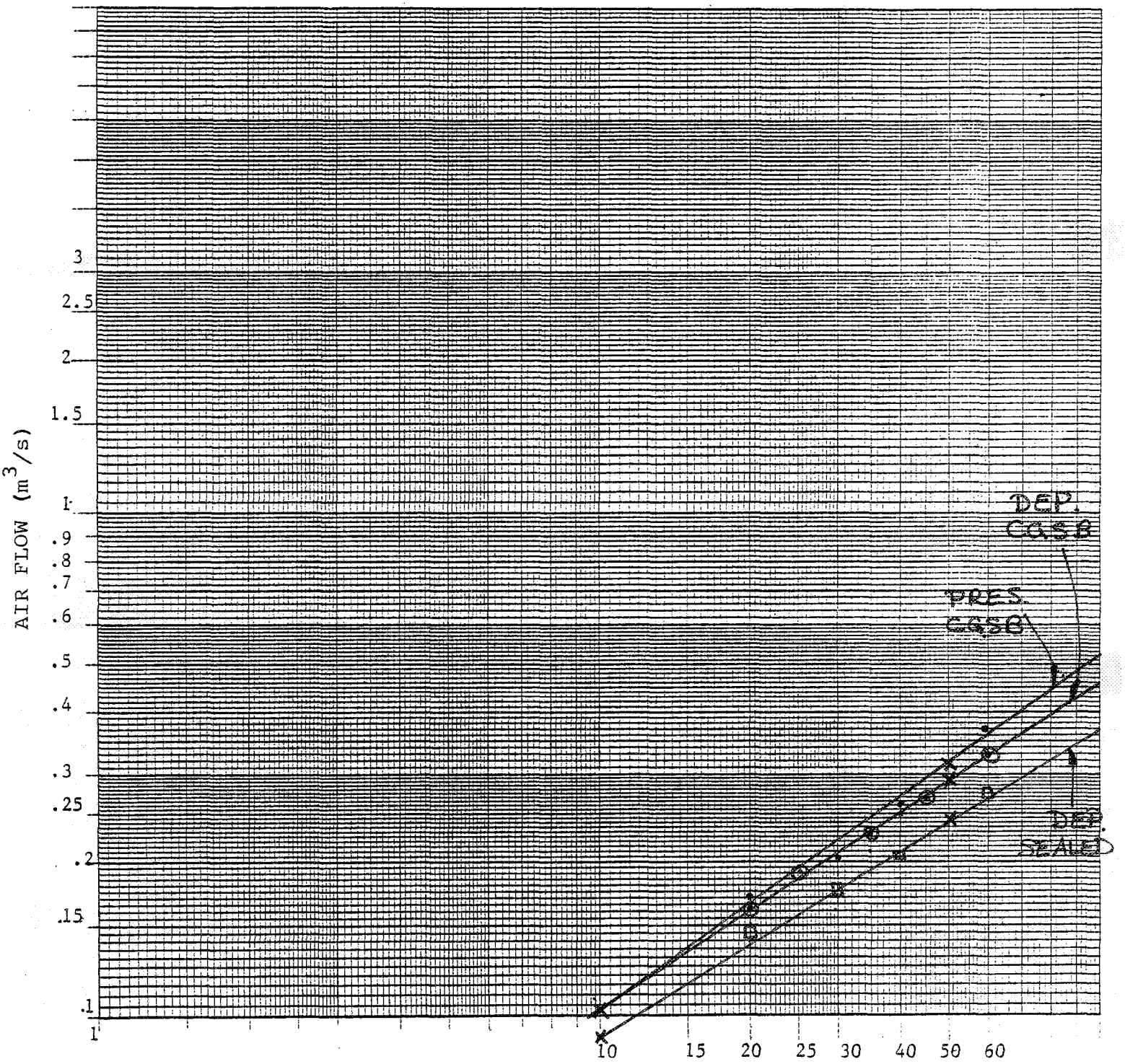
HOUSE # 23

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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AIR 2-186

Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: JAN 19-83
TIME: 11:15 - 11:45
TEST HOUSE: 23
TECHNICIAN: FUGLER/SINHA
ENVELOPE AREA: 305 m^2
VOLUME: 660 m^3
FIREPLACE: NO
HEATING: ELECTRIC
HEAT EXCHANGER SEALED

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-21.°C	19°C
REL. HUM	53%	45%
WIND (SPEED&DIR)	N.W. @ 30KPH	
AIR PRESSURE	102.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20		0.171	0.162
25		0.191	0.189
30		0.217	0.209
35		0.250	0.228
40		0.260	0.256
45		0.279	0.270
50		0.288	0.279
55		0.314	0.314
60		0.330	0.322
EXPONENT (N)		0.597	0.623
CONSTANT (C)		0.028	0.025
CORRELATION		0.9959	0.9978
AIR FLOW @ 10PA	M^3/S	0.113 M^3/S	0.105 M^3/S
AIR FLOW @ 50PA	M^3/S	0.296 M^3/S	0.288 M^3/S
ELA	SQM @ 10PA	0.045 SQM @ 10PA	0.042 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		1.61	1.57

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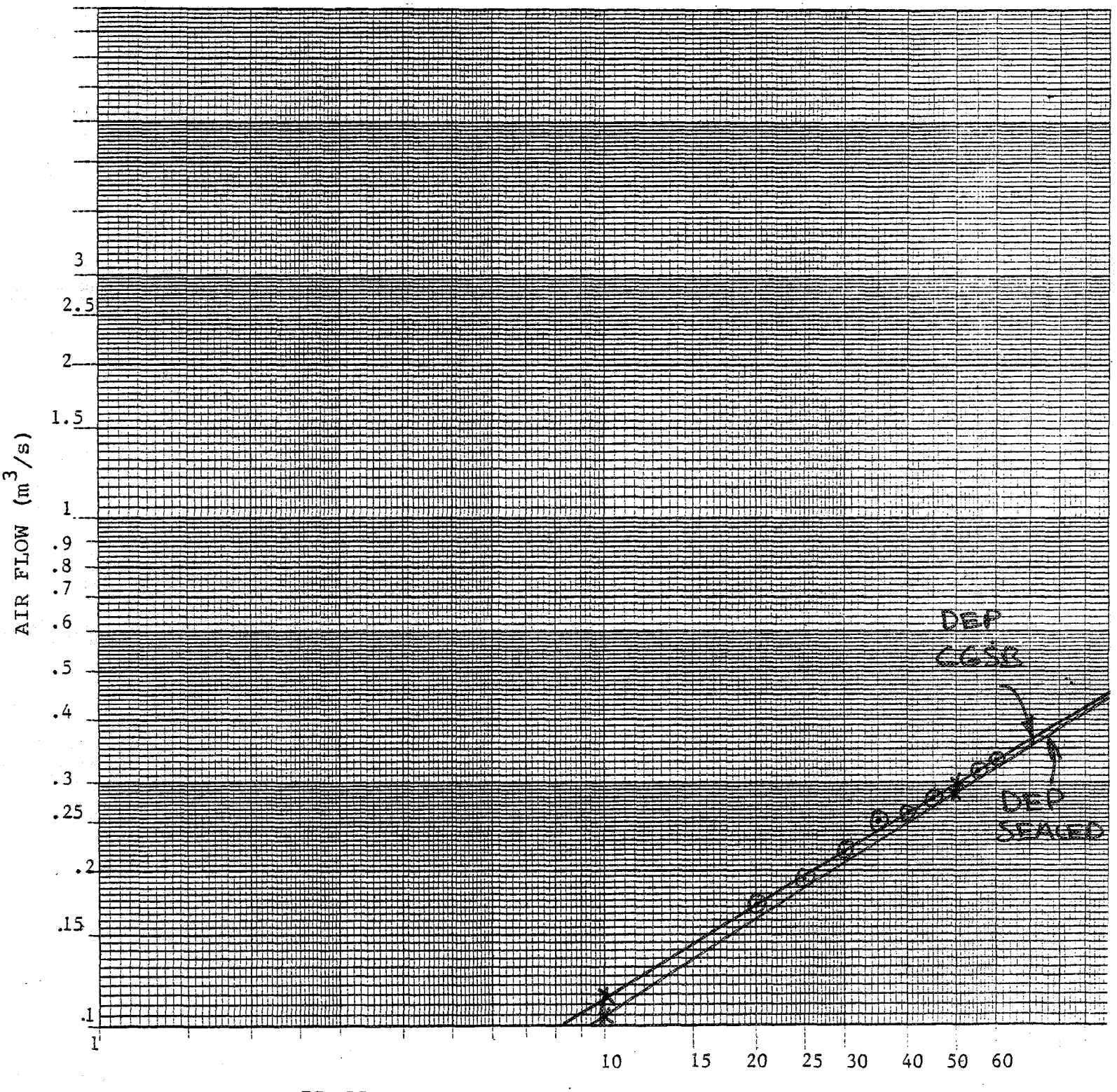
Retrospectors

HOUSE # 23

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP SEALED" LINE OMITTED DUE TO LACK OF SPACE

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR.4/82
TIME	18:00
TEST HOUSE	24
TECHNICIAN	ROSENBERG
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-10.°C	22°C
REL. HUM	79%	45%
WIND(SPEED&DIR)	E@26KPH	
AIR PRESSURE	101.1 KPA	
PRECIPITATION	LIGHT SNOW	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20		0.512	
25		0.588	0.329
30		0.625	0.361
35		0.695	0.402
40		0.695	0.447
45		0.738	0.474
50		0.836	0.527
55		0.900	0.533
60		0.915	

EXPONENT (N)		EXPONENT N	0.521	EXPONENT N	0.648
CONSTANT (C)		CONSTANT C	0.107	CONSTANT C	0.040
CORRELATION		CORRELATION	0.9859	CORRELATION	0.9955
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.35 M^3/S	AIR FLOW @ 10PA	0.18 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.82 M^3/S	AIR FLOW @ 50 PA	0.51 M^3/S
ELA	SQM @ 10PA	ELA	0.14 SQM @ 10PA	ELA	0.07 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	4.48	AIR CHNGS/HRS @ 50PA	2.78

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Retrospectors

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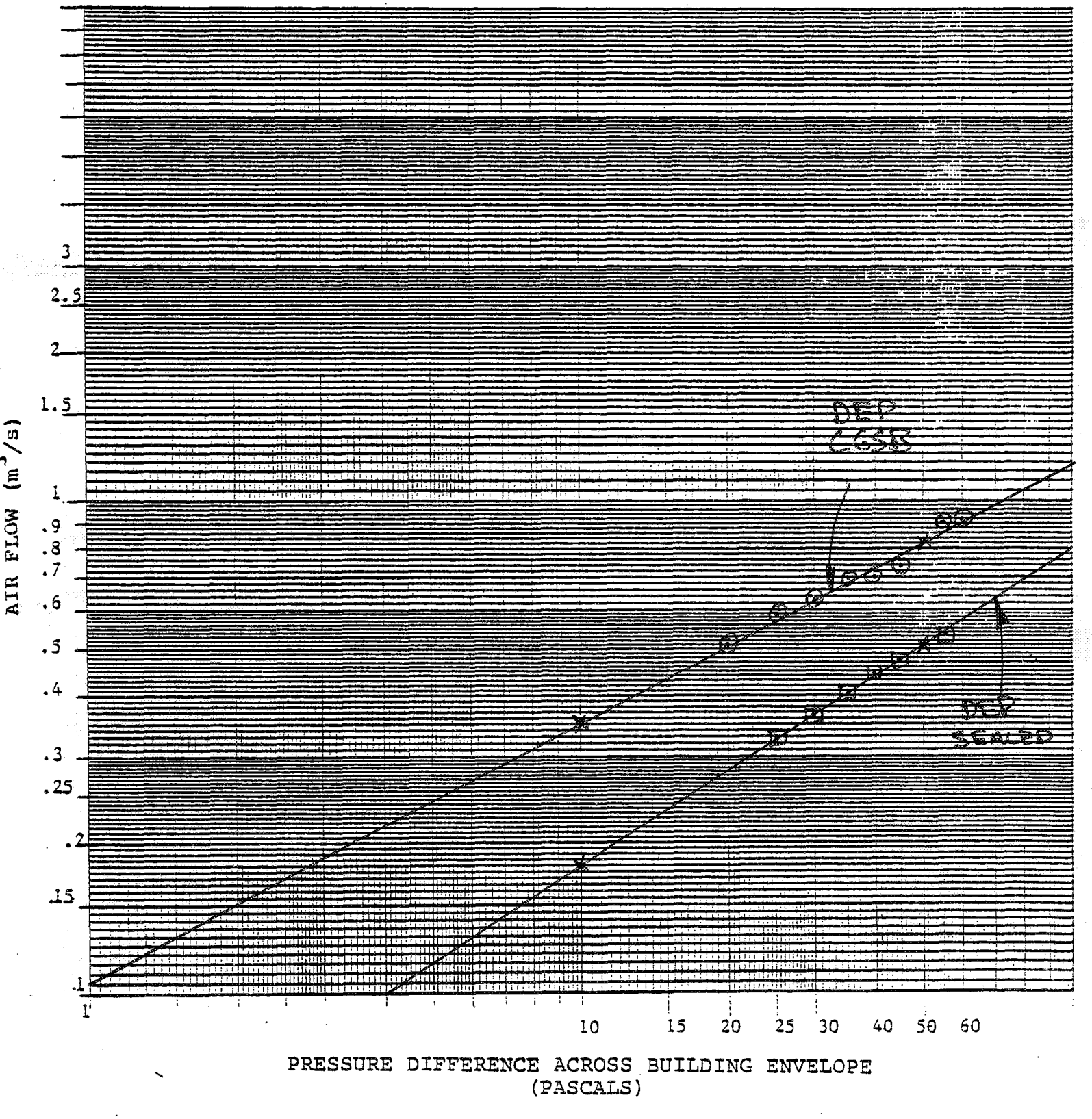
HOUSE # 24

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

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IDENTIFICATION

DATE	JULY 8/82
TIME	10:05 — 11:00
TEST HOUSE	24
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	25.0°C	26.1°C
REL. HUM	51%	69%
WIND(SPEED&DIR)	W@22KPH	
AIR PRESSURE	101.2KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTH EAST	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.257	10	—	10	—
15	0.341	15	0.266	15	—
20	0.396	20	—	20	0.189
25	0.438	25	0.348	25	—
30	0.471	30	—	30	0.247
35	0.502	35	0.402	35	—
40	0.568	40	0.455	40	0.276
45	0.619	45	0.522	45	—
50	0.642	50	0.550	50	0.326
55	0.673	55	0.594	55	0.341
60	—	60	0.618	60	0.363

EXPONENT (N)	0.549	EXPONENT N	0.622	EXPONENT N	0.582
CONSTANT (C)	0.074	CONSTANT C	0.047	CONSTANT C	0.033
CORRELATION	0.9965	CORRELEATION	0.9906	CORRELATION	0.9969
AIR FLOW @ 10PA	0.264 M^3/S	AIR FLOW @ 10PA	0.199 M^3/S	AIR FLOW @ 10PA	0.127 M^3/S
AIR FLOW @ 50PA	0.639 M^3/S	AIR FLOW @ 50PA	0.543 M^3/S	AIR FLOW @ 50 PA	0.324 M^3/S
ELA	0.105 SQM @ 10PA	ELA	0.079 SQM @ 10PA	ELA	0.050 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.48	AIR CHNGS/HRS @ 50PA	2.96	AIR CHNGS/HRS @ 50PA	1.76

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Retrospectors

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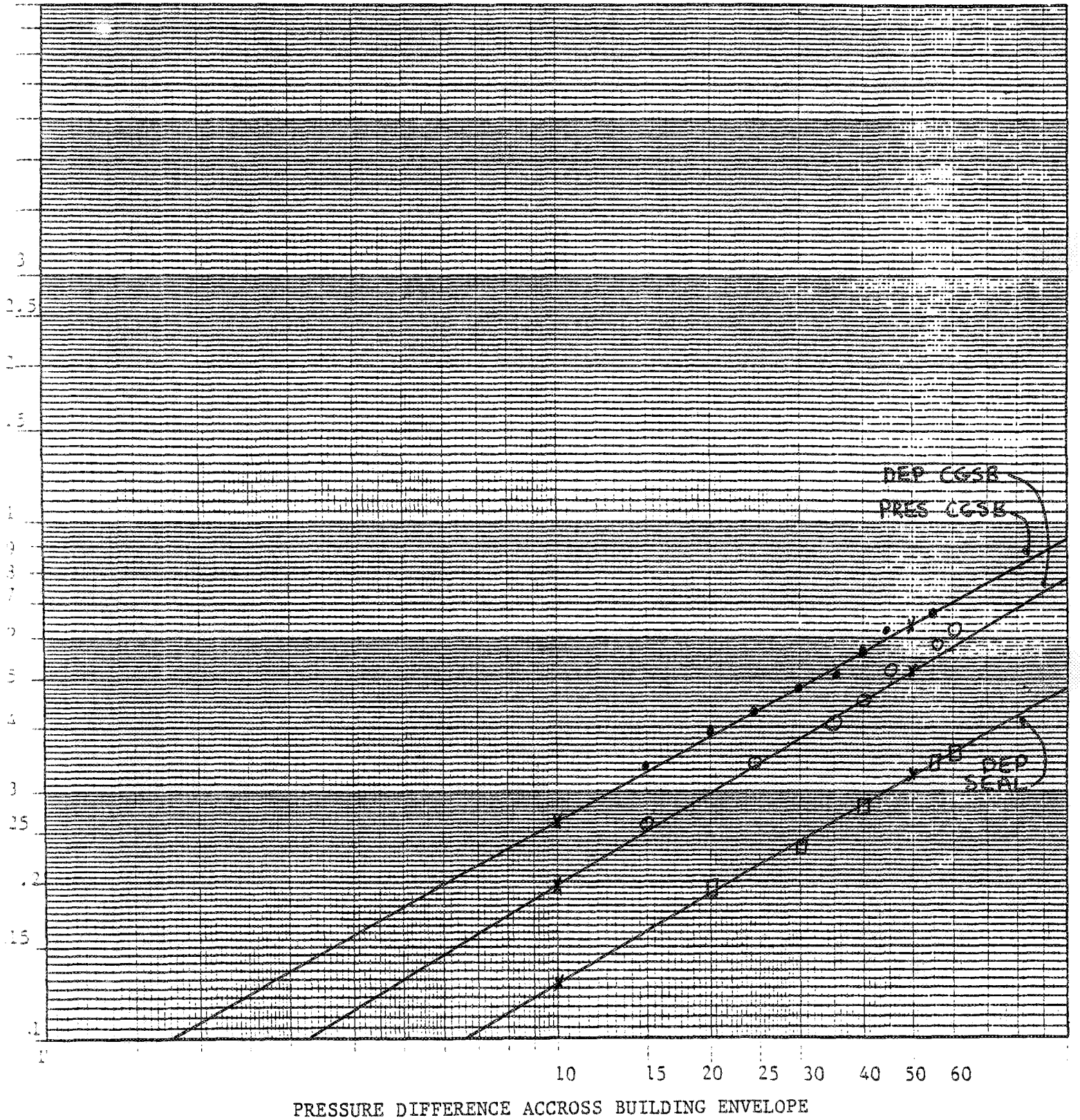
HOUSE # 24

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	SEPT. 21/82
TIME	10:20
TEST HOUSE	24
TECHNICIAN	FLUCKE/PASQUINI
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	12°C	19°C
REL. HUM	100%	72%
WIND(SPEED&DIR)	SE @ 8 KPH	
AIR PRESSURE	101.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.235	10	0.204	10	
15	0.274	15	0.250	15	
20	0.316	20	0.306	20	
25	0.387	25	0.338	25	0.177
30	0.424	30	0.381	30	0.204
35	0.436	35	0.419	35	0.228
40	0.463	40	0.443	40	0.239
45	0.538	45	0.498	45	0.270
50	0.565	50	0.528	50	0.288
55	0.599	55	0.566	55	0.306
60	0.639	60	0.583	60	0.322

EXPONENT (N)	0.567	EXPONENT N	0.598	EXPONENT N	0.681
CONSTANT (C)	0.060	CONSTANT C	0.050	CONSTANT C	0.019
CORRELATION	0.9934	CORRELATION	0.9985	CORRELATION	0.9976
AIR FLOW @ 10PA	0.224 M^3/S	AIR FLOW @ 10PA	0.199 M^3/S	AIR FLOW @ 10PA	0.095 M^3/S
AIR FLOW @ 50PA	0.558 M^3/S	AIR FLOW @ 50PA	0.522 M^3/S	AIR FLOW @ 50 PA	0.286 M^3/S
ELA	0.089 SQM @ 10PA	ELA	0.080 SQM @ 10PA	ELA	0.038 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.04	AIR CHNGS/HRS @ 50PA	2.85	AIR CHNGS/HRS @ 50PA	1.55

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Retrospectors

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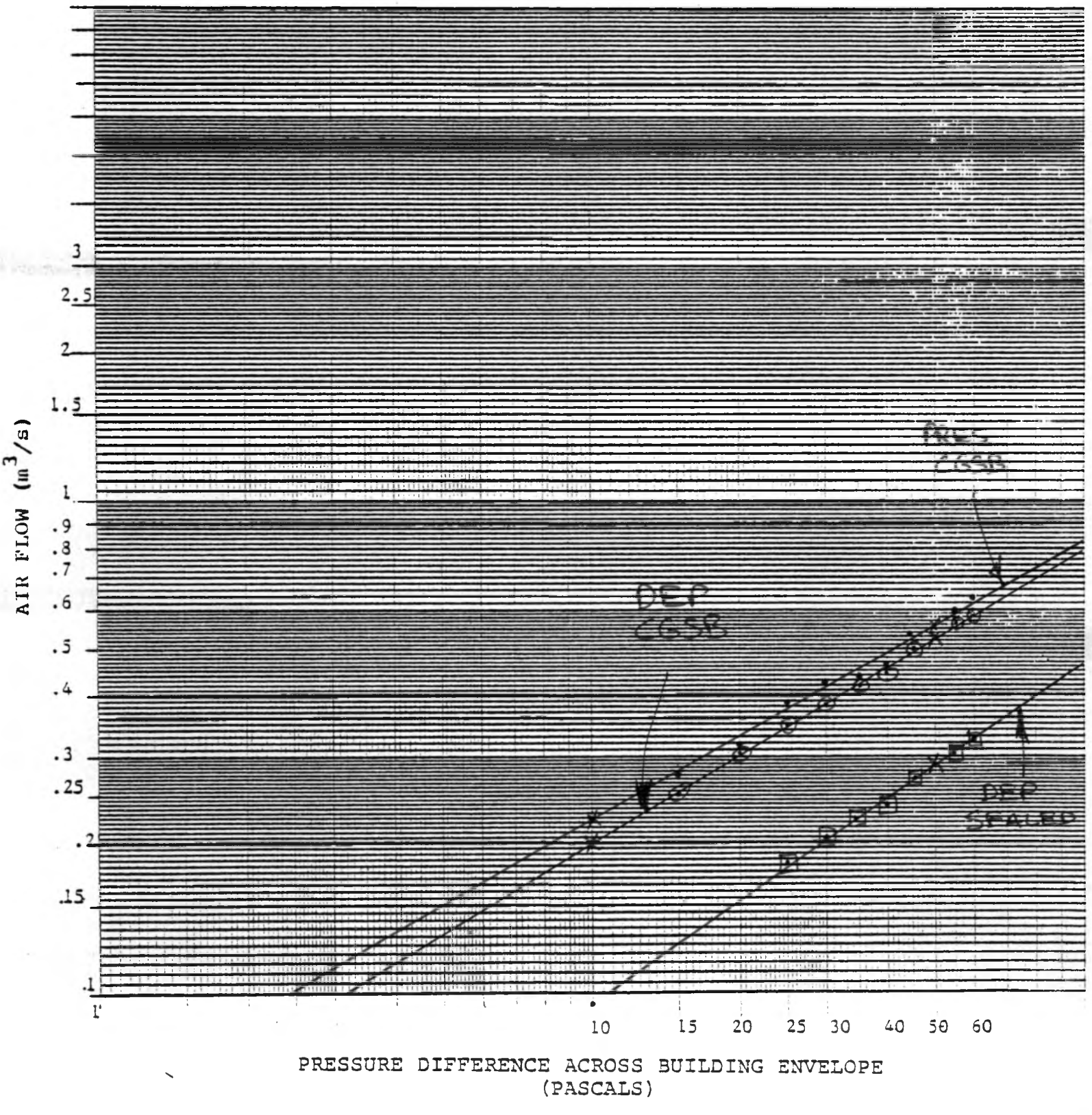
HOUSE # 24

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN. 7/83
TIME	9:45-10:15
TEST HOUSE	24
TECHNICIAN	SINHA/FUGGER
ENVELOPE AREA	305m²
VOLUME	660m³
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-1.0°C	17°C
REL. HUM	93%	44%
WIND(SPEED&DIR)	E@20KPH	
AIR PRESSURE	100.2 KPA	
PRECIPITATION	SNOW	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.178	—
15		0.229	0.134
20		0.290	0.172
25		0.324	0.195
30		0.355	0.211
35		0.383	0.230
40		0.422	0.251
45		0.468	0.271
50		0.490	0.290
55		0.521	0.307
60		0.559	0.324
EXPONENT (N)		0.624	0.608
CONSTANT (C)		0.042	0.026
CORRELATION		0.9985	0.9973
AIR FLOW @ 10PA	___ M^3/S	0.180 M^3/S	0.109 M^3/S
AIR FLOW @ 50PA	___ M^3/S	0.493 M^3/S	0.290 M^3/S
ELA	___ SQM @ 10PA	0.072 SQM @ 10PA	0.043 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	___	2.68	1.58

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Retrospectors

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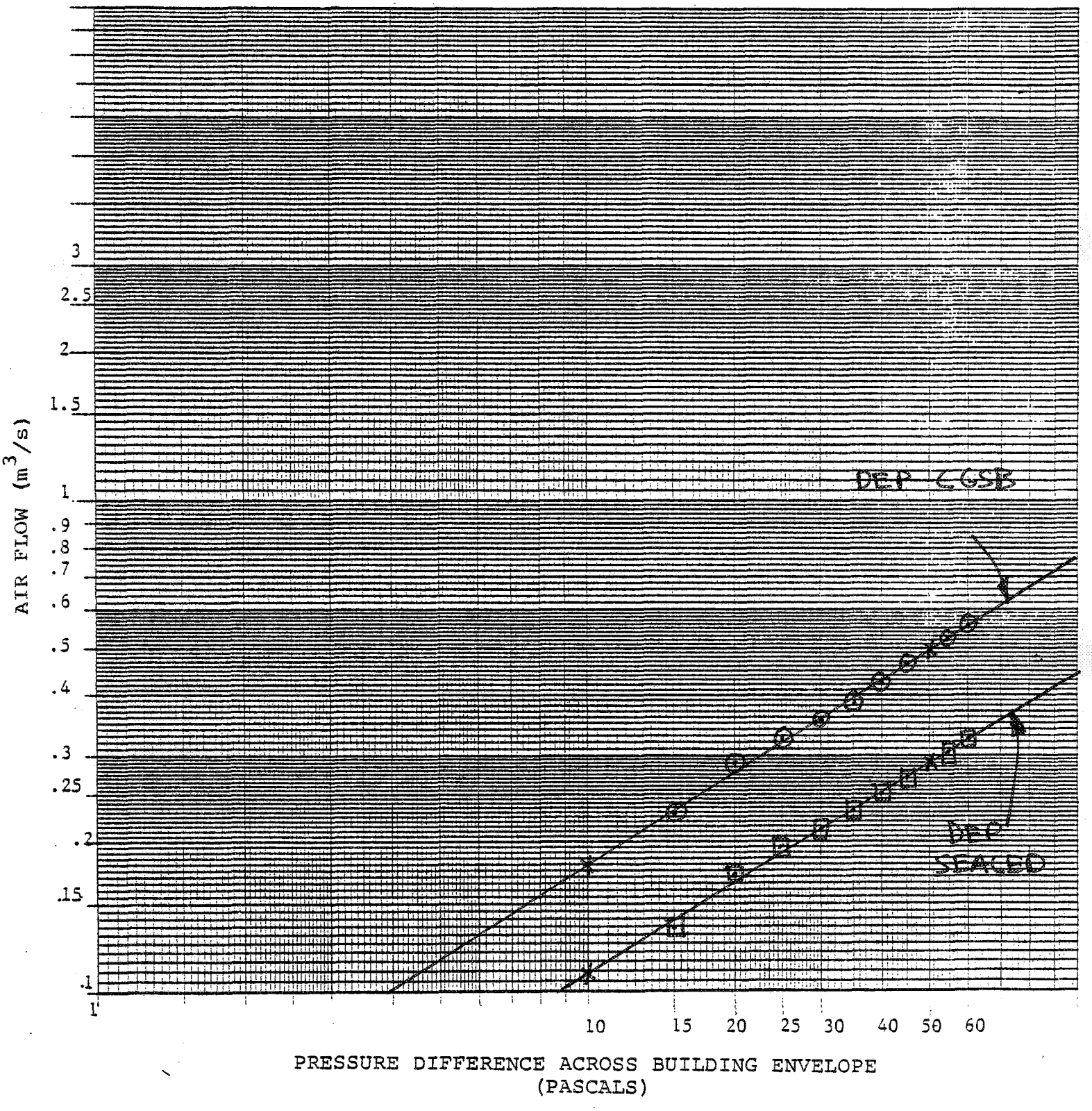
HOUSE # 24

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	June 18/82
TIME	10:45 - 11:05
TEST HOUSE	25
TECHNICIAN	Fugler / Seton
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	no
HEATING	Gas

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	18.3 °C	18.7 °C
REL. HUM	64 %	75 %
WIND (SPEED&DIR)	W @ 7 KPH	
AIR PRESSURE	101.4 KPA	
PRECIPITATION	No	
SOLAR RAD.	None	
SKY/CLOUD COND	Overcast	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.323	10	0.314	10	
15	0.420	15	0.401	15	
20	0.483	20	0.477	20	0.228
25	0.529	25	0.537	25	0.260
30	0.593	30	0.579	30	0.279
35	0.643	35	0.626	35	0.314
40	0.700	40	0.699	40	0.360
45		45		45	0.387
50		50		50	0.401
55		55		55	0.431
60		60		60	0.460

EXPONENT (N)	0.541	EXPONENT N	0.559	EXPONENT N	0.650
CONSTANT (C)	0.094	CONSTANT C	0.087	CONSTANT C	0.031
CORRELATION	0.9980	CORRELEATION	0.9982	CORRELATION	0.9955
AIR FLOW @ 10PA	0.32 M^3/S	AIR FLOW @ 10PA	0.31 M^3/S	AIR FLOW @ 10PA	0.14 M^3/S
AIR FLOW @ 50PA	0.78 M^3/S	AIR FLOW @ 50PA	0.78 M^3/S	AIR FLOW @ 50 PA	0.40 M^3/S
ELA	0.131 SQM @ 10PA	ELA	0.127 SQM @ 10PA	ELA	0.057 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.28	AIR CHNGS/HRS @ 50PA	4.26	AIR CHNGS/HRS @ 50PA	2.21

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Retrospectors

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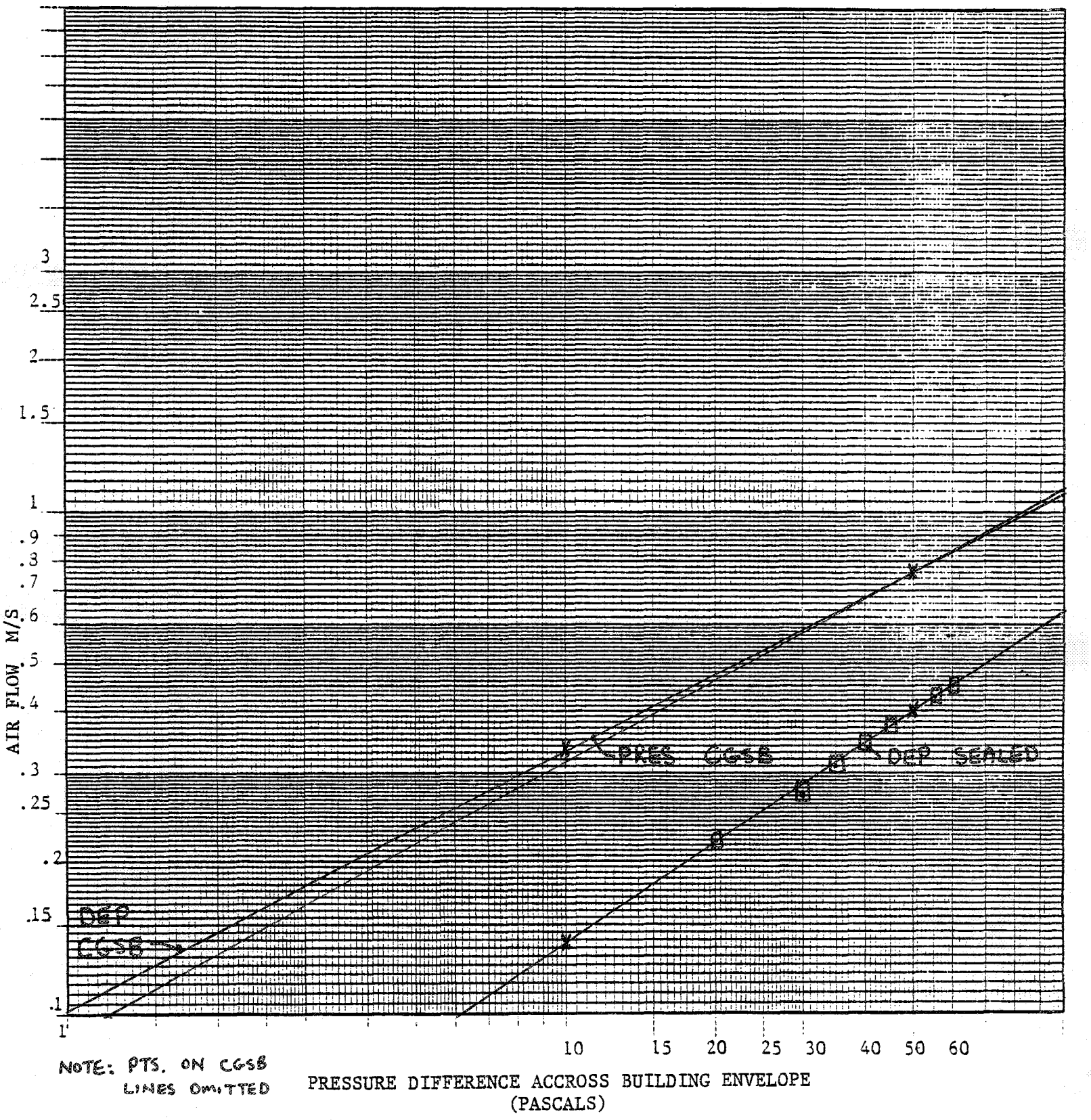
HOUSE # 25

PHASE 2

AIR LEAKAGE PROFILE



NOTE: PTS. ON CGSB LINES OMITTED

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Retrospectors

IDENTIFICATION

DATE	OCT. 6/82
TIME	15:00
TEST HOUSE	25
TECHNICIAN	Fugler/Pasquini
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	NONE
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	21°C	20°C
REL. HUM	56%	75%
WIND (SPEED&DIR)	W8 KPH	
AIR PRESSURE	102.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	YES	
SKY/CLOUD COND	NONE	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.304	0.287	
15	0.392	0.366	0.176
20	0.441	0.430	0.218
25	0.515	0.496	0.238
30	0.580	0.564	0.268
35	0.631	0.624	0.287
40	0.677	0.658	0.320
45		0.700	0.351
50			0.365
55			0.382
60			0.405

EXPONENT (N)	0.577	EXPONENT N	0.602	EXPONENT N	0.598
CONSTANT (C)	0.080	CONSTANT C	0.071	CONSTANT C	0.035
CORRELATION	0.9985	CORRELEATION	0.9992	CORRELATION	0.9978
AIR FLOW @ 10PA	0.304 M^3/S	AIR FLOW @ 10PA	0.287 M^3/S	AIR FLOW @ 10PA	0.139 M^3/S
AIR FLOW @ 50PA	0.772 M^3/S	AIR FLOW @ 50PA	0.756 M^3/S	AIR FLOW @ 50 PA	0.366 M^3/S
ELA	0.122 SQM @ 10PA	ELA	0.115 SQM @ 10PA	ELA	0.056 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.20	AIR CHNGS/HRS @ 50PA	4.09	AIR CHNGS/HRS @ 50PA	1.99

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Retrospectors

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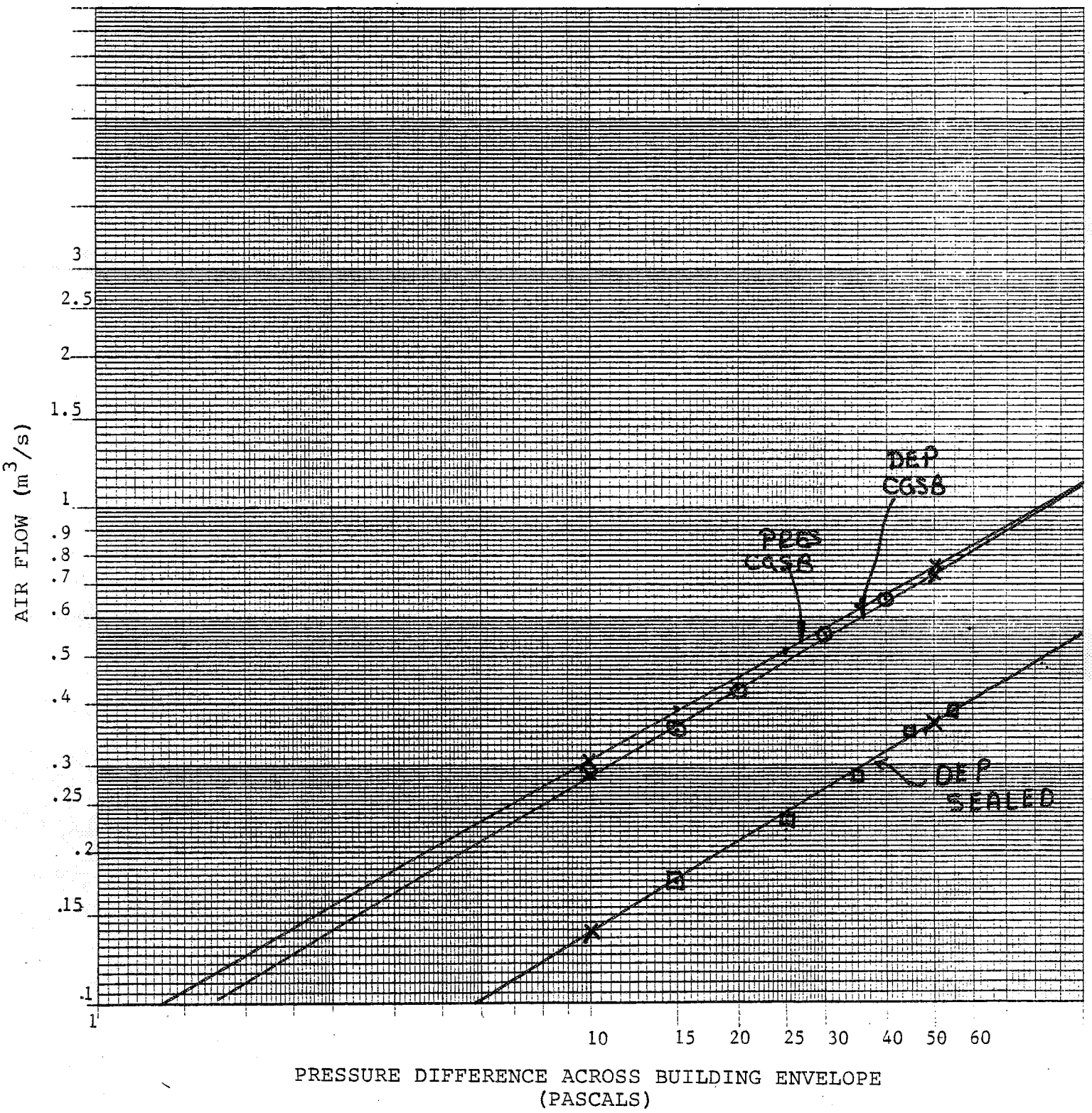
HOUSE # 25

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	DEC.10/82
TIME	12:15-13:15
TEST HOUSE	25
TECHNICIAN	SINHA/EWGLER
ENVELOPE AREA	305 m^2
VOLUME	660 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-12.0°C	19°C
REL. HUM	66%	50%
WIND(SPEED&DIR)	E@15KPH	
AIR PRESSURE	100.3 KPA	
PRECIPITATION	LIGHT SNOW	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.303	10	0.288	10	
15	0.371	15	0.338	15	0.159
20	0.449	20	0.443	20	0.204
25	0.449	25	0.487	25	0.250
30	0.524	30	0.537	30	0.270
35	0.590	35	0.583	35	0.306
40	0.620	40	0.642	40	0.322
45	0.691	45	0.688	45	0.353
50	0.656	50	0.738	50	0.367
55		55		55	0.407
60		60		60	0.419

EXPONENT (N)	0.493	EXPONENT N	0.593	EXPONENT N	0.678
CONSTANT (C)	0.098	CONSTANT C	0.071	CONSTANT C	0.026
CORRELATION	0.9917	CORRELATION	0.9962	CORRELATION	0.9952
AIR FLOW @ 10PA	0.306 M^3/S	AIR FLOW @ 10PA	0.281 M^3/S	AIR FLOW @ 10PA	0.127 M^3/S
AIR FLOW @ 50PA	0.676 M^3/S	AIR FLOW @ 50PA	0.732 M^3/S	AIR FLOW @ 50 PA	0.378 M^3/S
ELA	0.122 SQM @ 10PA	ELA	0.113 SQM @ 10PA	ELA	0.050 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.68	AIR CHNGS/HRS @ 50PA	3.99	AIR CHNGS/HRS @ 50PA	2.06

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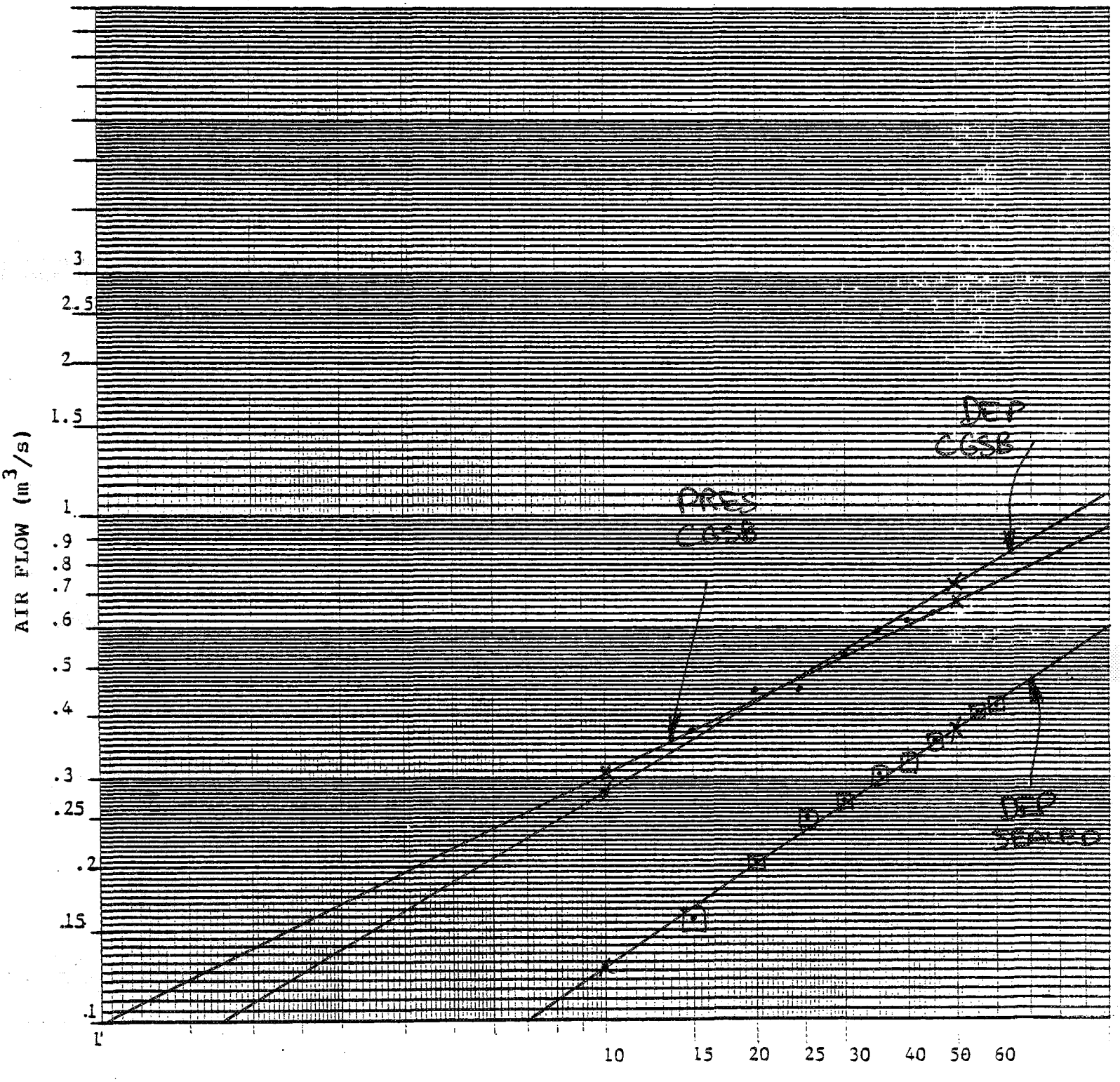
HOUSE # 25

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS. ON "DEP" CGSB LINE OMITTED DUE TO LACK OF SPACE

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR 15/82
TIME	17:00
TEST HOUSE	27
TECHNICIAN	ROSENBERG
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	3°C	21°C
REL. HUM	44%	
WIND(SPEED&DIR)	W@17KPH	
AIR PRESSURE	102.7 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	PARTIAL	
SKY/CLOUD COND	PARTLY CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.493	0.510	0.464
25			0.586
30	0.602		0.647
35		0.717	0.668
40	0.693	0.767	0.767
45		0.783	0.783
50	0.780	0.884	0.910
55			0.949
60	0.804	0.938	0.912

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.460	0.558	0.627
CONSTANT (C)	0.125	0.096	0.074
CORRELATION	0.9948	0.9941	0.9829
AIR FLOW @ 10PA	0.36 M^3/S	0.34 M^3/S	0.31 M^3/S
AIR FLOW @ 50PA	0.75 M^3/S	0.86 M^3/S	0.86 M^3/S
ELA	0.14 SQM @ 10PA	0.14 SQM @ 10PA	0.12 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.42	3.92	3.94

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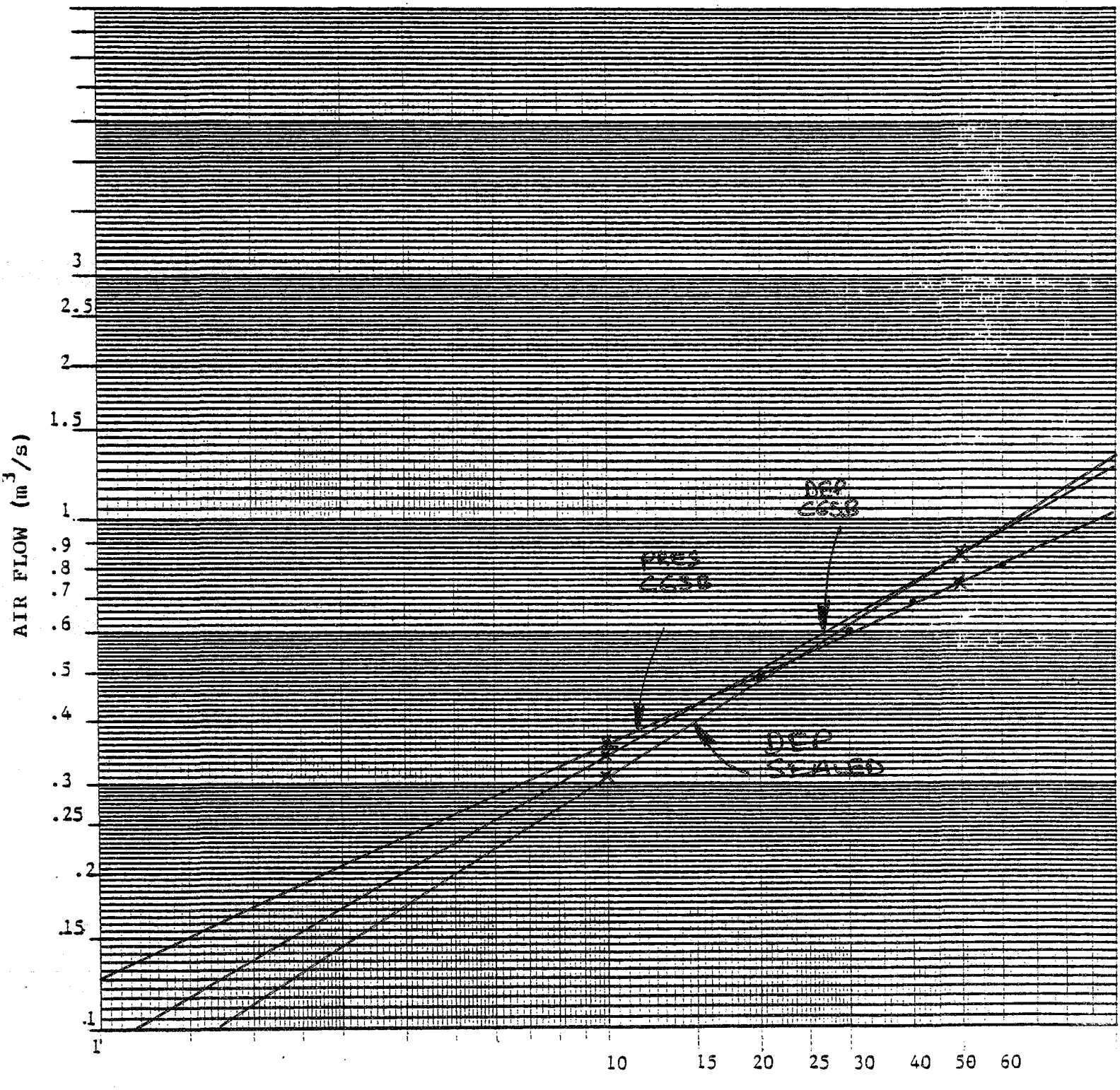
HOUSE # 27

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS. ON DEP. LINES OMITTED DUE TO LACK OF SPACE

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	June 29/82
TIME	1400-15:10
TEST HOUSE	27
TECHNICIAN	Fugler / Seton
ENVELOPE AREA	375 m^2
VOLUME	770 m^3
FIREPLACE	Yes
HEATING	Gas

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	20.0°C	23.0°C
REL. HUM	83%	73%
WIND(SPEED&DIR)	E @ 10 KPH	
AIR PRESSURE	100.4 KPa	
PRECIPITATION	little	
SOLAR RAD.	none	
SKY/CLOUD COND	Overcast	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP SEALED
10	0.366	0.303	0.215
15	0.425	0.404	0.320
20	0.555	0.505	0.372
25	0.616	0.548	0.423
30	0.679	0.621	0.457
35		0.657	0.484
40		0.740	0.553
45			0.613
50			0.661
55			0.698
60			

	PRES CGSB	DEP CGSB	DEP SEALED
EXPONENT (N)	0.589	0.621	0.649
CONSTANT (C)	0.091	0.074	0.051
CORRELATION	0.9885	0.9960	0.9932
AIR FLOW @ 10PA	0.35 M^3/S	0.31 M^3/S	0.22 M^3/S
AIR FLOW @ 50PA	0.92 M^3/S	0.84 M^3/S	0.65 M^3/S
ELA	0.143 SQM @ 10PA	0.125 SQM @ 10PA	0.091 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.20	3.86	2.96

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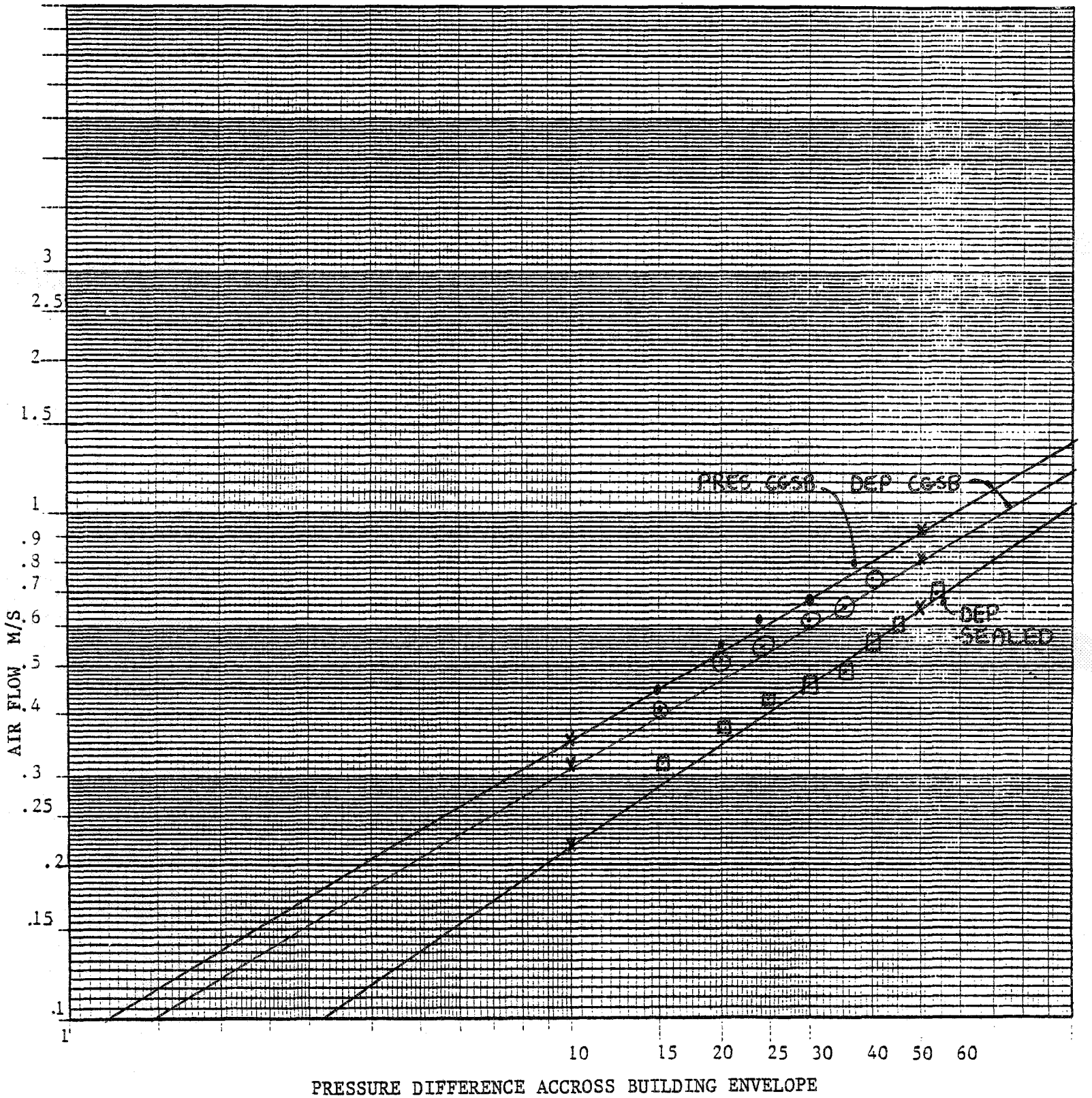
Retrospectors

HOUSE # 27

PHASE 2

AIR LEAKAGE PROFILE



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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	Oct 21/82
TIME	10:50-12:30
TEST HOUSE	27
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	7°C	17°C
REL. HUM	81%	56%
WIND(SPEED&DIR)	W @ 24KPH	
AIR PRESSURE	101.7 KPA	
PRECIPITATION	SCATTERED	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.281	0.229	-
15	0.358	0.307	0.229
20	0.421	0.421	0.289
25	0.496	0.473	0.354
30	0.552	0.505	0.382
35	0.664	0.603	0.456
40		0.668	0.479
45		0.712	0.539
50			0.585
55			0.628
60			0.652

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.666	0.754	0.758
CONSTANT (C)	0.058	0.040	0.029
CORRELATION	0.9946	0.9954	0.9980
AIR FLOW @ 10PA	0.274 M^3/S	0.232 M^3/S	0.171 M^3/S
AIR FLOW @ 50PA	0.804 M^3/S	0.783 M^3/S	0.580 M^3/S
ELA	0.110 SQM @ 10PA	0.093 SQM @ 10PA	0.068 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.66	3.57	2.64

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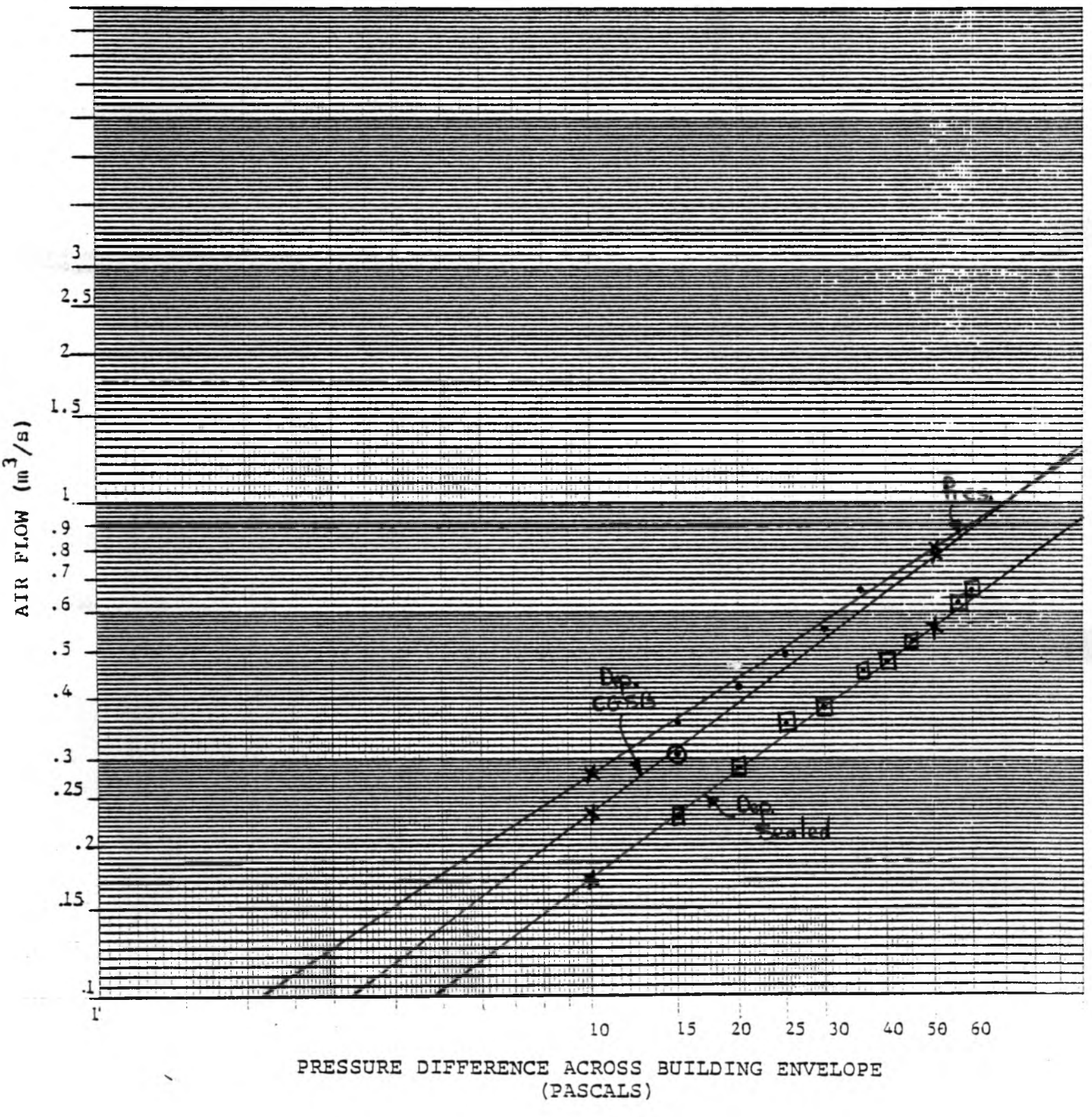
HOUSE # 27

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB.9/83
TIME	14:20 - 14:50
TEST HOUSE	27
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-13°C	17°C
REL. HUM	36%	36%
WIND(SPEED&DIR)	NW@33KPH	
AIR PRESSURE	102.2KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

NOTE: HOMEOWNER HAS REDUCED SIZE OF FURNACE ROOM INTAKES, HAS SEALED LOWER HEATILATOR VENTS IN FIREPLACE, AND SOME DOORS AND WINDOWS HAVE BEEN TAPED SHUT.

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	0.210
15		15	0.298	15	0.251
20		20	0.382	20	0.323
25		25	-	25	0.354
30		30	0.500	30	0.421
35		35	0.530	35	0.462
40		40	0.611	40	0.489
45		45	0.644	45	0.585
50		50	0.705	50	0.590
55		55	0.741	55	0.644
60		60		60	0.668
EXPONENT (N)		EXPONENT N	0.689	EXPONENT N	0.673
CONSTANT (C)		CONSTANT C	0.047	CONSTANT C	0.042
CORRELATION		CORRELATION	0.9977	CORRELATION	0.9957
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.230 M^3/S	AIR FLOW @ 10PA	0.200 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.699 M^3/S	AIR FLOW @ 50 PA	0.592 M^3/S
ELA	SQM @ 10PA	ELA	0.092 SQM @ 10PA	ELA	0.080 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	3.19	AIR CHNGS/HRS @ 50PA	2.63

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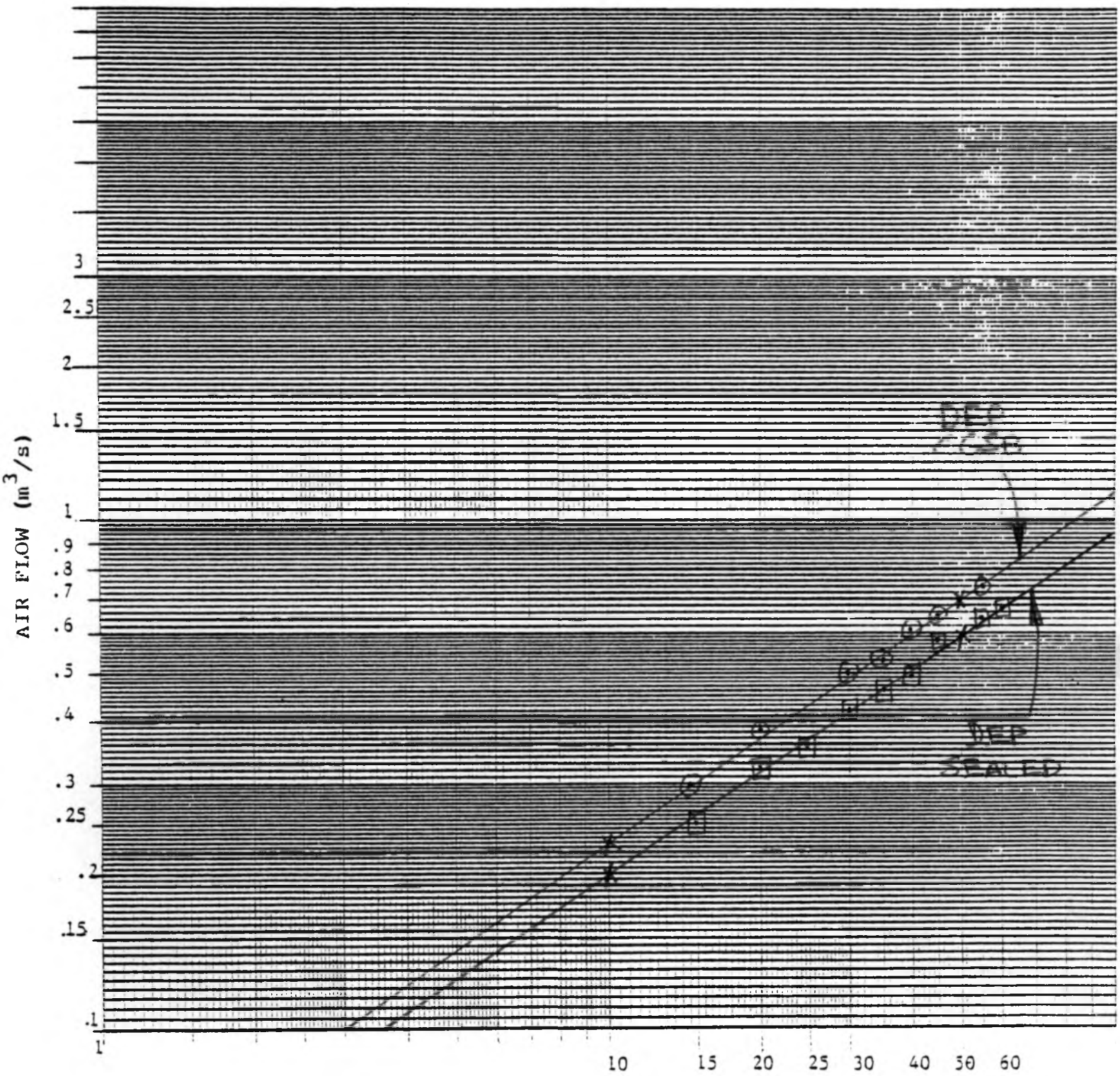
HOUSE # 27

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	APR.13/83
TIME	14:30
TEST HOUSE	28
TECHNICIAN	SHOLDICE/FUGLER
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	9.0°C	18°C
REL. HUM	81%	
WIND(SPEED&DIR)	S@15KPH	
AIR PRESSURE	99.0 KPA	
PRECIPITATION	RAIN	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.327	10	0.361	10	0.288
15	0.419	15	0.524	15	0.337
20	0.577	20	0.602	20	0.492
25	0.659	25	0.726	25	0.517
30		27.5	0.767	30	0.565
35		35		35	0.616
40		40		40	0.679
45		45		27.5	0.537
50		50		32.5	0.599
55		55		55	
60		60		60	
EXPONENT (N)	0.782	EXPONENT N	0.702	EXPONENT N	0.643
CONSTANT (C)	0.053	CONSTANT C	0.075	CONSTANT C	0.063
CORRELATION	0.9928	CORRELATION	0.9924	CORRELATION	0.9945
AIR FLOW @ 10PA	0.32 M^3/S	AIR FLOW @ 10PA	0.37 M^3/S	AIR FLOW @ 10PA	0.27 M^3/S
AIR FLOW @ 50PA	1.14 M^3/S	AIR FLOW @ 50PA	1.17 M^3/S	AIR FLOW @ 50 PA	0.78 M^3/S
ELA	0.13 SQM @ 10PA	ELA	0.15 SQM @ 10PA	ELA	0.11 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	5.19	AIR CHNGS/HRS @ 50PA	5.34	AIR CHNGS/HRS @ 50PA	3.58

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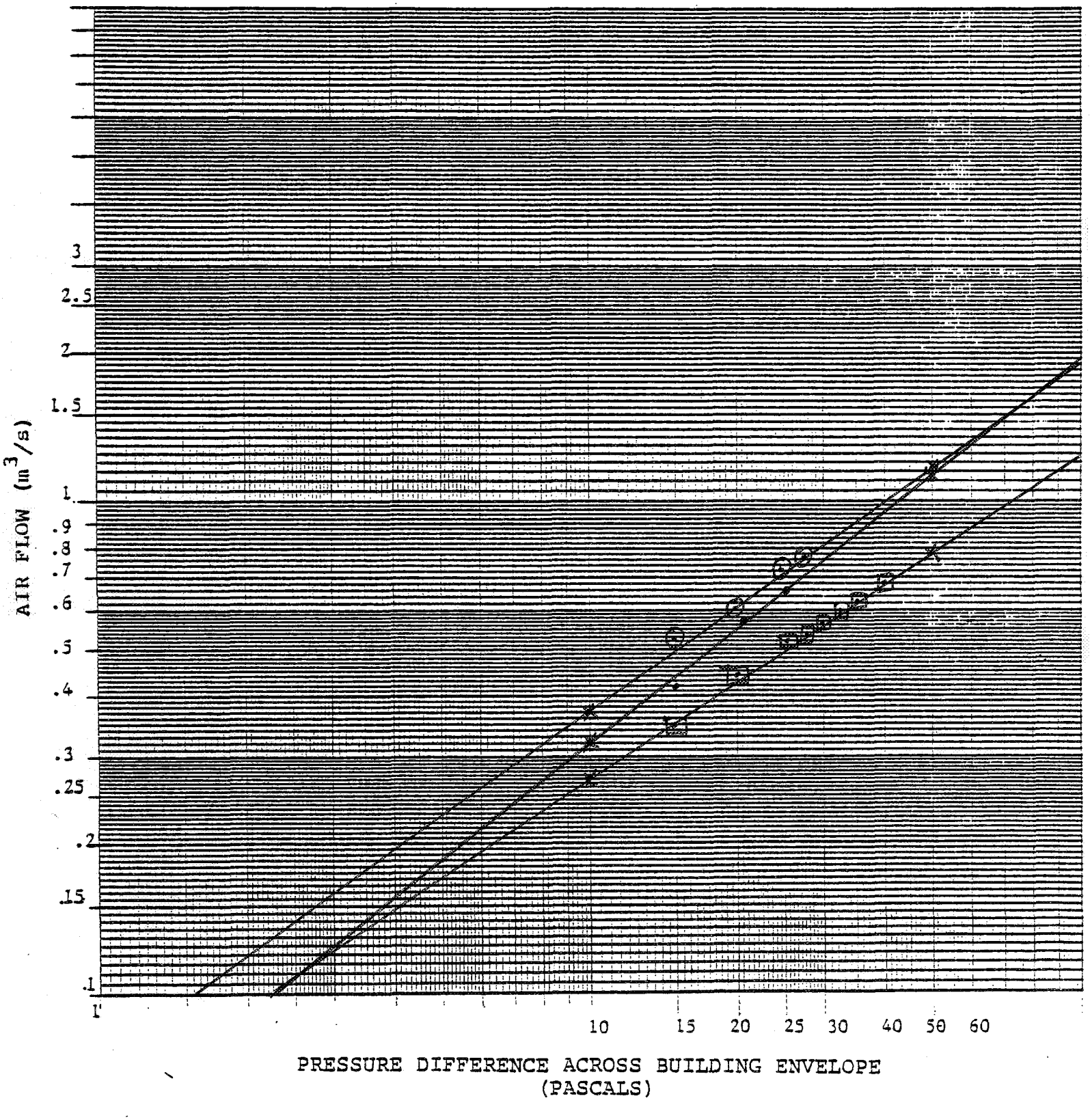
HOUSE # 28

PHASE 1

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAY 25/82
TIME	15:23 - 16:12
TEST HOUSE	28
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	19.°C	19.°C
REL. HUM	64%	N.A.
WIND (SPEED&DIR)	W@12 KPH	
AIR PRESSURE	101.5 KPa	
PRECIPITATION	NONE	
SOLAR RAD.	S.W.	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	.407	.394	.228
15	.518	.498	—
20	.575	.556	.367
25	.650	.658	—
30	.717	.731	.455
35			.508
40			.564
45			.618
50			.673
55			.717
60			

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	.502	.554	.663
CONSTANT (C)	.129	.109	.049
CORRELATION	.9972	.9964	.9984
AIR FLOW @ 10PA	.41 M^3/S	.39 M^3/S	.22 M^3/S
AIR FLOW @ 50PA	.92 M^3/S	.95 M^3/S	.66 M^3/S
ELA	0.165 SQM @ 10PA	0.157 SQM @ 10PA	0.091 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.19	4.34	3.00

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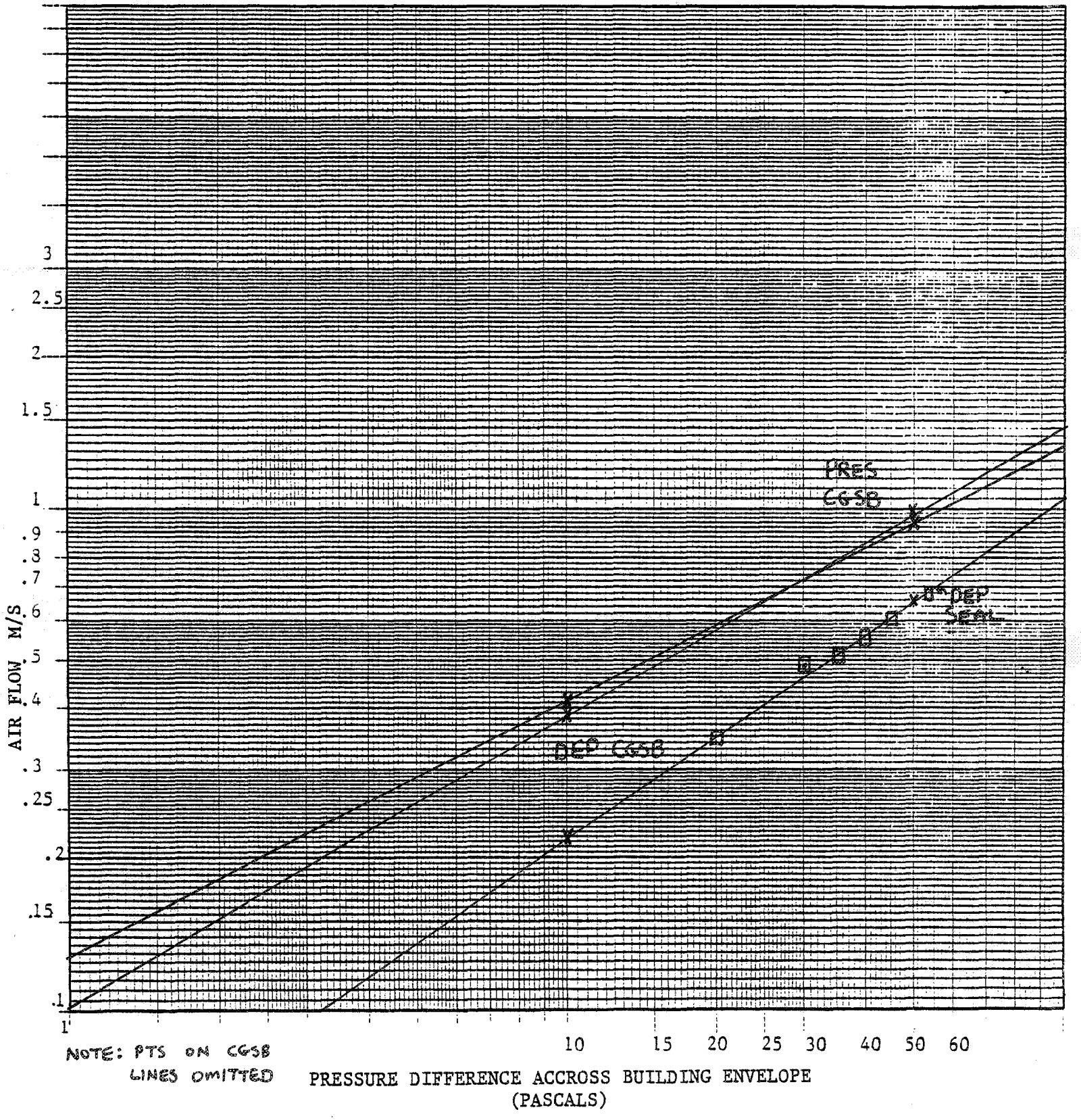
Retrospectors

HOUSE # 28

PHASE 2

AIR LEAKAGE PROFILE



NOTE: PTS ON CGSB LINES OMITTED

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	Sept 28/82
TIME	15:00-15:30
TEST HOUSE #	28
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	16°C	20°C
REL. HUM	77%	70%
WIND (SPEED&DIR)	NW @ 18KPH	
AIR PRESSURE	102.3KPA	
PRECIPITATION	DRIZZLE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.319	10	0.304	10	–
15	0.390	15	0.379	15	0.203
20	0.481	20	0.474	20	0.249
25	0.550	25	0.544	25	0.304
27.5	0.594	27.5	0.589	30	0.336
30	0.626	30	0.622	35	0.392
32.5	0.665	32.5	0.642	40	0.429
35	0.708	35	0.699	45	0.452
50		50		50	0.485
55		55		55	0.525
60		60		60	0.563
EXPONENT (N)	0.643	EXPONENT N	0.666	EXPONENT N	0.730
CONSTANT (C)	0.070	CONSTANT C	0.064	CONSTANT C	0.028
CORRELATION	0.9976	CORRELATION	0.9983	CORRELATION	0.9985
AIR FLOW @ 10PA	0.310 M^3/S	AIR FLOW @ 10PA	0.298 M^3/S	AIR FLOW @ 10PA	0.152 M^3/S
AIR FLOW @ 50PA	0.873 M^3/S	AIR FLOW @ 50PA	0.872 M^3/S	AIR FLOW @ 50 PA	0.494 M^3/S
ELA	0.124 SQM @ 10PA	ELA	0.119 SQM @ 10PA	ELA	0.061 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.97	AIR CHNGS/HRS @ 50PA	3.98	AIR CHNGS/HRS @ 50PA	2.25

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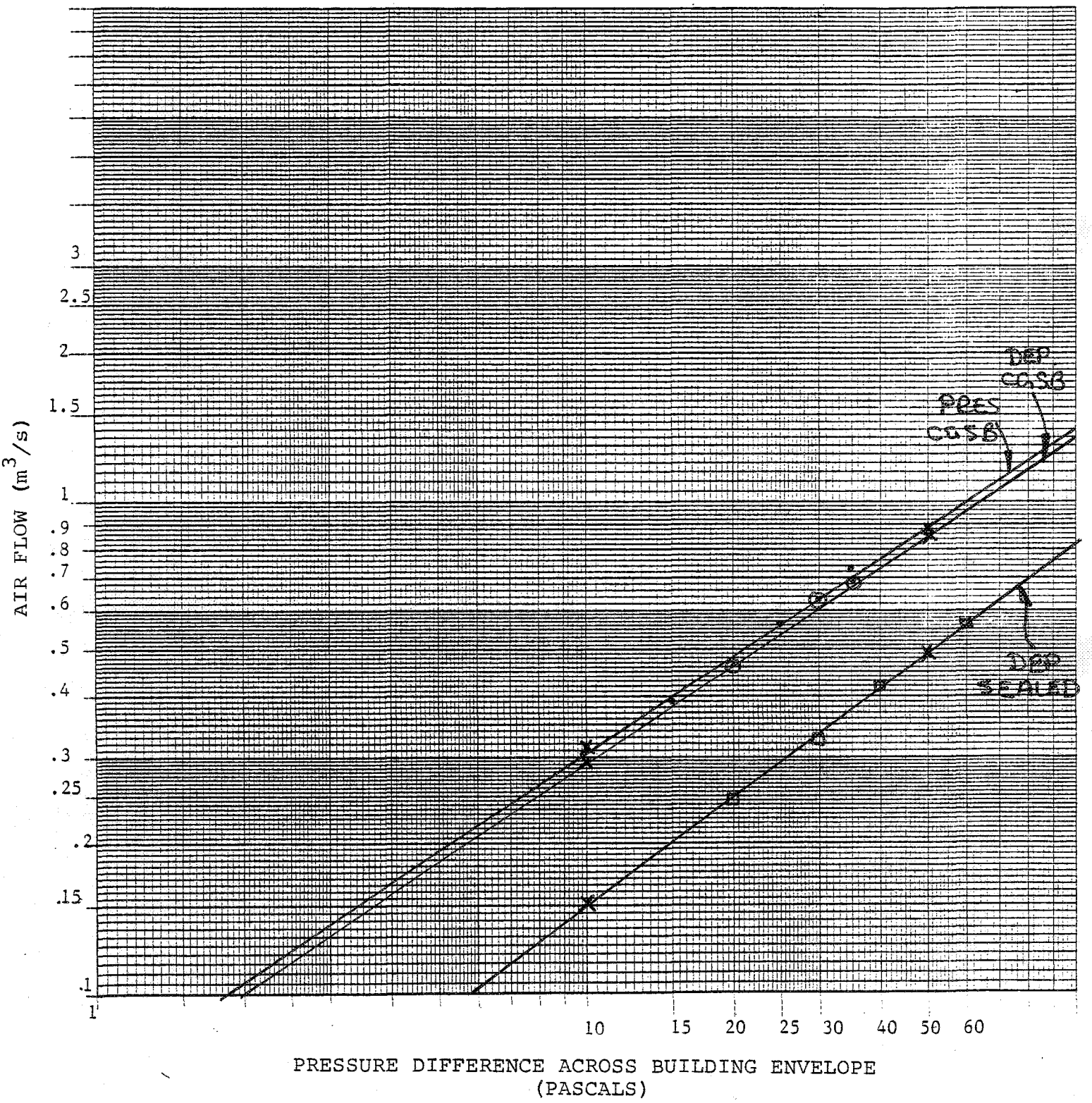
HOUSE # 28

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 13-83
TIME	14:15 - 14:40
TEST HOUSE	28
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-13.0°C	20.°C
REL. HUM	47%	37%
WIND(SPEED&DIR)	W @ 6KPH	
AIR PRESSURE	102.2	
PRECIPITATION	NONE	
SOLAR RAD.	LIGHT	
SKY/CLOUD COND	HAZY	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.269	10	
15		15	0.352	15	0.204
20		20	0.465	20	0.249
25		25	0.537	25	0.305
30		30	0.600	30	0.352
35		35	0.657	35	0.393
40		40	0.737	40	0.406
45		45	0.797	45	0.487
50		50		50	0.517
55		55		55	0.546
60		60		60	0.574
EXPONENT (N)		EXPONENT N	0.722	EXPONENT N	0.758
CONSTANT (C)		CONSTANT C	0.051	CONSTANT C	0.026
CORRELATION		CORRELATION	0.9982	CORRELATION	0.9972
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.271 M^3/S	AIR FLOW @ 10PA	0.150 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.866 M^3/S	AIR FLOW @ 50 PA	0.509 M^3/S
ELA	SQM @ 10PA	ELA	0.108 SQM @ 10PA	ELA	0.060 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	3.94	AIR CHNGS/HRS @ 50PA	2.32

176 Bronson Ave.
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Retrospectors

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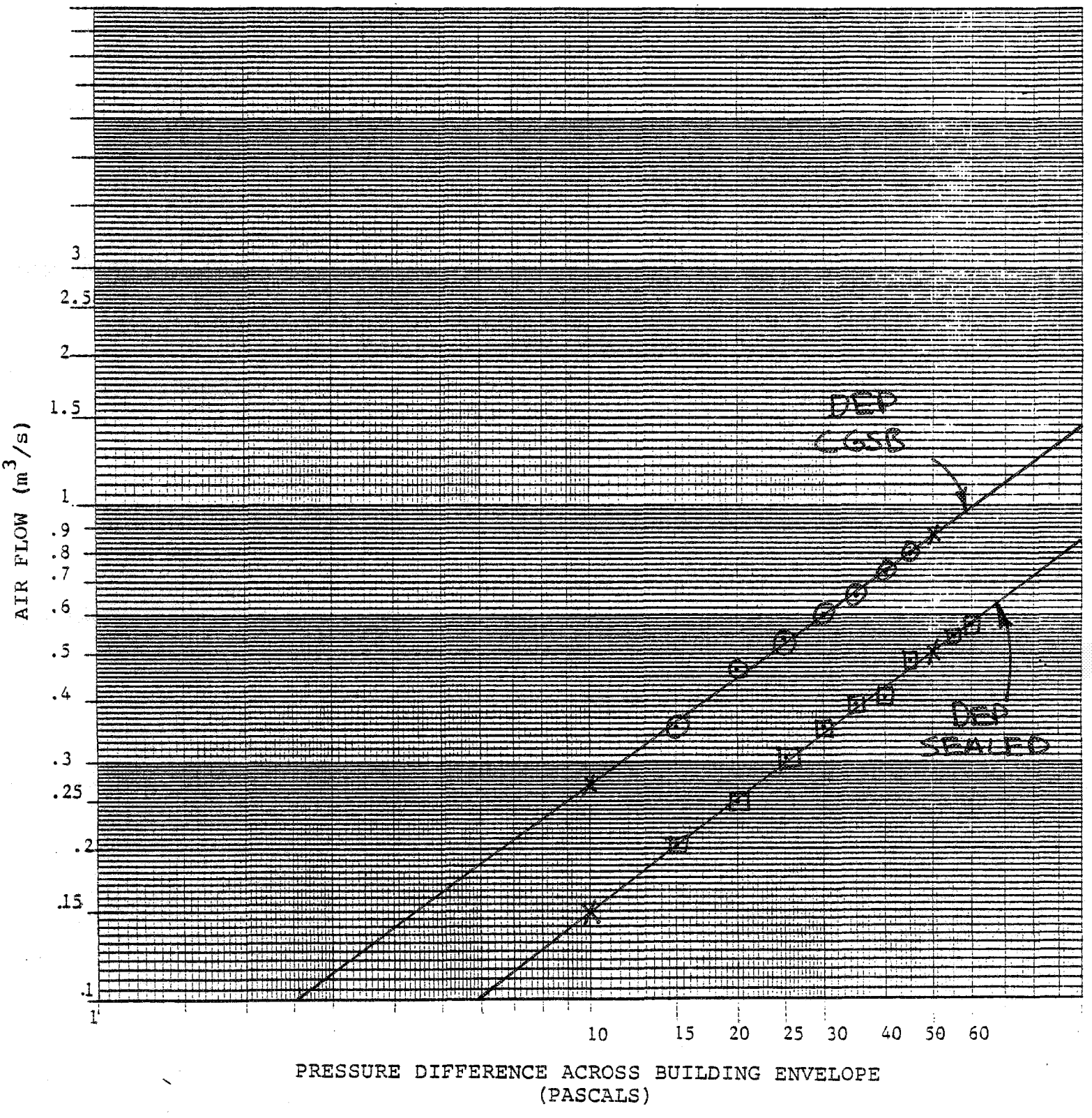
HOUSE # 28

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR. 23/82
TIME	19:00
TEST HOUSE	29
TECHNICIAN	ROSENBERG
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	0°C	16°C
REL. HUM	59%	
WIND(SPEED&DIR)	SE 9 KPH	
AIR PRESSURE	101.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.513	0.548	0.562
25		0.646	0.599
30	0.668	0.683	0.659
35		0.753	0.680
40	0.762	0.803	0.753
45		0.841	0.745
50	0.875	0.971	0.817
55		0.958	0.906
60	0.928	1.00	0.893

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.543	0.548	0.508
CONSTANT (C)	0.102	0.107	0.113
CORRELATION	0.9960	0.9915	0.9853
AIR FLOW @ 10PA	0.35 M^3/S	0.37 M^3/S	0.36 M^3/S
AIR FLOW @ 50PA	0.86 M^3/S	0.91 M^3/S	0.82 M^3/S
ELA	0.14 SQM @ 10PA	0.15 SQM @ 10PA	0.14 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.92	4.18	3.76

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Retrospectors

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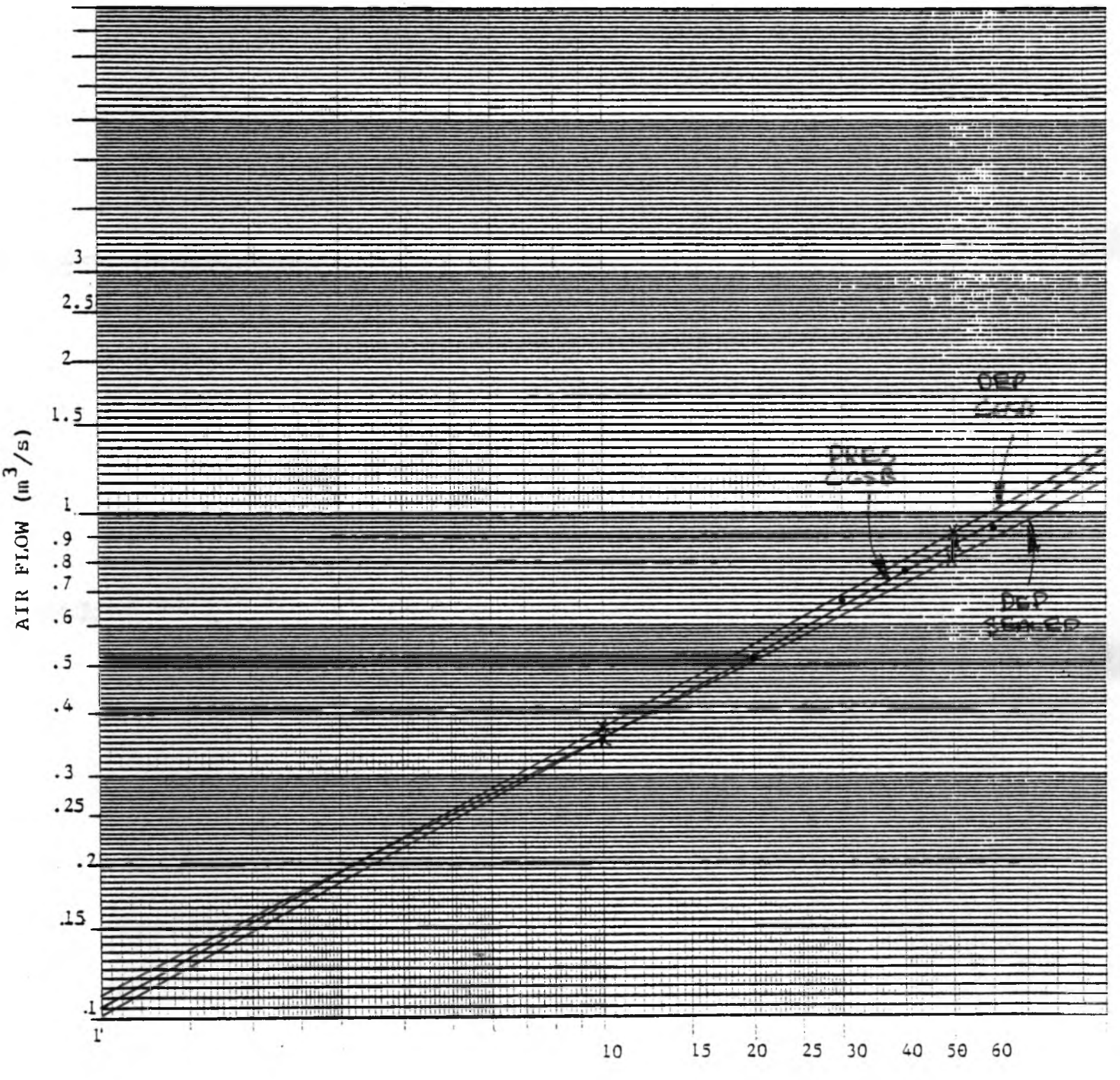
HOUSE # 29

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS. ON DEP LINES OMITTED DUE TO LACK OF SPACE

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	June 17/82
TIME	8:45 - 9:30
TEST HOUSE	29
TECHNICIAN	Fugler / Seton
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	Yes
HEATING	Gas

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	18°C	21°C
REL. HUM	59%	60%
WIND(SPEED&DIR)	E@17KPH	
AIR PRESSURE	101.0 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL S.F	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) DRES CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.360	10	0.350	10	
15	0.478	15	0.452	15	0.258
20	0.602	20	0.524	20	0.303
25	0.682	25	0.613	25	0.357
30	0.740	30	0.657	30	0.391
35		35	0.740	35	0.428
40		40		40	0.474
45		45		45	0.524
50		50		50	0.553
55		55		55	0.579
60		60		60	0.617

EXPONENT (N)	0.669	EXPONENT N	0.586	EXPONENT N	0.635
CONSTANT (C)	0.078	CONSTANT C	0.091	CONSTANT C	0.045
CORRELATION	0.9964	CORRELEATION	0.9986	CORRELATION	0.9990
AIR FLOW @ 10PA	0.36 M^3/S	AIR FLOW @ 10PA	0.35 M^3/S	AIR FLOW @ 10PA	0.19 M^3/S
AIR FLOW @ 50PA	1.07 M^3/S	AIR FLOW @ 50PA	0.90 M^3/S	AIR FLOW @ 50 PA	0.54 M^3/S
ELA	0.146 SQM @ 10PA	ELA	0.141 SQM @ 10PA	ELA	0.079 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.89	AIR CHNGS/HRS @ 50PA	4.12	AIR CHNGS/HRS @ 50PA	2.50

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Retrospectors

AIR LEAKAGE PROFILE

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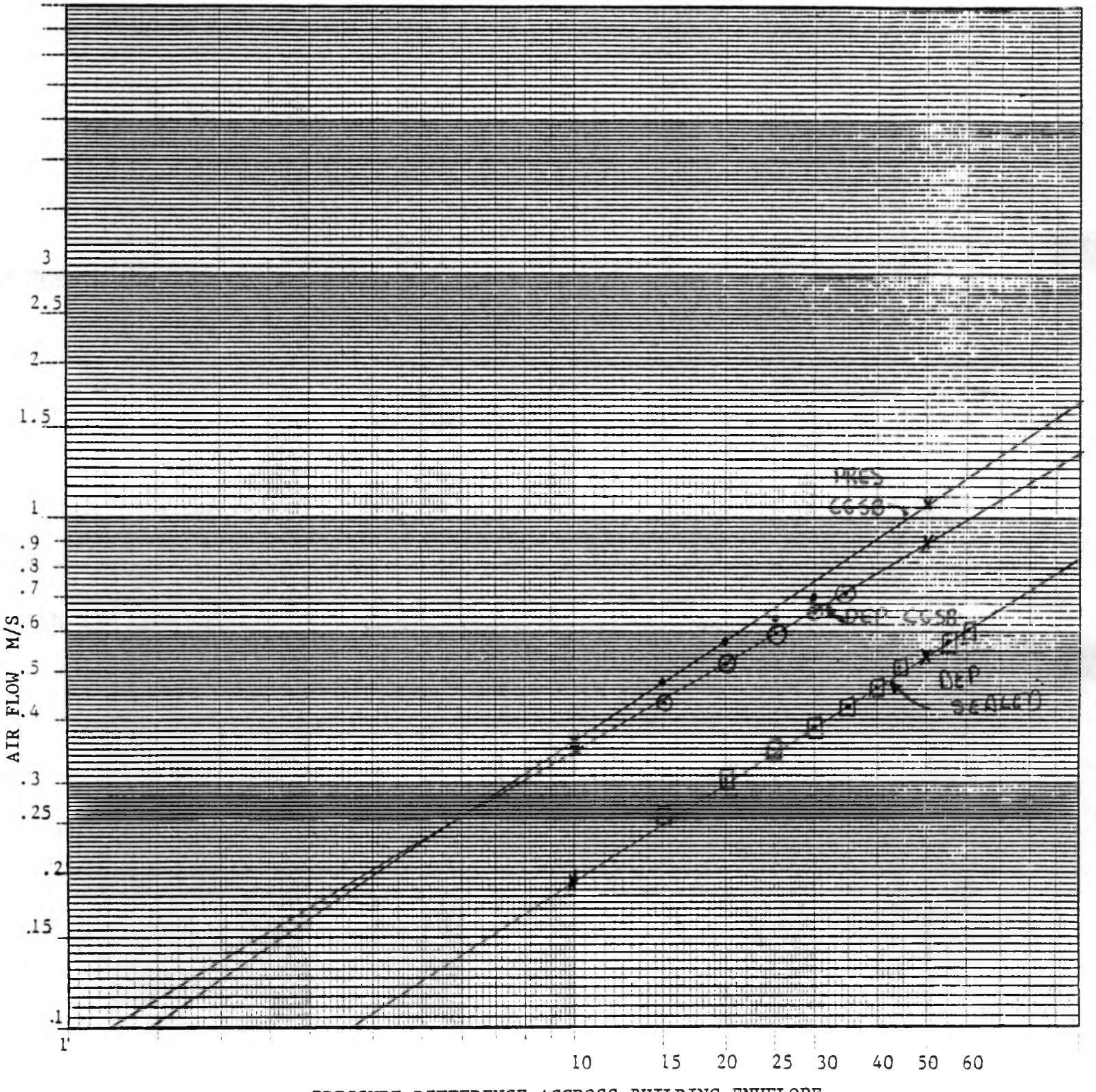
HOUSE # 29

PHASE 2



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: SEPT. 22/82
TIME: 11:30
TEST HOUSE: 29
TECHNICIAN: FUGLER/PASQUINZ
ENVELOPE AREA: 375 m^2
VOLUME: 790 m^3
FIREPLACE: YES
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	18°C	18°C
REL. HUM	68%	60%
WIND(SPEED&DIR)	NE 17 KPH	
AIR PRESSURE	102.0 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

HOUSE UNFINISHED

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.323	10	0.408	10	0.228
20	0.538	15	0.499	15	0.270
22.5	0.557	20	0.566	20	0.323
25	0.610	25	0.627	25	0.353
27.5	0.663	30	0.689	30	0.408
30	0.718	35	0.711	35	0.444
35		40		40	0.488
40		45		45	0.538
45		50		50	0.584
50		55		55	0.619
55		60		60	0.635
60					

EXPONENT (N)	0.741	EXPONENT N	0.453	EXPONENT N	0.598
CONSTANT (C)	0.056	CONSTANT C	0.145	CONSTANT C	0.054
CORRELATION	0.9926	CORRELEATION	0.9978	CORRELATION	0.9954
AIR FLOW @ 10PA	0.312 M^3/S	AIR FLOW @ 10PA	0.412 M^3/S	AIR FLOW @ 10PA	0.215 M^3/S
AIR FLOW @ 50PA	1.028 M^3/S	AIR FLOW @ 50PA	0.855 M^3/S	AIR FLOW @ 50 PA	0.565 M^3/S
ELA	0.125 SQM @ 10PA	ELA	0.165 SQM @ 10PA	ELA	0.086 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.69	AIR CHNGS/HRS @ 50PA	3.89	AIR CHNGS/HRS @ 50PA	2.57

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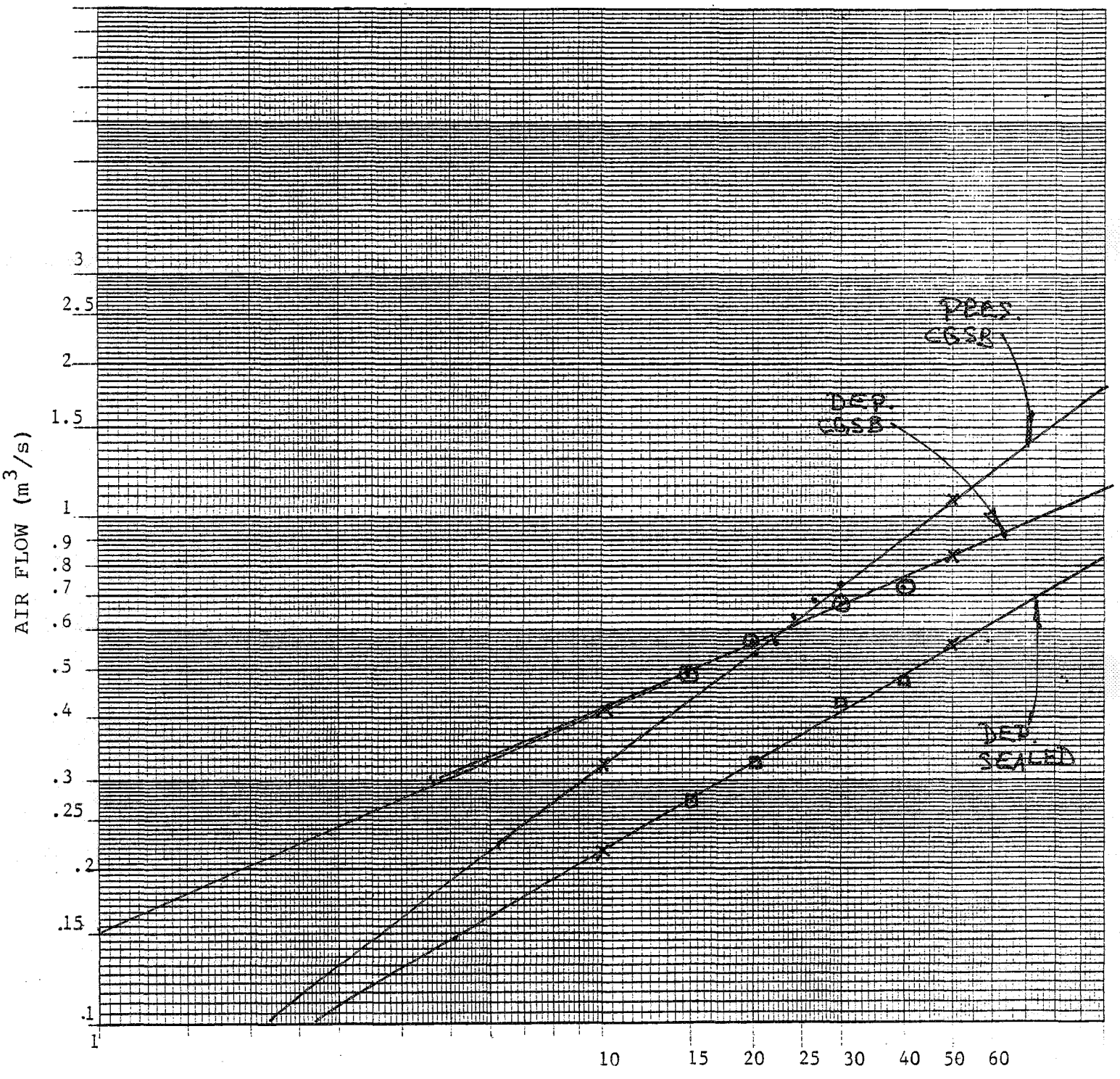
HOUSE # 29

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	Jan 04 83
TIME	10:30 - 11:30
TEST HOUSE	29
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-17°C	18°C
REL. HUM	54%	28%
WIND (SPEED&DIR)	ESE @ 13KPH	
AIR PRESSURE	104.1 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.269	10	0.270	10	
15	0.391	15	0.367	15	0.204
20	0.502	20	0.467	20	0.270
25	0.552	25	0.519	25	0.338
30	0.613	30	0.602	30	0.367
35	0.702	32.5	0.627	35	0.395
40	0.780	35	0.651	40	0.444
45		37.5	0.704	45	0.478
50		50		50	0.509
55		55		55	0.529
60		60		60	0.584
EXPONENT (N)	0.737	EXPONENT N	0.704	EXPONENT N	0.711
CONSTANT (C)	0.051	CONSTANT C	0.054	CONSTANT C	0.031
CORRELATION	0.9946	CORRELATION	0.9982	CORRELATION	0.9933
AIR FLOW @ 10PA	0.281 M^3/S	AIR FLOW @ 10PA	0.275 M^3/S	AIR FLOW @ 10PA	0.163 M^3/S
AIR FLOW @ 50PA	0.924 M^3/S	AIR FLOW @ 50PA	0.856 M^3/S	AIR FLOW @ 50 PA	0.514 M^3/S
ELA	0.113 SQM @ 10PA	ELA	0.110 SQM @ 10PA	ELA	0.065 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.21	AIR CHNGS/HRS @ 50PA	3.90	AIR CHNGS/HRS @ 50PA	2.34

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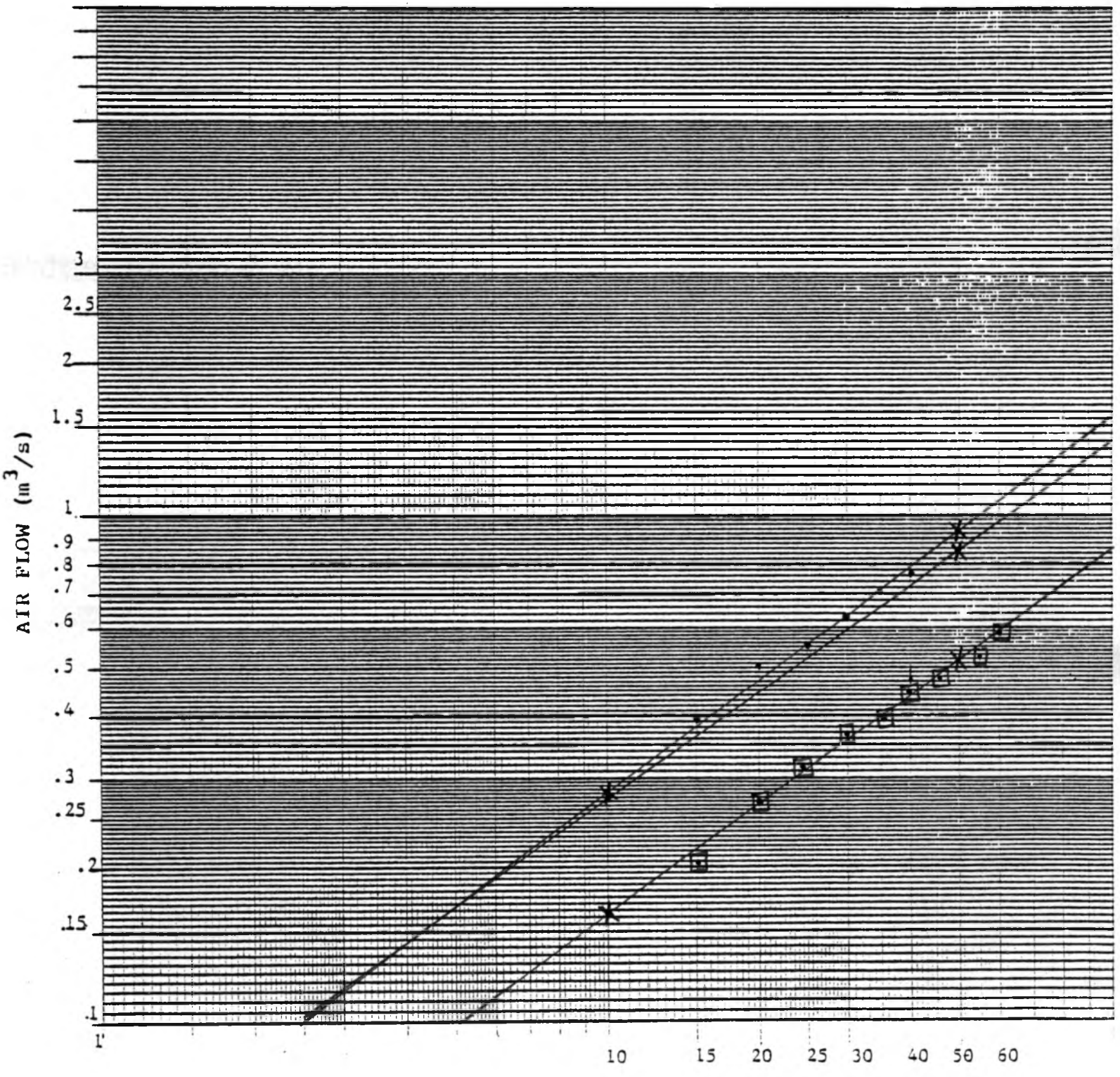
HOUSE # 29

PHASE 4

AIR LEAKAGE PROFILE



Note: Pts on Depre CGSB Line omitted due to lack of space

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Retrospectors

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JULY 7, 82
TIME	10:00 - 11:00
TEST HOUSE	36
TECHNICIAN	SETON/EUGLER
ENVELOPE AREA	375 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	24.6°C	25.3°C
REL. HUM	65%	72%
WIND(SPEED&DIR)	SW @ 15 KPH	
AIR PRESSURE	101.3 KPa	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTH EAST	
SKY/CLOUD COND	HAZY	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10	0.382	10	0.390	10	
15	0.449	15	0.444	15	0.256
20	0.558	20	0.513	20	0.325
25	0.633	25	0.603	25	0.401
30	0.715	30	0.666	30	0.408
35		35	0.724	35	0.465
40		40		40	0.501
45		45		45	0.535
50		50		50	0.558
55		55		55	0.593
60		60		60	0.641

EXPONENT (N)	0.581	EXPONENT N	0.510	EXPONENT N	0.621
CONSTANT (C)	0.097	CONSTANT C	0.115	CONSTANT C	0.050
CORRELATION	0.9935	CORRELEATION	0.9910	CORRELATION	0.9927
AIR FLOW @ 10PA	0.371 M^3/S	AIR FLOW @ 10PA	0.375 M^3/S	AIR FLOW @ 10PA	0.210 M^3/S
AIR FLOW @ 50PA	0.947 M^3/S	AIR FLOW @ 50PA	0.853 M^3/S	AIR FLOW @ 50 PA	0.571 M^3/S
ELA	0.149 SQM @ 10PA	ELA	0.150 SQM @ 10PA	ELA	0.084 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.32	AIR CHNGS/HRS @ 50PA	3.89	AIR CHNGS/HRS @ 50PA	2.60

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Retrospectors

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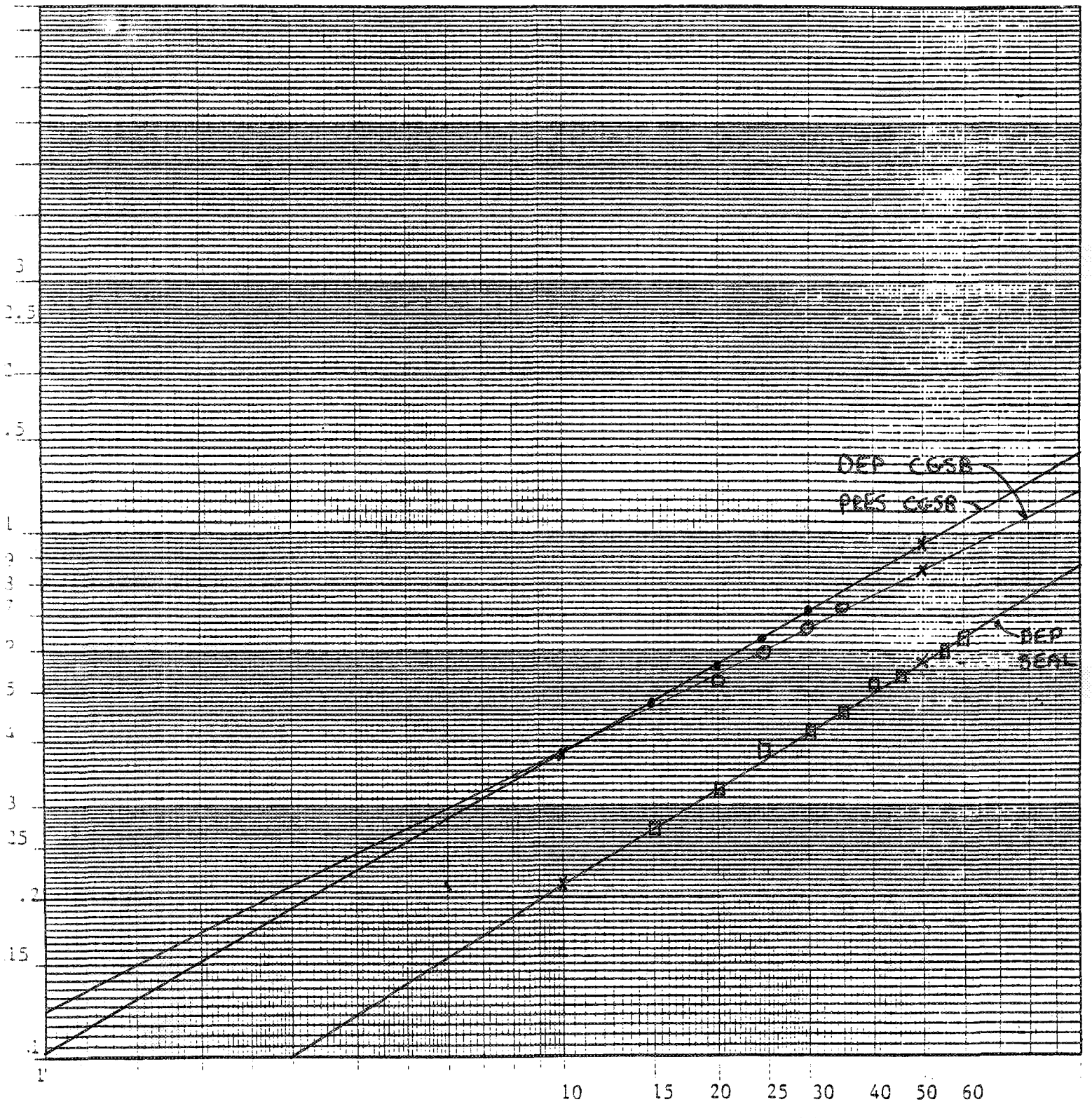
HOUSE # 30

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
K1R 6H4
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	Sept 30 82
TIME	11:00-12:10
TEST HOUSE	30
TECHNICIAN	FUGLER
ENVELOPE AREA	375 m^2
VOLUME	790 m^2
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	15°C	20°C
REL. HUM	88%	71%
WIND(SPEED&DIR)	SW@7KPH	
AIR PRESSURE	101.1 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.357	0.288	0.190
15	0.427	0.413	0.260
20	0.628	0.517	0.313
25	0.635	0.582	0.366
30	0.723	0.653	0.413
35		0.716	0.442
40		-	0.502
45		-	0.532
50		-	0.574
55		-	0.612
60		-	0.641

Note: 3 readings taken between intervals

Note: 2 readings taken between intervals

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.650	0.718	0.669
CONSTANT (C)	0.076	0.057	0.041
CORRELATION	0.9908	0.9957	0.9992
AIR FLOW @ 10PA	0.341 M^3/S	0.299 M^3/S	0.195 M^3/S
AIR FLOW @ 50PA	0.973 M^3/S	0.953 M^3/S	0.574 M^3/S
ELA	0.137 SQM @ 10PA	0.120 SQM @ 10PA	0.078 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.43	4.34	2.61

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Retrospectors

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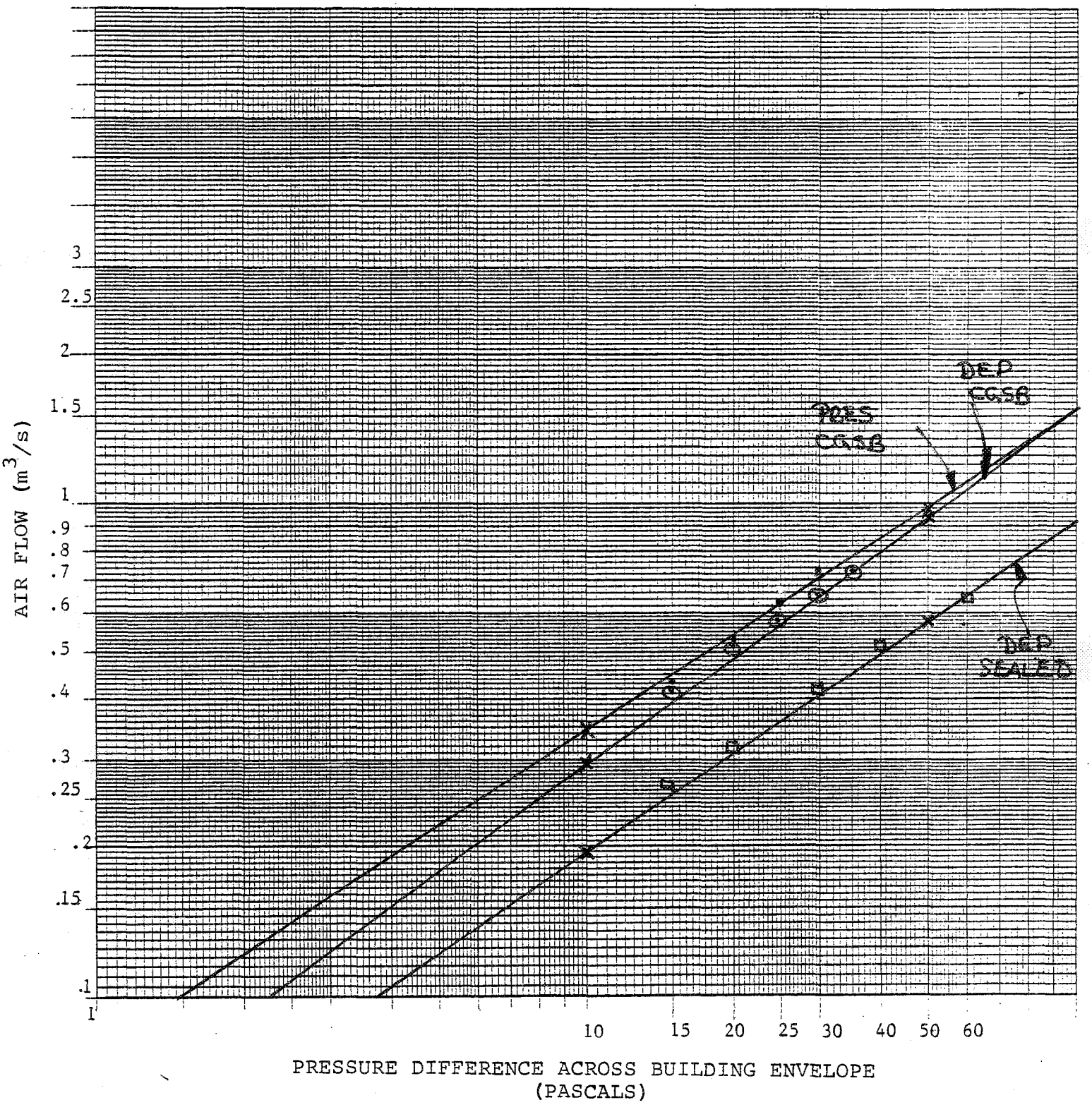
HOUSE # 30

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 17-83
TIME	11:30-12:30
TEST HOUSE	30
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	575 m^2
VOLUME	790 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-17.°C	18.°C
REL. HUM	65%	33%
WIND(SPEED&DIR)	W@26	
AIR PRESSURE	100.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		.270	
15		.431	.228
20		.518	.306
25		.556	.353
30		.609	.395
35		.731	.467
37.5		.759	.509
40			.538
45			.576
50			.619
55			.635
60			

EXPONENT (N)		EXPONENT N	0.724
CONSTANT (C)		CONSTANT C	0.055
CORRELATION		CORRELATION	0.9834
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.293 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.939 M^3/S
ELA	SQM @ 10PA	ELA	0.117 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	4.28

EXPONENT N		EXPONENT N	0.730
CONSTANT C		CONSTANT C	0.033
CORRELATION		CORRELATION	0.9956
AIR FLOW @ 10PA		AIR FLOW @ 10PA	0.179 M^3/S
AIR FLOW @ 50 PA		AIR FLOW @ 50 PA	0.580 M^3/S
ELA	SQM @ 10PA	ELA	0.071 SQM @ 10PA
AIR CHNGS/HRS @	50PA	AIR CHNGS/HRS @	50PA 2.65

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Retrospectors

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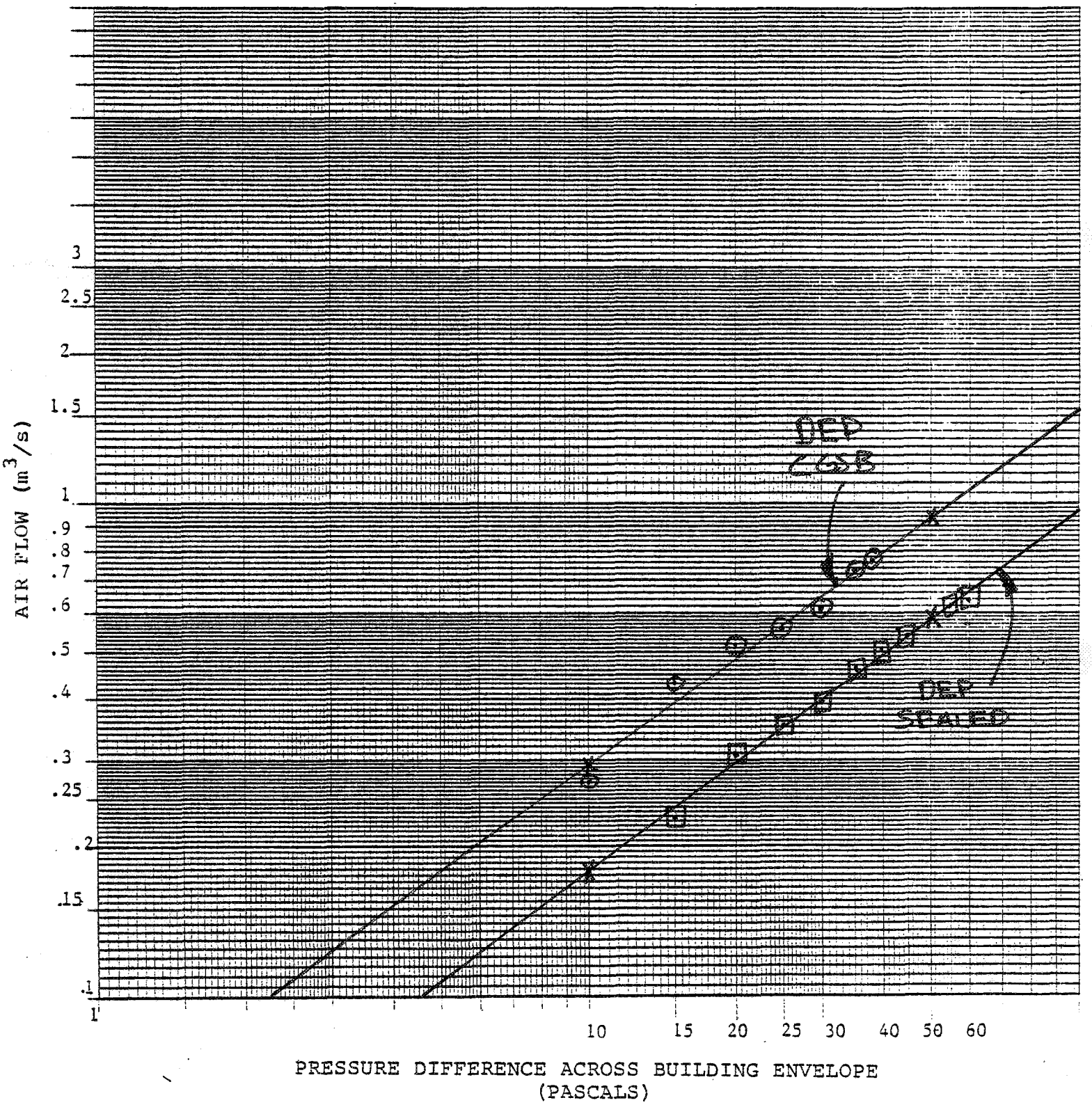
HOUSE # 30

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB 23/82
TIME	11:00
TEST HOUSE	31
TECHNICIAN	ROSENBERG
ENVELOPE AREA	266 m^2
VOLUME	454 m^3
FIREPLACE	YES
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-6.4°C	19°C
REL. HUM	73%	51%
WIND(SPEED&DIR)	N.E @ 7KPH	
AIR PRESSURE	101 KPA	
PRECIPITATION	N.A	
SOLAR RAD.	N.A.	
SKY/CLOUD COND	N.A.	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20		0.346	0.323
25			
30		0.498	0.451
35			
40		0.588	0.513
45			
50		0.697	0.620
55			
60			

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)		0.752	0.690
CONSTANT (C)		0.037	0.041
CORRELATION		0.9958	0.9941
AIR FLOW @ 10PA	___ M^3/S	0.20 M^3/S	0.20 M^3/S
AIR FLOW @ 50PA	___ M^3/S	0.70 M^3/S	0.61 M^3/S
ELA	___ SQM @ 10PA	0.08 SQM @ 10PA	0.08 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	___	5.58	4.89

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Retrospectors

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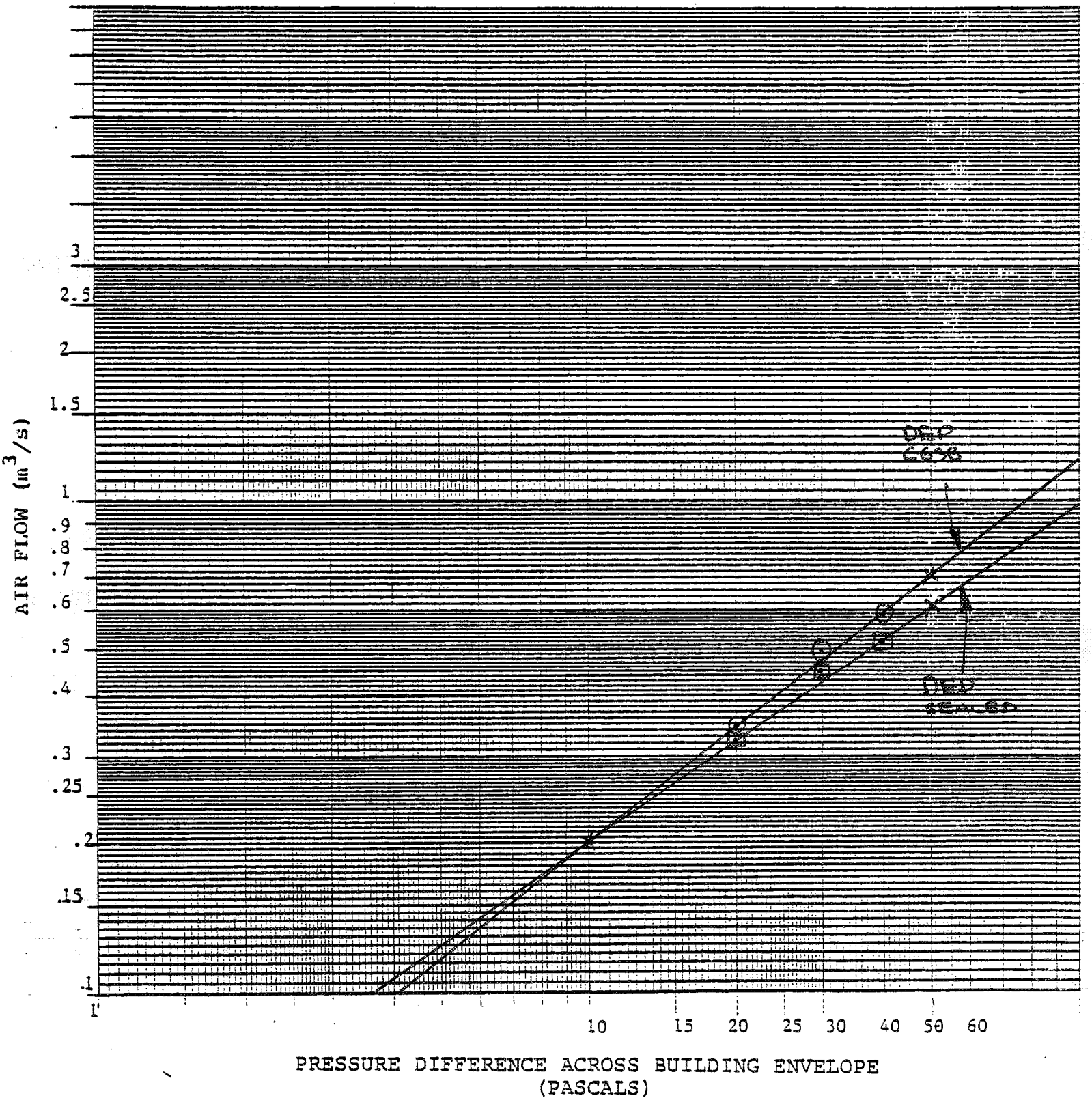
HOUSE # 31

PHASE 1

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: JUNE 7/82
TIME: 13:45-14:30
TEST HOUSE: 31
TECHNICIAN: SETON-FUGLER
ENVELOPE AREA: 266m²
VOLUME: 454m³
FIREPLACE: YES
HEATING: ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	23.0°C	23.0°C
REL. HUM	29%	60%
WIND(SPEED&DIR)	E@18KPH	
AIR PRESSURE	101.9 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL-S.W.	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15		15	
20	0.277	20	0.286	20	0.258
25	0.320	25	0.320	25	0.286
30	0.391	30	0.371	30	0.343
35	0.404	35	0.416	35	0.364
40	0.452	40	0.446	40	0.398
45	0.479	45	0.484	45	0.423
50	0.505	50	0.524	50	0.468
55	0.524	55	0.529	55	0.484
60	0.605	60	0.571	60	0.494

EXPONENT (N)	0.658	EXPONENT N	0.639	EXPONENT N	0.618
CONSTANT (C)	0.039	CONSTANT C	0.041	CONSTANT C	0.040
CORRELATION	0.9908	CORRELEATION	0.9973	CORRELATION	0.9951
AIR FLOW @ 10PA	0.17 M^3/S	AIR FLOW @ 10PA	0.18 M^3/S	AIR FLOW @ 10PA	0.16 M^3/S
AIR FLOW @ 50PA	0.51 M^3/S	AIR FLOW @ 50PA	0.51 M^3/S	AIR FLOW @ 50 PA	0.45 M^3/S
ELA	0.071 SQM @ 10PA	ELA	0.073 SQM @ 10PA	ELA	0.067 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.09	AIR CHNGS/HRS @ 50PA	4.05	AIR CHNGS/HRS @ 50PA	3.61

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Retrospectors

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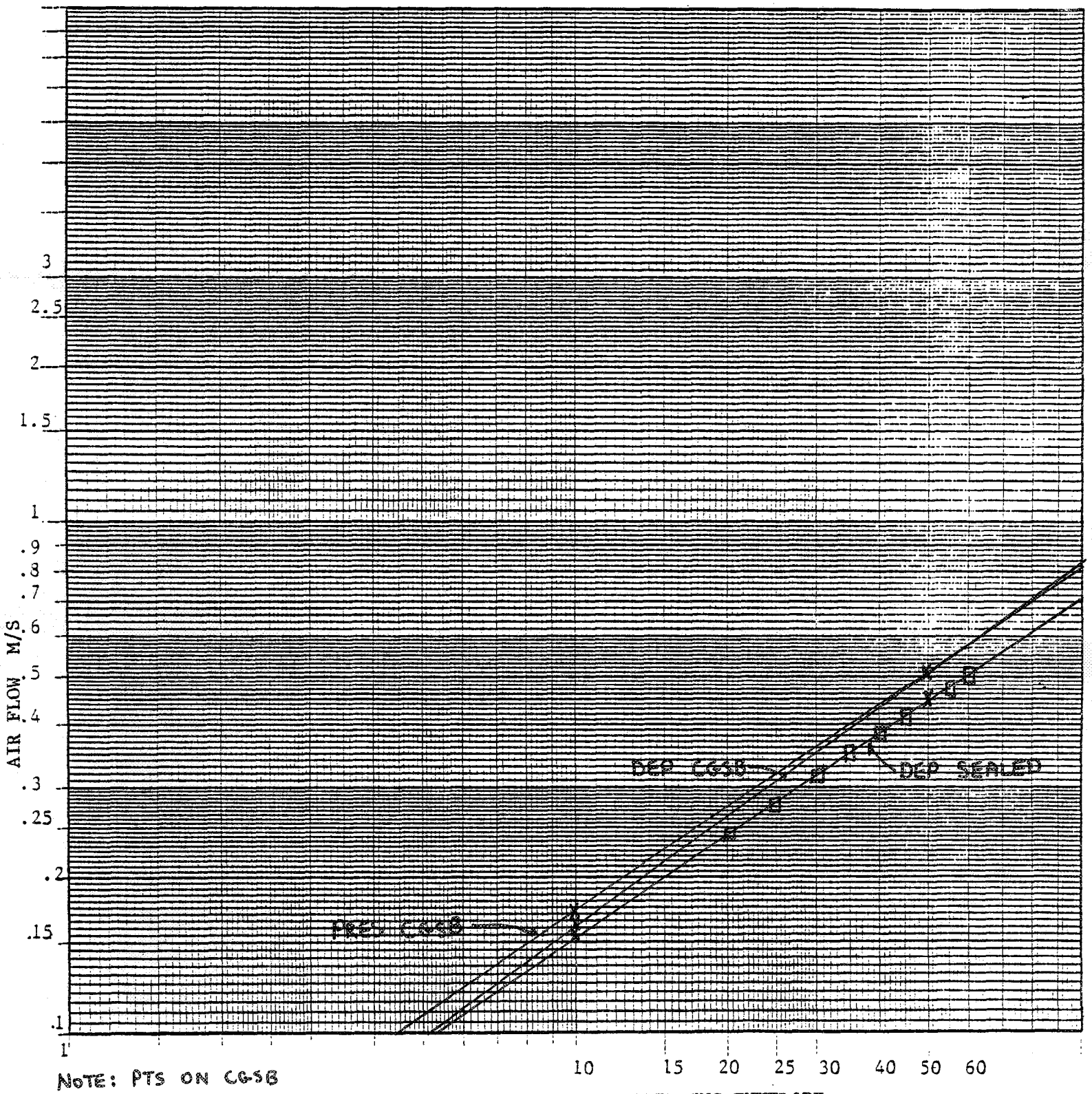
HOUSE # 31

PHASE 2

AIR LEAKAGE PROFILE



NOTE: PTS ON CGSB LINES OMITTED

PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS ON PRES & DEP CGSB OMITTED DUE TO LACK OF SPACE

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Retrospectors

IDENTIFICATION

DATE	SEPT. 13/82
TIME	11:15-13:45
TEST HOUSE	31
TECHNICIAN	EUGLEE/PASQUINI
ENVELOPE AREA	266 m^2
VOLUME	454 m^3
FIREPLACE	YES
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	26.4°C	24.4°C
REL. HUM	65%	70%
WIND (SPEED&DIR)	CALM	
AIR PRESSURE	102.3 kPa	
PRECIPITATION	NONE	
SOLAR RAD.	FULL	
SKY/CLOUD COND	HAZY	

SUSPECT CAPACITY BOX MALFUNCTION IN CGSB TESTS.
TUBES "Y" 'D FOR SEALED TEST

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.201	10		10	
15	0.266	15	0.202	15	0.202
20	0.302	20	0.247	20	0.247
25	0.334	25	0.311	25	0.294
30	0.376	30	0.349	30	0.319
35	0.376	35	0.396	35	0.349
40	0.414	40	0.396	40	0.363
45	0.438	45	0.488	45	0.402
50	0.512	50	0.537	50	0.439
55	0.540	55	0.599	55	0.482
60	0.549	60	0.619	60	0.493

EXPONENT (N)	0.541	EXPONENT N	0.813	EXPONENT N	0.631
CONSTANT (C)	0.058	CONSTANT C	0.021	CONSTANT C	0.037
CORRELATION	0.9912	CORRELEATION	0.9938	CORRELATION	0.9963
AIR FLOW @ 10PA	0.204 M^3/S	AIR FLOW @ 10PA	0.143 M^3/S	AIR FLOW @ 10PA	0.158 M^3/S
AIR FLOW @ 50PA	0.489 M^3/S	AIR FLOW @ 50PA	0.529 M^3/S	AIR FLOW @ 50 PA	0.489 M^3/S
ELA	0.082 SQM @ 10PA	ELA	0.057 SQM @ 10PA	ELA	0.063 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.87	AIR CHNGS/HRS @ 50PA	4.20	AIR CHNGS/HRS @ 50PA	3.48

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Retrospectors

AIR LEAKAGE PROFILE

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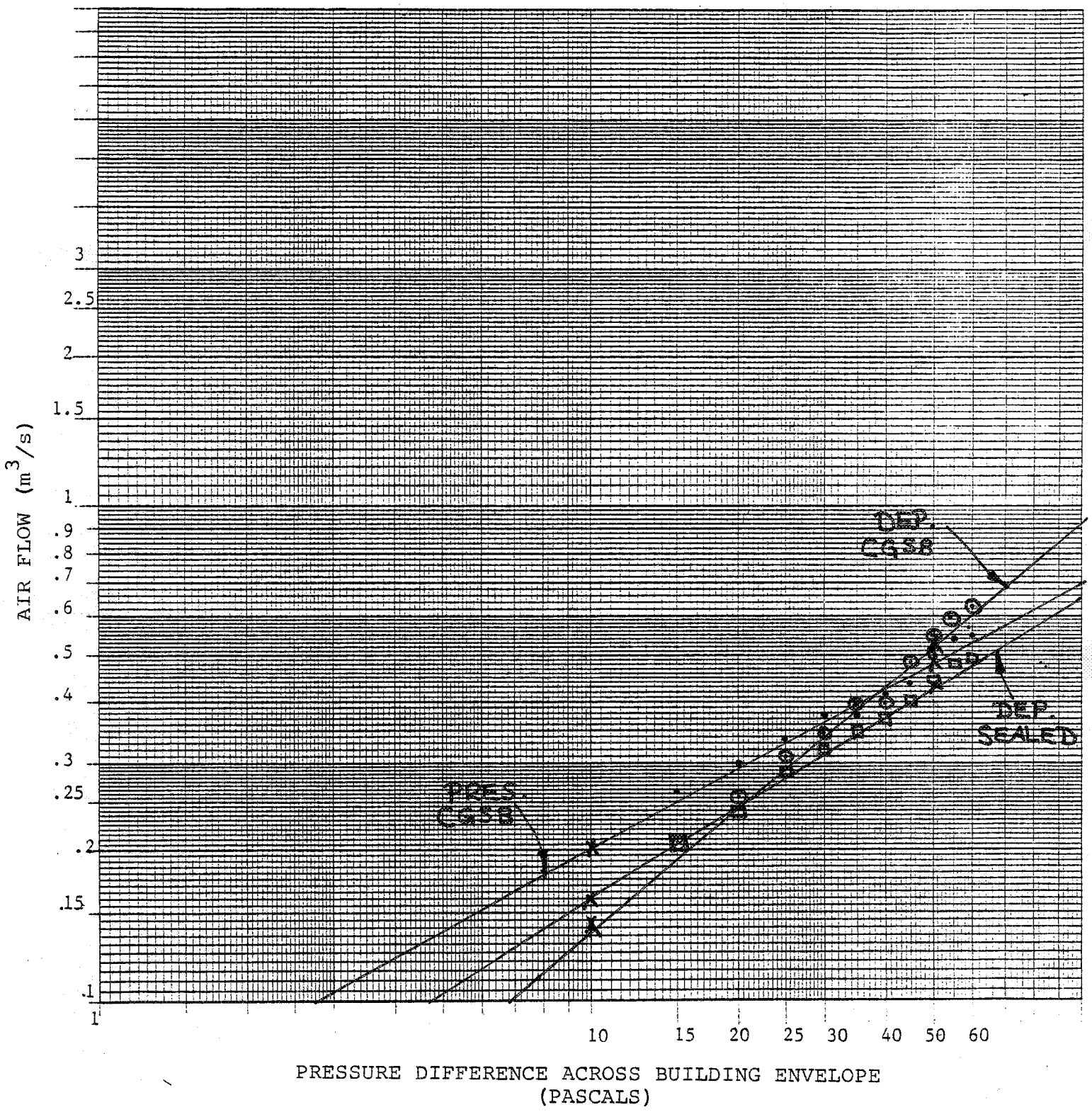
HOUSE # 31

PHASE 3



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 10-83
TIME	13:30-14:30
TEST HOUSE	31
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	266m²
VOLUME	454m³
FIREPLACE	YES
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-5.0°C	20°C
REL. HUM	86%	51%
WIND(SPEED&DIR)	E@19KPH	
AIR PRESSURE	102.0	
PRECIPITATION	RAIN	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		-	-
15		-	0.204
20		0.260	0.260
25		0.322	0.297
30		0.338	0.330
35		0.394	0.381
40		0.419	0.413
45		0.471	0.449
50		0.503	0.482
55		0.561	0.508
60		0.575	0.533
EXPONENT (N)		0.719	0.689
CONSTANT (C)		0.030	0.032
CORRELATION		0.9951	0.9988
AIR FLOW @ 10PA	M^3/S	0.159 M^3/S	0.158 M^3/S
AIR FLOW @ 50PA	M^3/S	0.507 M^3/S	0.479 M^3/S
ELA	SQM @ 10PA	0.063 SQM @ 10PA	0.063 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		4.02	3.79

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Retrospectors

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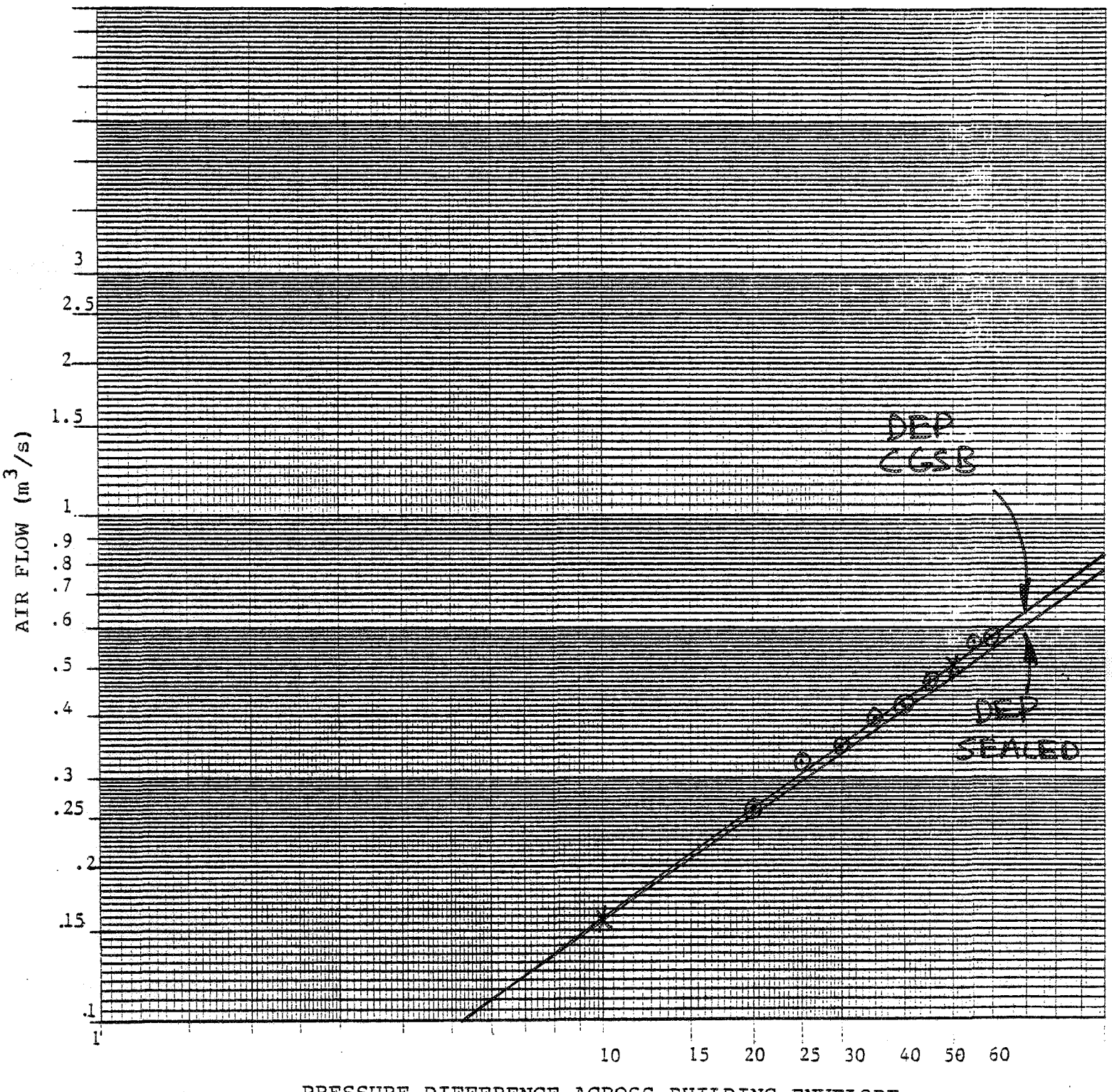
PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP SEALED" LINE OMITTED DUE TO LACK OF SPACE

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB 23/82
TIME	16:00
TEST HOUSE	32
TECHNICIAN	ROSENBERG
ENVELOPE AREA	266m²
VOLUME	454m³
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-0.4°C	22°C
REL. HUM	74%	
WIND (SPEED&DIR)	W @ 23KPH	
AIR PRESSURE	101.1 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTHWEST	
SKY/CLOUD COND	PARTLY CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.513	0.512	0.397
25			
30	0.736	0.697	0.553
35			
40	0.808	0.844	0.770
45			
50	0.868	0.964	0.810
55			
60			

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.624	0.692	0.823
CONSTANT (C)	0.081	0.065	0.034
CORRELATION	0.9809	0.9986	0.9854
AIR FLOW @ 10PA	0.34 M^3/S	0.32 M^3/S	0.22 M^3/S
AIR FLOW @ 50PA	0.94 M^3/S	0.91 M^3/S	0.85 M^3/S
ELA	0.13 SQM @ 10PA	0.12 SQM @ 10PA	0.09 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	7.49	7.75	6.77

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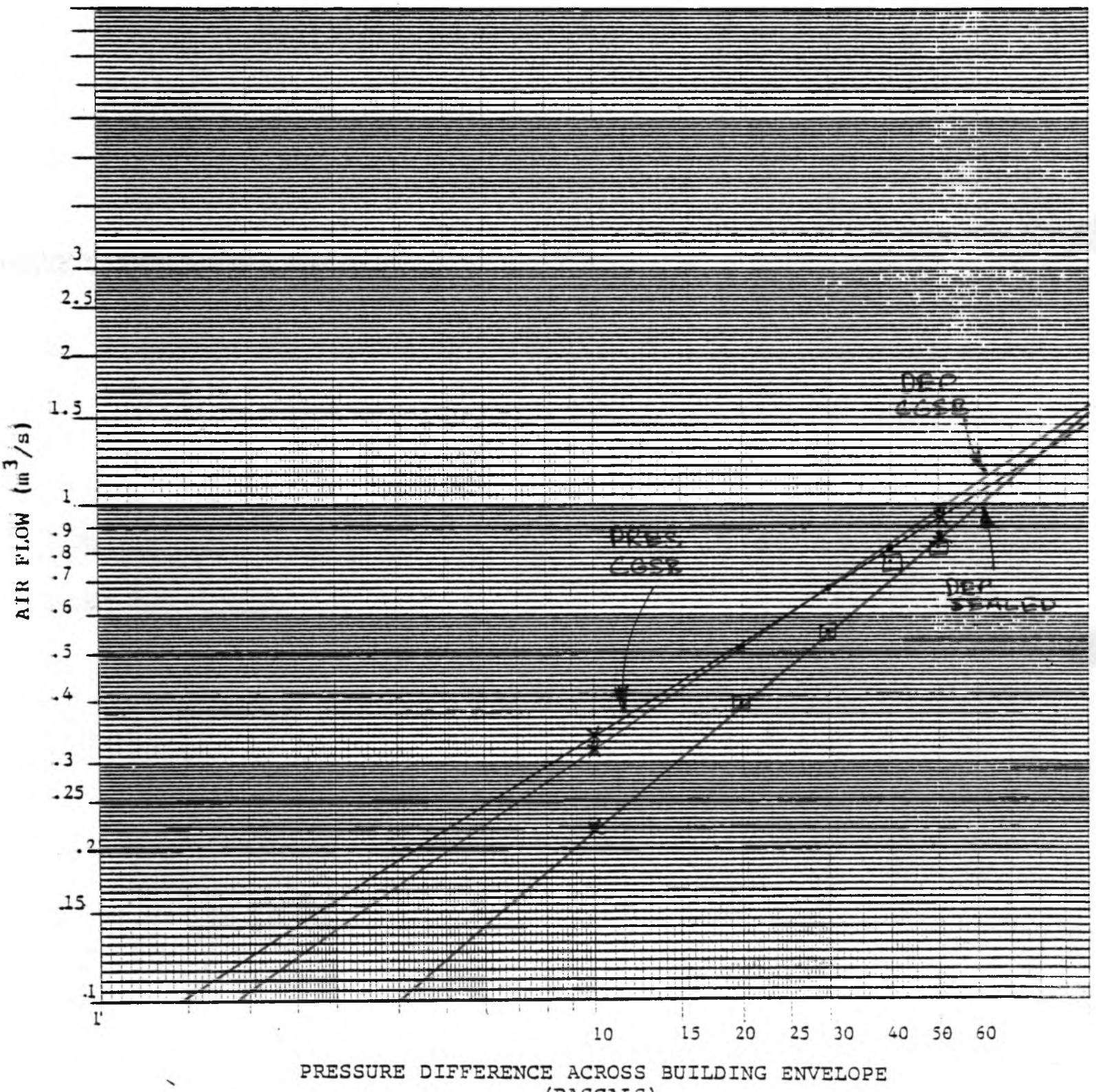
HOUSE # 32

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAY 31/82
TIME	2:35 - 4:25
TEST HOUSE	32
TECHNICIAN	SETON/EUGLER
ENVELOPE AREA	266 m^2
VOLUME	454 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	23°C	23°C
REL. HUM	78%	72%
WIND(SPEED&DIR)	SE @ 14 KPH	
AIR PRESSURE	100.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP. SEALED
10			
15	0.416	0.371	
20	0.484	0.452	0.295
25	0.495	0.505	0.343
30	0.588	0.562	0.385
35	0.613	0.617	0.440
40	0.691	0.653	0.494
45			0.515
50			0.553
55			0.597
60			0.621

EXPONENT (N)	0.508	EXPONENT N	0.574	EXPONENT N	0.689
CONSTANT (C)	0.102	CONSTANT C	0.079	CONSTANT C	0.037
CORRELATION	0.9813	CORRELEATION	0.9984	CORRELATION	0.9980
AIR FLOW @ 10PA	0.33 M^3/S	AIR FLOW @ 10PA	0.29 M^3/S	AIR FLOW @ 10PA	0.18 M^3/S
AIR FLOW @ 50PA	0.75 M^3/S	AIR FLOW @ 50PA	0.75 M^3/S	AIR FLOW @ 50 PA	0.55 M^3/S
ELA	0.132 SQM @ 10PA	ELA	0.119 SQM @ 10PA	ELA	0.073 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	5.95	AIR CHNGS/HRS @ 50PA	5.96	AIR CHNGS/HRS @ 50PA	4.41

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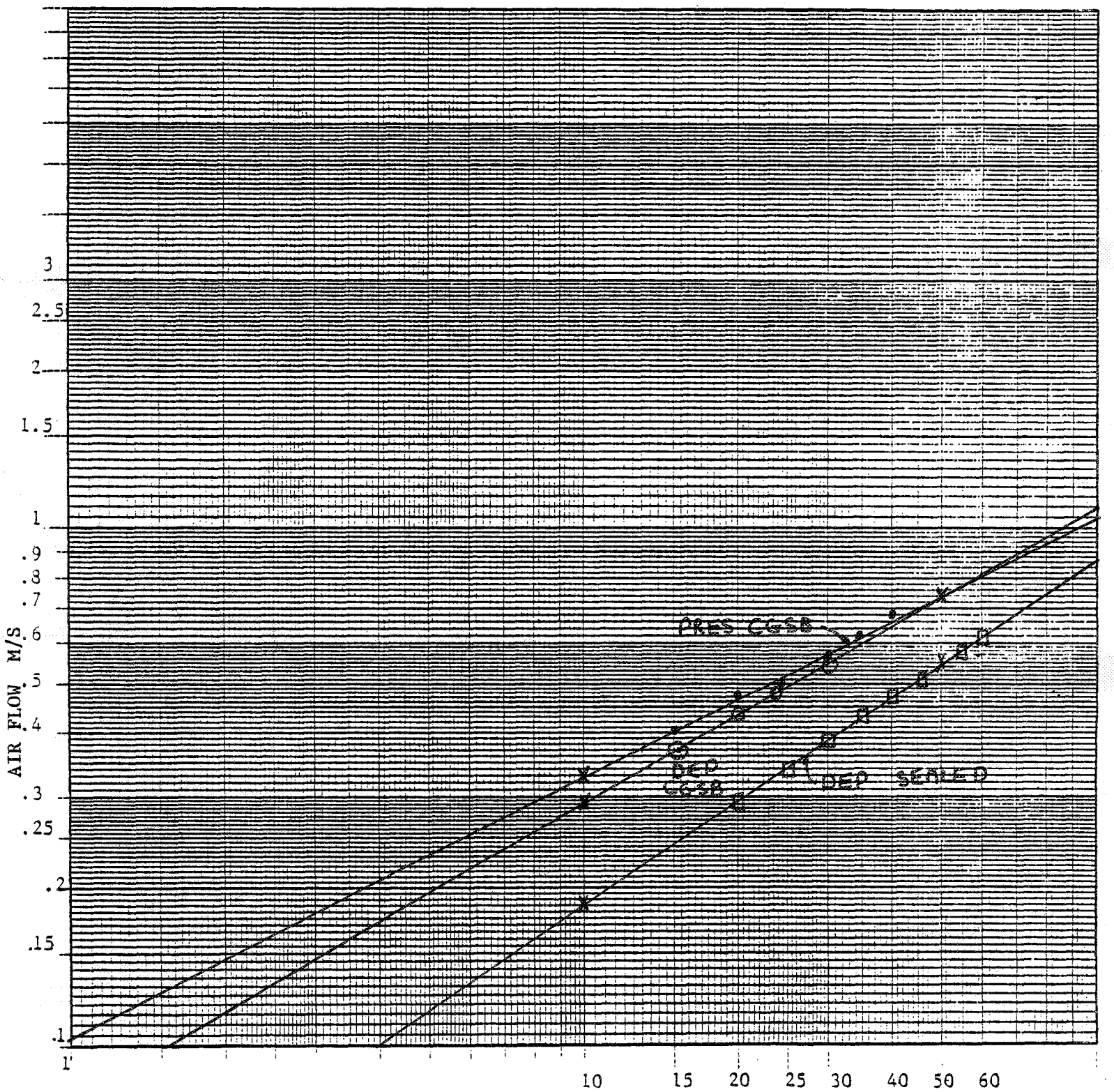
HOUSE # 32

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

IDENTIFICATION

DATE	SEPT. 22/82
TIME	15:00
TEST HOUSE	32
TECHNICIAN	Fugler/Pasquini
ENVELOPE AREA	~~534~~ 266 m^2
VOLUME	454 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	20°C	21°C
REL. HUM	49%	60%
WIND (SPEED&DIR)	NE 20 KPH	
AIR PRESSURE	101.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.320	0.287	0.176
15	0.411	0.405	0.227
20	0.505	0.452	0.287
25	0.544	0.535	0.336
30	0.589	0.589	0.392
35	0.647	0.622	0.441
40		0.670	0.474
45			0.505
50			0.544
55			0.572
60			0.580

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0551	0.596	0.693
CONSTANT (C)	0.092	0.076	0.053
CORRELATION	0.9945	0.9927	0.9974
AIR FLOW @ 10PA	0.328 M^3/S	0.301 M^3/S	0.177 M^3/S
AIR FLOW @ 50PA	0.797 M^3/S	0.786 M^3/S	0.542 M^3/S
ELA	0.131 SQM @ 10PA	0.120 SQM @ 10PA	0.071 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	6.32	6.23	4.29

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Retrospectors

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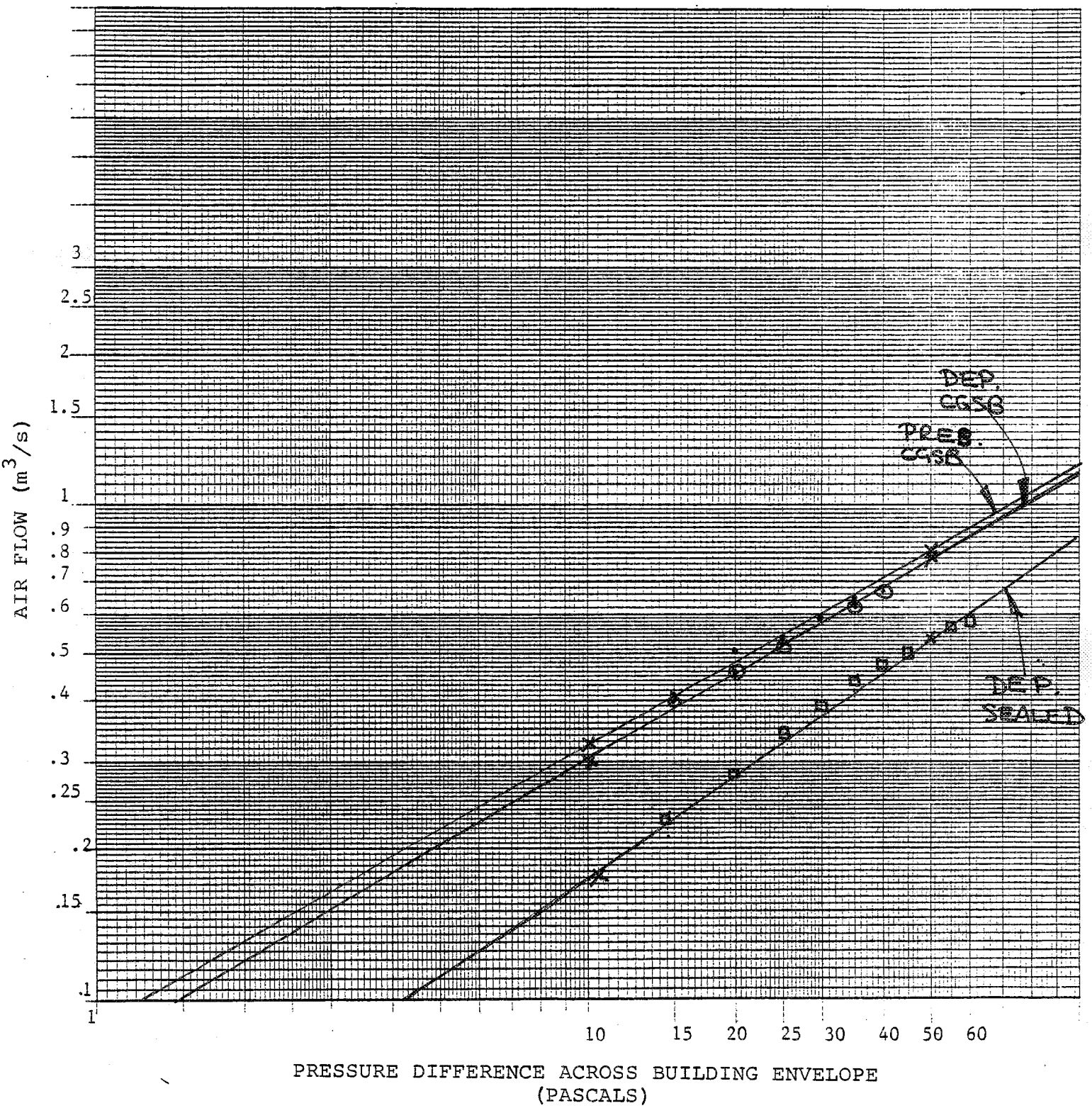
HOUSE # 32

PHASE 3

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	Dec 03/82
TIME	13:00-14:00
TEST HOUSE	32
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	266 m^2
VOLUME	454 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	13°C	21°C
REL. HUM	94%	54%
WIND(SPEED&DIR)	S @ 19KPH	
AIR PRESSURE	101.4 KPA	
PRECIPITATION	ALMOST	
SOLAR RAD.	SLIGHT	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.243	10	0.216	10	
15	0.375	15	0.313	15	0.203
20	0.418	20	0.373	20	0.259
25	0.485	25	0.464	25	0.304
30	0.565	30	0.516	30	0.352
35	0.615	35	0.624	35	0.366
40	0.684	40	0.648	40	0.418
45		45		45	0.475
50		50		50	0.526
55		55		55	0.564
60		60		60	0.599

EXPONENT (N)	0.707	EXPONENT N	0.801	EXPONENT N	0.770
CONSTANT (C)	0.050	CONSTANT C	0.034	CONSTANT C	0.025
CORRELATION	0.9923	CORRELATION	0.9972	CORRELATION	0.9967
AIR FLOW @ 10PA	0.257 M^3/S	AIR FLOW @ 10PA	0.219 M^3/S	AIR FLOW @ 10PA	0.148 M^3/S
AIR FLOW @ 50PA	0.805 M^3/S	AIR FLOW @ 50PA	0.796 M^3/S	AIR FLOW @ 50 PA	0.516 M^3/S
ELA	0.103 SQM @ 10PA	ELA	0.087 SQM @ 10PA	ELA	0.059 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	6.38	AIR CHNGS/HRS @ 50PA	6.31	AIR CHNGS/HRS @ 50PA	4.08

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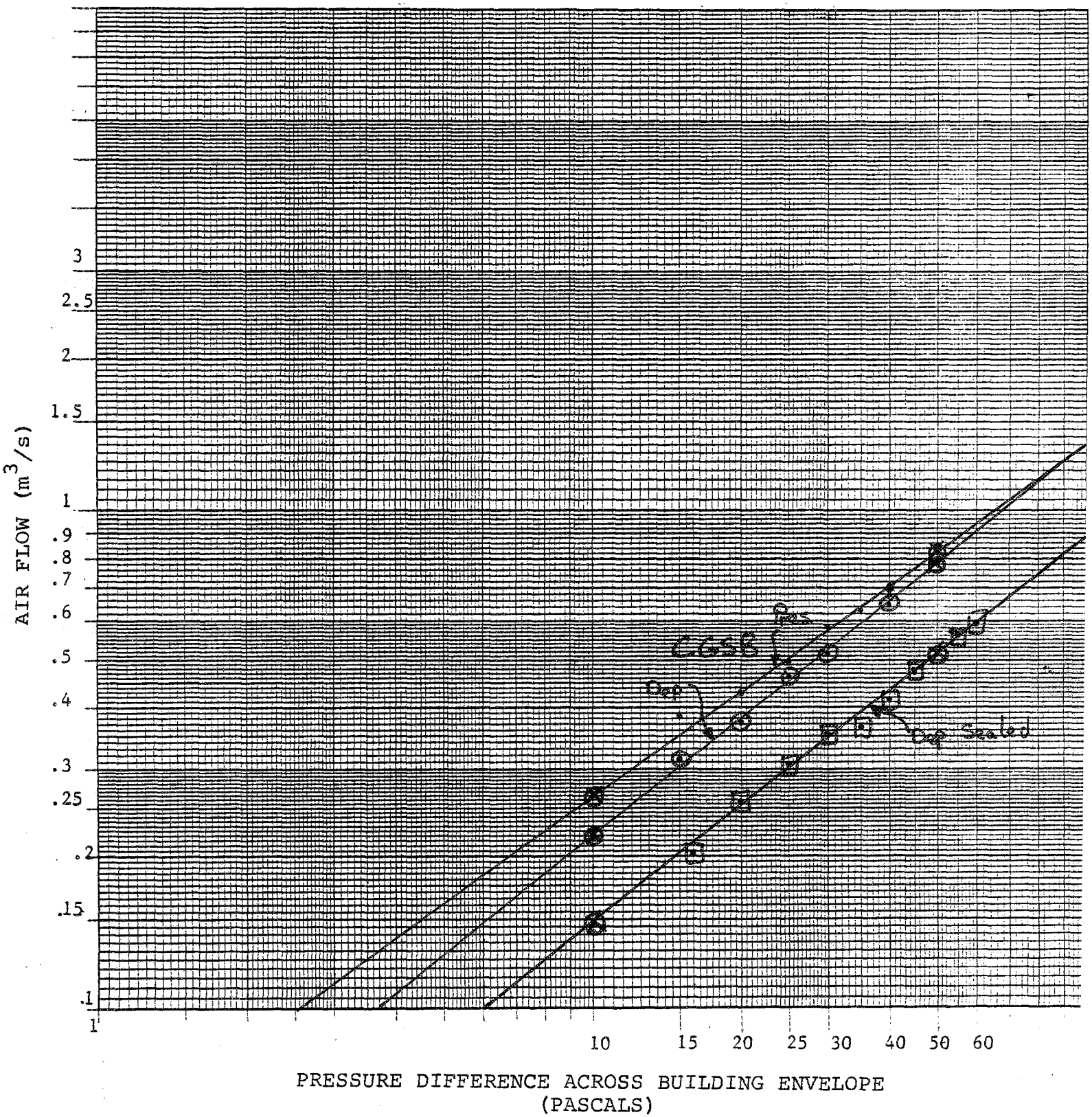
Retrospectors

HOUSE # 32

PHASE 4

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB. 17/82
TIME	10:00
TEST HOUSE	34
TECHNICIAN	ROSENBERG
ENVELOPE AREA	410 m^2
VOLUME	930 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-12°C	17°C
REL. HUM	51%	42%
WIND(SPEED&DIR)	NE @ 15KPH	
AIR PRESSURE	103.0KPA	
PRECIPITATION	NONE	
SOLAR RAD.	S.E.	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.407	0.463	
25			
30	0.468	0.644	
35			
40	0.615	0.690	
45			
50	0.716	0.881	
55			
60			
EXPONENT (N)	0.731	0.656	
CONSTANT (C)	0.040	0.065	
CORRELATION	0.9943	0.9798	
AIR FLOW @ 10PA	0.21 M^3/S	0.29 M^3/S	M^3/S
AIR FLOW @ 50PA	0.70 M^3/S	0.85 M^3/S	M^3/S
ELA	0.08 SQM @ 10PA	0.11 SQM @ 10PA	SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.75	3.31	

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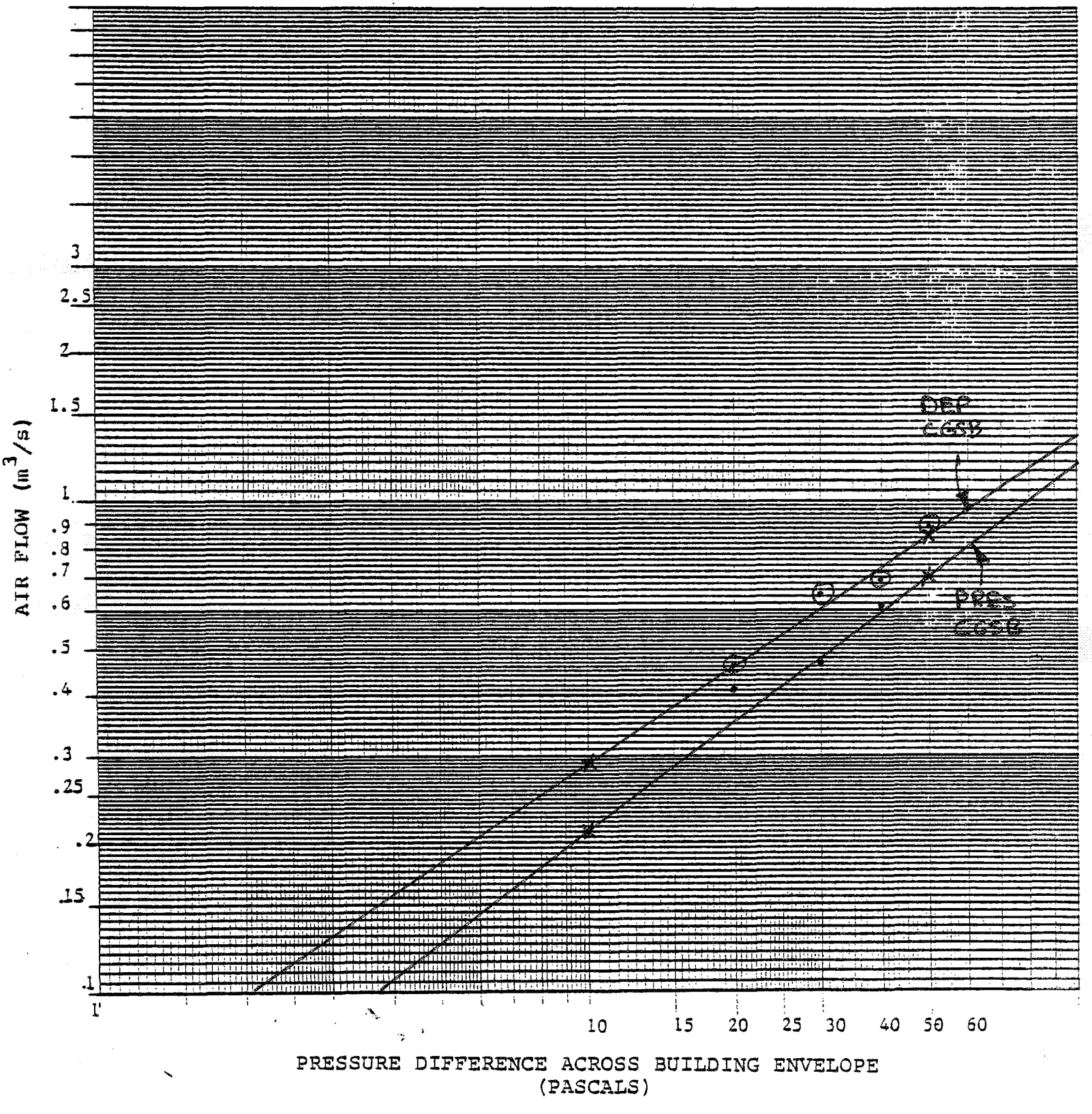
HOUSE #34

PHASE 1

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

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IDENTIFICATION

DATE	JUNE 7/82
TIME	9:15 - 10:15
TEST HOUSE	34
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	410 m^2
VOLUME	930 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	18°C	20.0°C
REL. HUM	52%	68%
WIND(SPEED&DIR)	E @ 10 KPH	
AIR PRESSURE	102.0 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10	0.346	0.288	
15	0.478	0.393	
20	0.557	0.487	0.321
25	0.619	0.582	0.380
30	0.733	0.625	0.419
35			0.406
40			0.517
45			0.555
50			0.608
55			0.641
60			0.687

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.652	0.723	0.694
CONSTANT (C)	0.078	0.055	0.039
CORRELATION	0.9947	0.9971	0.9812
AIR FLOW @ 10PA	0.35 M^3/S	0.29 M^3/S	0.19 M^3/S
AIR FLOW @ 50PA	1.00 M^3/S	0.93 M^3/S	0.59 M^3/S
ELA	0.141 SQM @ 10PA	0.117 SQM @ 10PA	0.077 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.87	3.60	2.30

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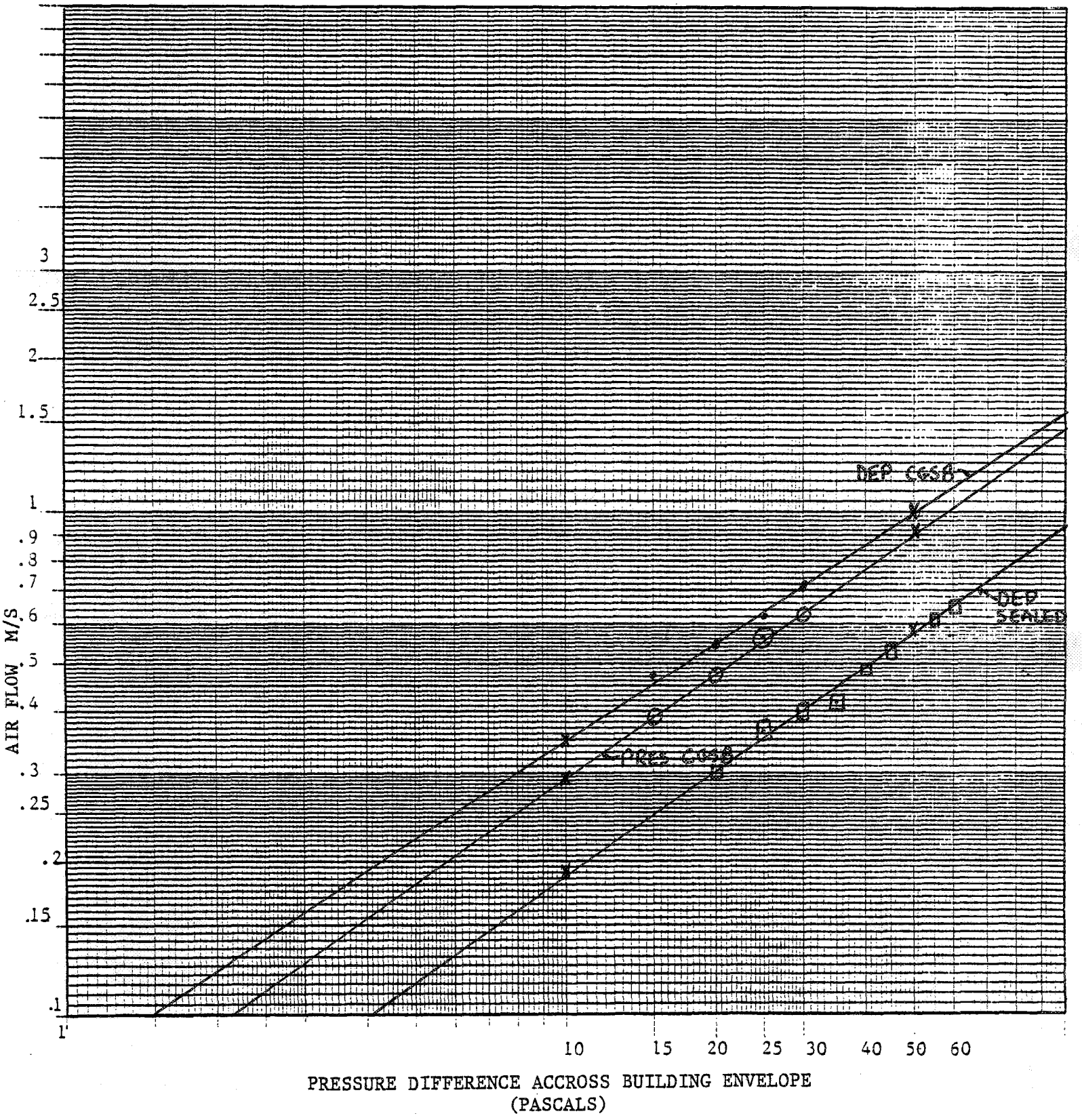
HOUSE # 34

PHASE 2

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	Oct 01/82
TIME	11:00
TEST HOUSE	34
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	410 m^2
VOLUME	930 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	14°C	19°C
REL. HUM	100%	75%
WIND(SPEED&DIR)	SW @ 10KPH	
AIR PRESSURE	101.2 KPA	
PRECIPITATION	RAIN	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.362	10	0.352	10	0.204
15	0.460	15	0.442	15	0.269
17.5	0.492	20	0.537	20	0.337
20	0.560	25	0.591	25	0.393
22.5	0.594	27.5	0.625	30	0.442
25	0.634	30	0.649	35	0.476
27.5	0.688	32.5	0.694	40	0.527
30	0.737	35	0.716	45	0.546
50		50		50	0.616
55		55		55	0.672
60		60		60	0.709
EXPONENT (N)	0.642	EXPONENT N	0.564	EXPONENT N	0.681
CONSTANT (C)	0.080	CONSTANT C	0.096	CONSTANT C	0.042
CORRELATION	0.9968	CORRELATION	0.9988	CORRELATION	0.9984
AIR FLOW @ 10PA	0.356 M^3/S	AIR FLOW @ 10PA	0.354 M^3/S	AIR FLOW @ 10PA	0.206 M^3/S
AIR FLOW @ 50PA	1.000 M^3/S	AIR FLOW @ 50PA	0.878 M^3/S	AIR FLOW @ 50 PA	0.617 M^3/S
ELA	0.142 SQM @ 10PA	ELA	0.142 SQM @ 10PA	ELA	0.082 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.87	AIR CHNGS/HRS @ 50PA	3.40	AIR CHNGS/HRS @ 50PA	2.39

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Retrospectors

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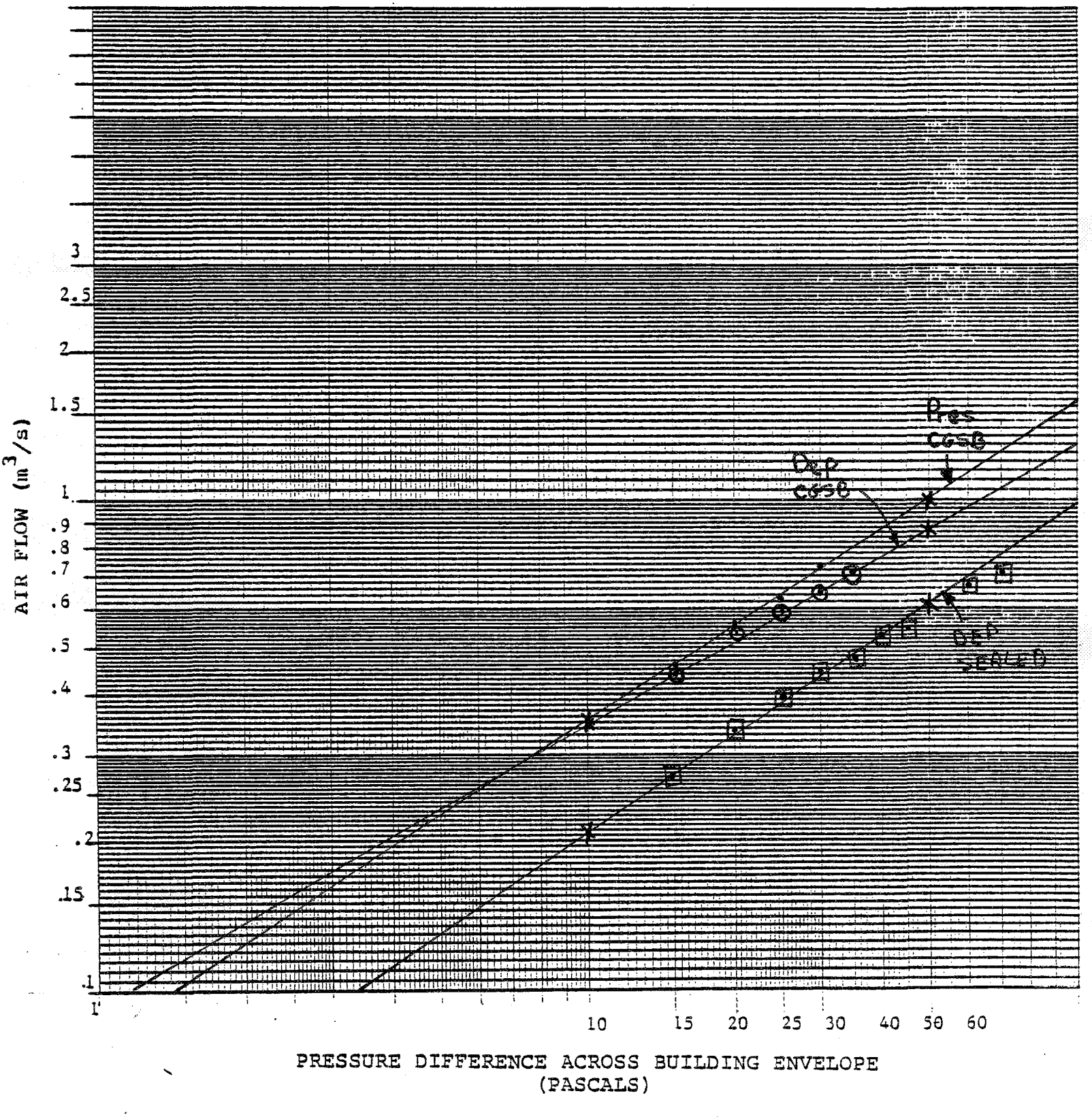
HOUSE # 34

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB-11-83
TIME	14:30-15:06
TEST HOUSE	34
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	410 m^2
VOLUME	930 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-13°C	18°C
REL. HUM	39%	40%
WIND(SPEED&DIR)	N.E @ 18 KPH	
AIR PRESSURE	103.3 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

NOTE: HOMEOWNER HAS SEALED VENTILATION INLET

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.270	10	0.217
15		15	0.338	15	0.280
20		20	0.432	20	0.346
25		25	0.524	25	0.420
30		30	0.619	30	0.461
35		35	0.700	35	0.529
40		40	0.764	40	0.584
45		45	-	45	0.635
50		50	-	50	0.682
55		55	-	55	0.740
60		60	-	60	0.767
EXPONENT (N)		EXPONENT N	0.778	EXPONENT N	0.722
CONSTANT (C)		CONSTANT C	0.043	CONSTANT C	0.040
CORRELATION		CORRELATION	0.9968	CORRELATION	0.9993
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.259 M^3/S	AIR FLOW @ 10PA	0.213 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.907 M^3/S	AIR FLOW @ 50 PA	0.681 M^3/S
ELA	SQM @ 10PA	ELA	0.103 SQM @ 10PA	ELA	0.085 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	3.5	AIR CHNGS/HRS @ 50PA	2.6

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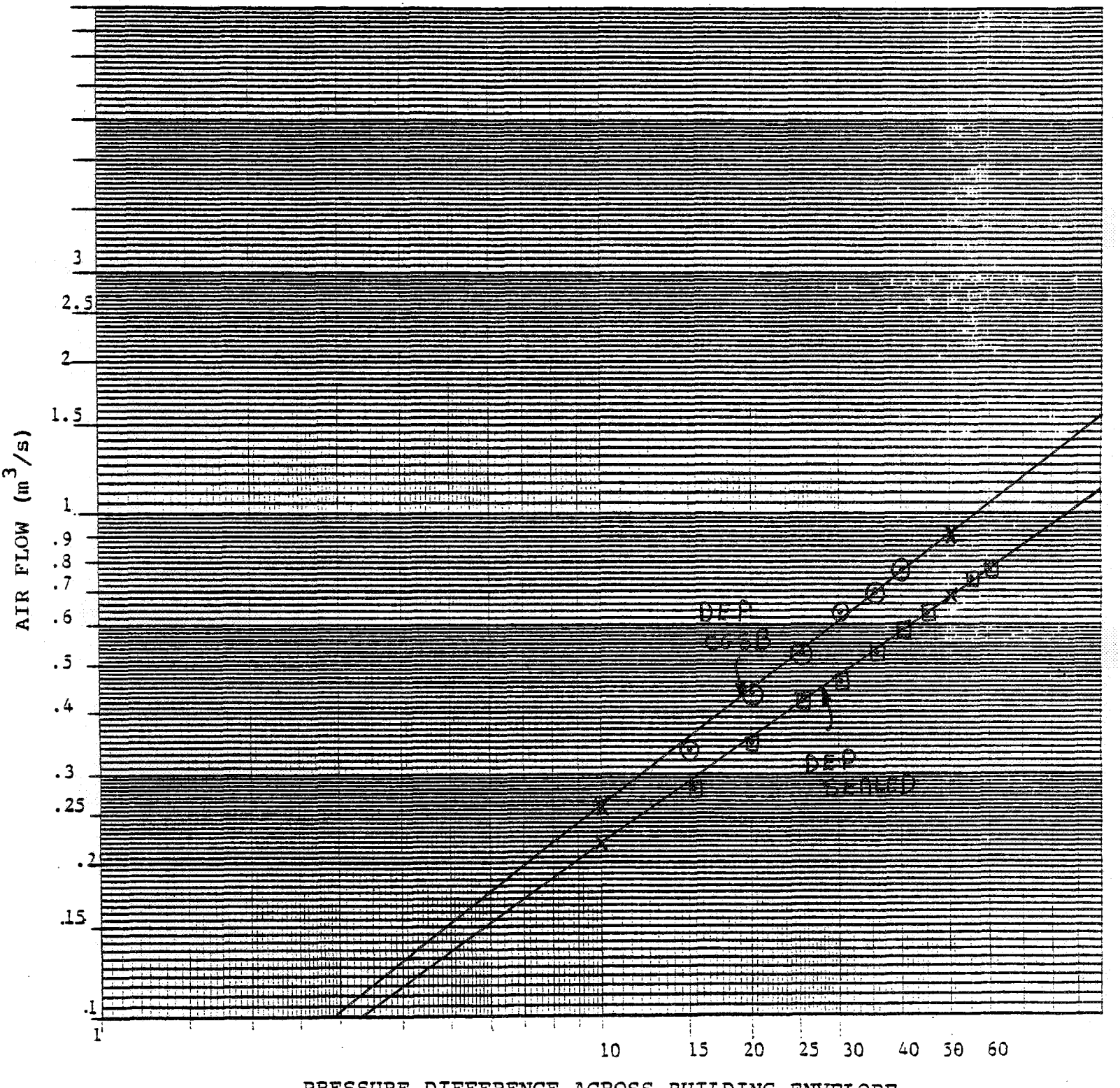
HOUSE # 34

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JULY 12/82
TIME	10:30 – 11:20
TEST HOUSE	35
TECHNICIAN	SETON/FUGLER
ENVELOPE AREA	410 m^2
VOLUME	930 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	21.3 °C	25.0 °C
REL. HUM	57%	72%
WIND(SPEED&DIR)	SW@30-46 KPH	
AIR PRESSURE	100.9 KPA	
PRECIPITATION	IMMINENT	
SOLAR RAD.	SOME SOUTH	
SKY/CLOUD COND	SCATTERED CLOUD	

NOTE: TWO WINDOWS TAPED SHUT AS THEY WOULD NOT CLOSE

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEAL.
10	0.393	10	0.302	10	
15	0.506	15	0.421	15	
20	0.573	20	0.503	20	0.302
25	0.640	25	0.603	25	0.390
30	0.678	30	0.635	30	0.396
35		35	0.696	35	0.482
40		40		40	0.532
45		45		45	0.555
50		50		50	0.595
55		55		55	0.635
60		60		60	0.674

EXPONENT (N)	0.497	EXPONENT N	0.662	EXPONENT N	0.704
CONSTANT (C)	0.128	CONSTANT C	0.068	CONSTANT C	0.038
CORRELATION	0.9944	CORRELEATION	0.9938	CORRELATION	0.9904
AIR FLOW @ 10PA	0.402 M^3/S	AIR FLOW @ 10PA	0.313 M^3/S	AIR FLOW @ 10PA	0.193 M^3/S
AIR FLOW @ 50PA	0.896 M^3/S	AIR FLOW @ 50PA	0.911 M^3/S	AIR FLOW @ 50 PA	0.600 M^3/S
ELA	0.161 SQM @ 10PA	ELA	0.125 SQM @ 10PA	ELA	0.077 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.17	AIR CHNGS/HRS @ 50PA	3.53	AIR CHNGS/HRS @ 50PA	2.32

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Retrospectors

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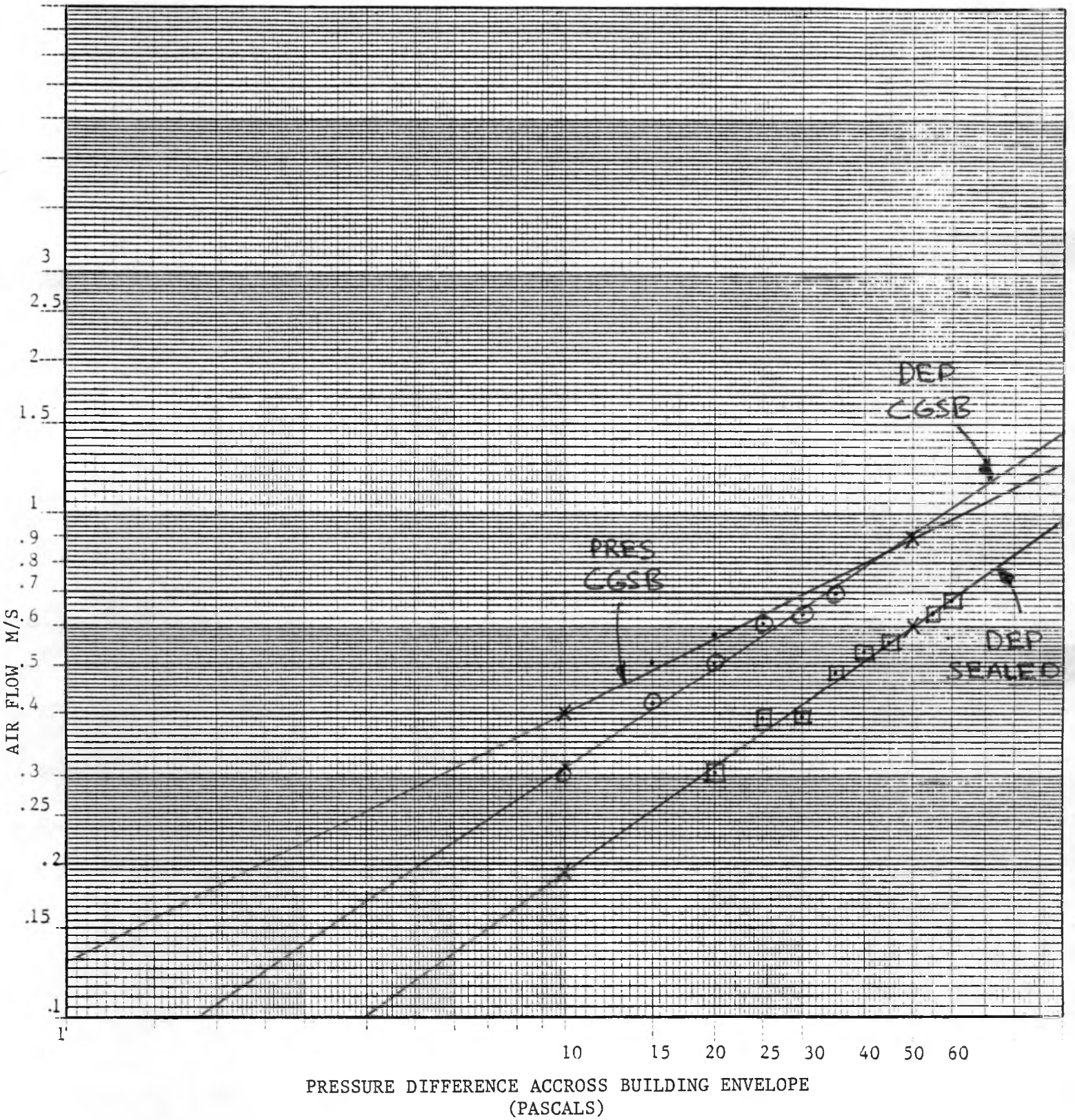
HOUSE # 35

PHASE 2

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	Oct 08/82
TIME	11:00
TEST HOUSE	35
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	410 m^2
VOLUME	930 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	11°C	21.4°C
REL. HUM	76%	75%
WIND(SPEED&DIR)	E @ 25KPH	
AIR PRESSURE	102.2 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	YES	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.373	10	0.352	10	0.203
15	0.498	15	0.464	15	0.287
17.5	0.537	17.5	0.496	20	0.337
20	0.572	20	0.545	25	0.393
22.5	0.606	22.5	0.573	30	0.453
25	0.646	25	0.615	35	0.464
27.5	0.717	27.5	0.655	40	0.545
45		30	0.686	45	0.590
50		50		50	0.632
55		55		55	0.678
60		60		60	-
EXPONENT (N)	0.594	EXPONENT N	0.579	EXPONENT N	0.686
CONSTANT (C)	0.097	CONSTANT C	0.095	CONSTANT C	0.043
CORRELATION	0.9944	CORRELATION	0.9957	CORRELATION	0.9974
AIR FLOW @ 10PA	0.383 M^3/S	AIR FLOW @ 10PA	0.363 M^3/S	AIR FLOW @ 10PA	0.209 M^3/S
AIR FLOW @ 50PA	0.996 M^3/S	AIR FLOW @ 50PA	0.923 M^3/S	AIR FLOW @ 50 PA	0.631 M^3/S
ELA	0.153 SQM @ 10PA	ELA	0.145 SQM @ 10PA	ELA	0.083 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.86	AIR CHNGS/HRS @ 50PA	3.57	AIR CHNGS/HRS @ 50PA	2.44

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Retrospectors

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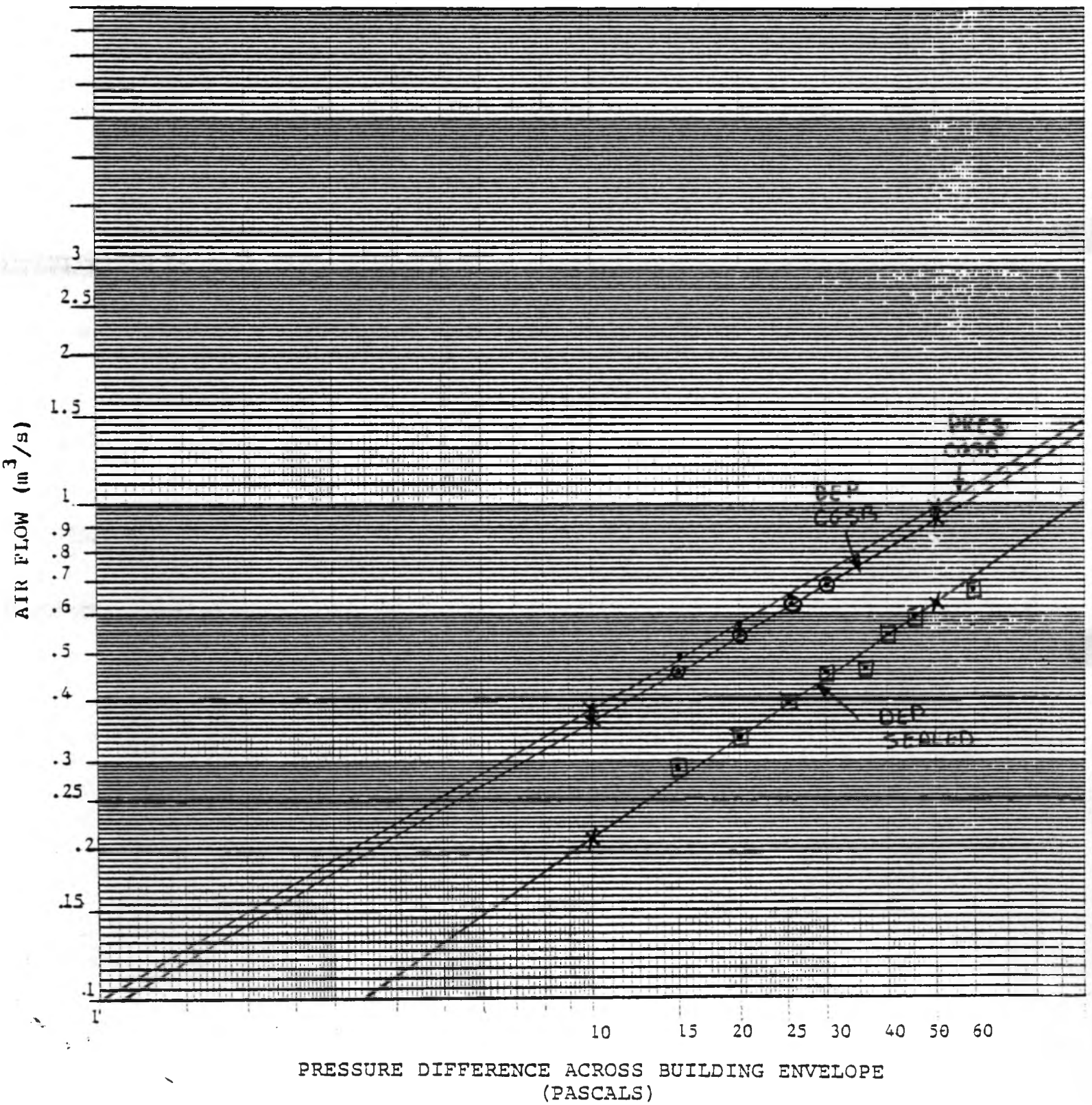
HOUSE # 35

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 24-83
TIME	15:00-15:30
TEST HOUSE	35
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	410 m^2
VOLUME	930 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	1.°C	19.0
REL. HUM	86%	37%
WIND(SPEED&DIR)	SW@5KPH	
AIR PRESSURE	100.4	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.381	10	0.204
15		15	0.466	15	0.288
20		20	0.575	20	0.367
25		22.5	0.601	25	0.419
30		25	0.650	30	0.487
35		27.5	0.681	35	0.528
40		30	0.703	40	0.592
45		32.5	0.772	45	0.618
50		50		50	0.681
55		55		55	0.738
60		60		60	
EXPONENT (N)		EXPONENT N	0.589	EXPONENT N	0.731
CONSTANT (C)		CONSTANT C	0.096	CONSTANT C	0.039
CORRELATION		CORRELATION	0.9976	CORRELATION	0.9981
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.376 M^3/S	AIR FLOW @ 10PA	0.212 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.972 M^3/S	AIR FLOW @ 50 PA	0.690 M^3/S
ELA	SQM @ 10PA	ELA	0.150 SQM @ 10PA	ELA	0.085 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	3.76	AIR CHNGS/HRS @ 50PA	2.67

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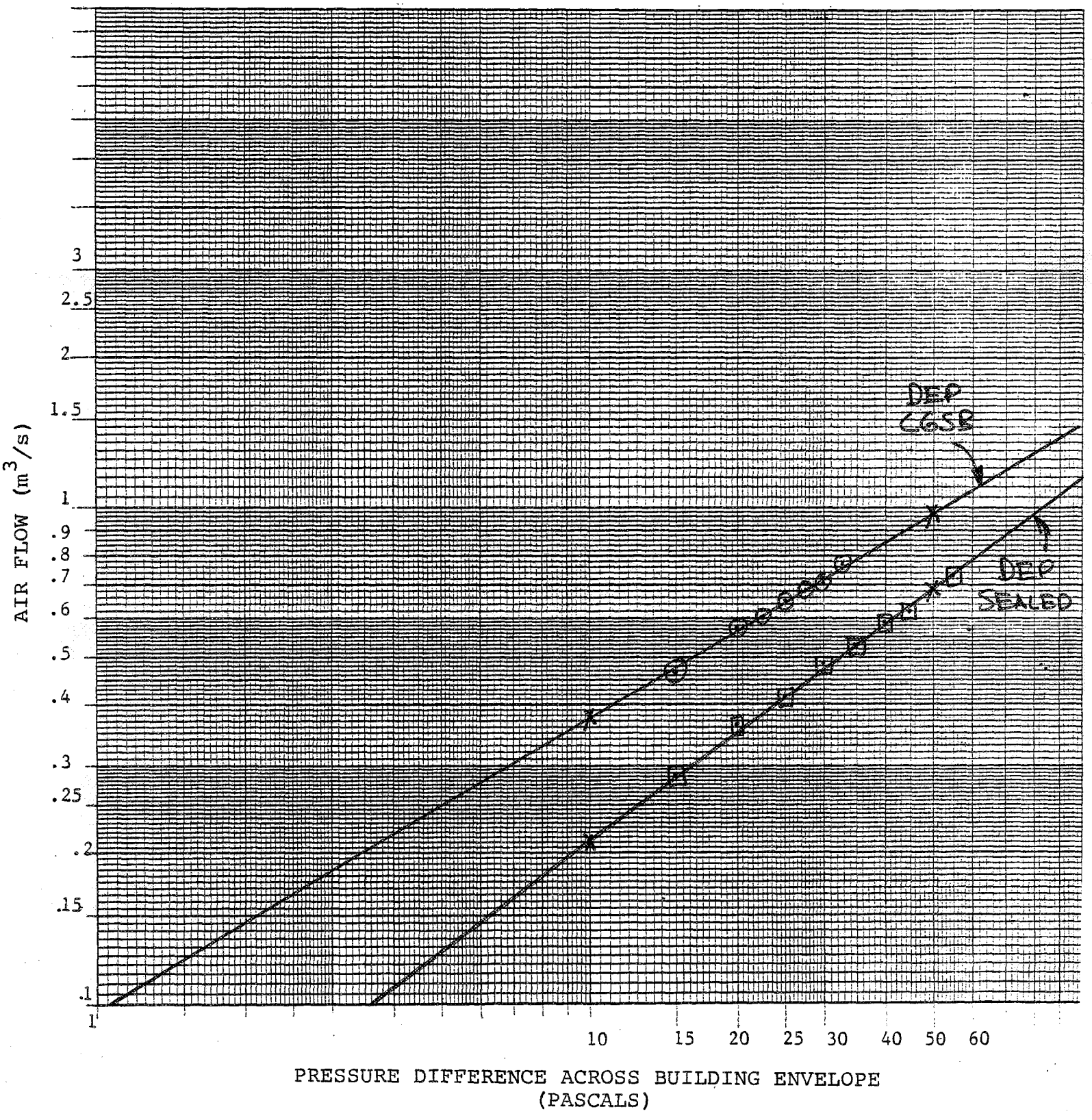
Retrospectors

HOUSE # 35

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR 23/82
TIME	17:00
TEST HOUSE	37
TECHNICIAN	ROSENBERG
ENVELOPE AREA	330 m^2
VOLUME	635 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	1°C	22°C
REL. HUM	51%	
WIND(SPEED&DIR)	S@9KPH	
AIR PRESSURE	101.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	DARK	
SKY/CLOUD COND	SCATTERED CLOUD	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20	0.474	0.502	0.278
25	0.544		0.324
30	0.623	0.642	0.404
35	0.666		0.445
40	0.735	0.739	0.489
45	0.750		0.514
50	0.821	0.831	0.570
55	0.906		0.603
60	0.872	0.856	0.613

	PRES. CGSB	DEP. CGSB	DEP. SEALED
EXPONENT (N)	0.580	0.498	0.739
CONSTANT (C)	0.084	0.115	0.031
CORRELATION	0.9920	0.9917	0.9929
AIR FLOW @ 10PA	0.32 M^3/S	0.36 M^3/S	0.17 M^3/S
AIR FLOW @ 50PA	0.81 M^3/S	0.81 M^3/S	0.56 M^3/S
ELA	0.12 SQM @ 10PA	0.14 SQM @ 10PA	0.06 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.64	4.60	3.18

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Retrospectors

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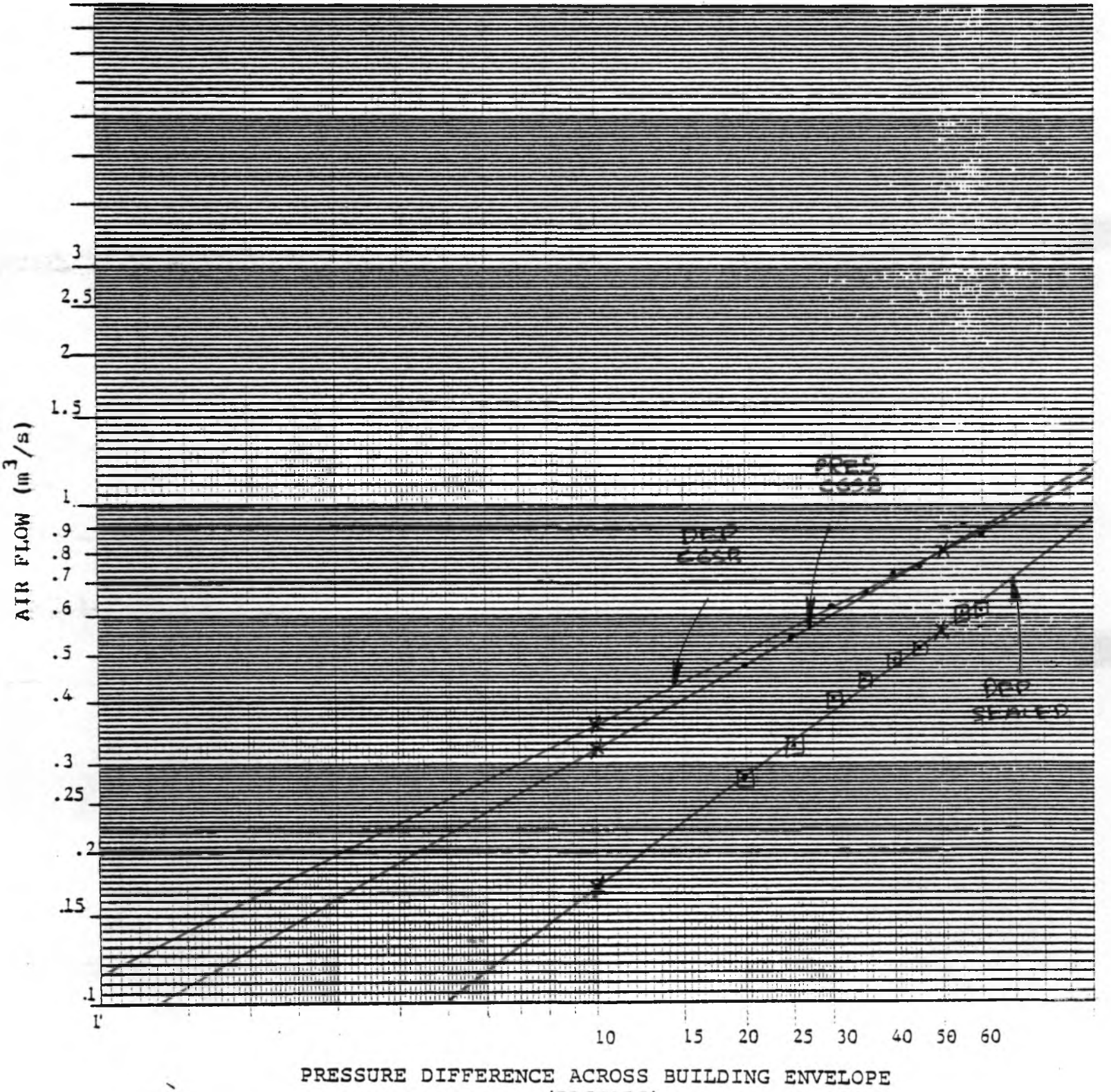
HOUSE # 37

PHASE 1

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAY 28/82
TIME	9:50-11:00
TEST HOUSE	37
TECHNICIAN	EUGLER/SETON
ENVELOPE AREA	330 m^2
VOLUME	635 m^3
FIREPLACE	No
HEATING	Gas

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	20 °C	24.8 °C
REL. HUM	77%	64%
WIND(SPEED&DIR)	E@15 KPH	
AIR PRESSURE	101.6 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	LIGHT	
SKY/CLOUD COND	HAZY	

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15	.321	15	.285	15	
20	.380	20	—	20	.160
25	.419	25	.390	25	—
30	.487	30	.433	30	.214
35	.537	35	.467	35	—
40	.591	40	.532	40	.276
45	.600	45	.541	45	.294
50	.664	50	.603	50	.319
55		55	.635	55	.334
60		60	.666	60	.363

EXPONENT (N)	.602	EXPONENT N	.613	EXPONENT N	.742
CONSTANT (C)	.062	CONSTANT C	.053	CONSTANT C	.017
CORRELATION	.9964	CORRELEATION	.9979	CORRELATION	.9986
AIR FLOW @ 10PA	.24 M^3/S	AIR FLOW @ 10PA	.22 M^3/S	AIR FLOW @ 10PA	.09 M^3/S
AIR FLOW @ 50PA	.65 M^3/S	AIR FLOW @ 50PA	.59 M^3/S	AIR FLOW @ 50 PA	.31 M^3/S
ELA	0.100 SQM @ 10PA	ELA	0.088 SQM @ 10PA	ELA	0.038 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.69	AIR CHNGS/HRS @ 50PA	3.37	AIR CHNGS/HRS @ 50PA	1.79

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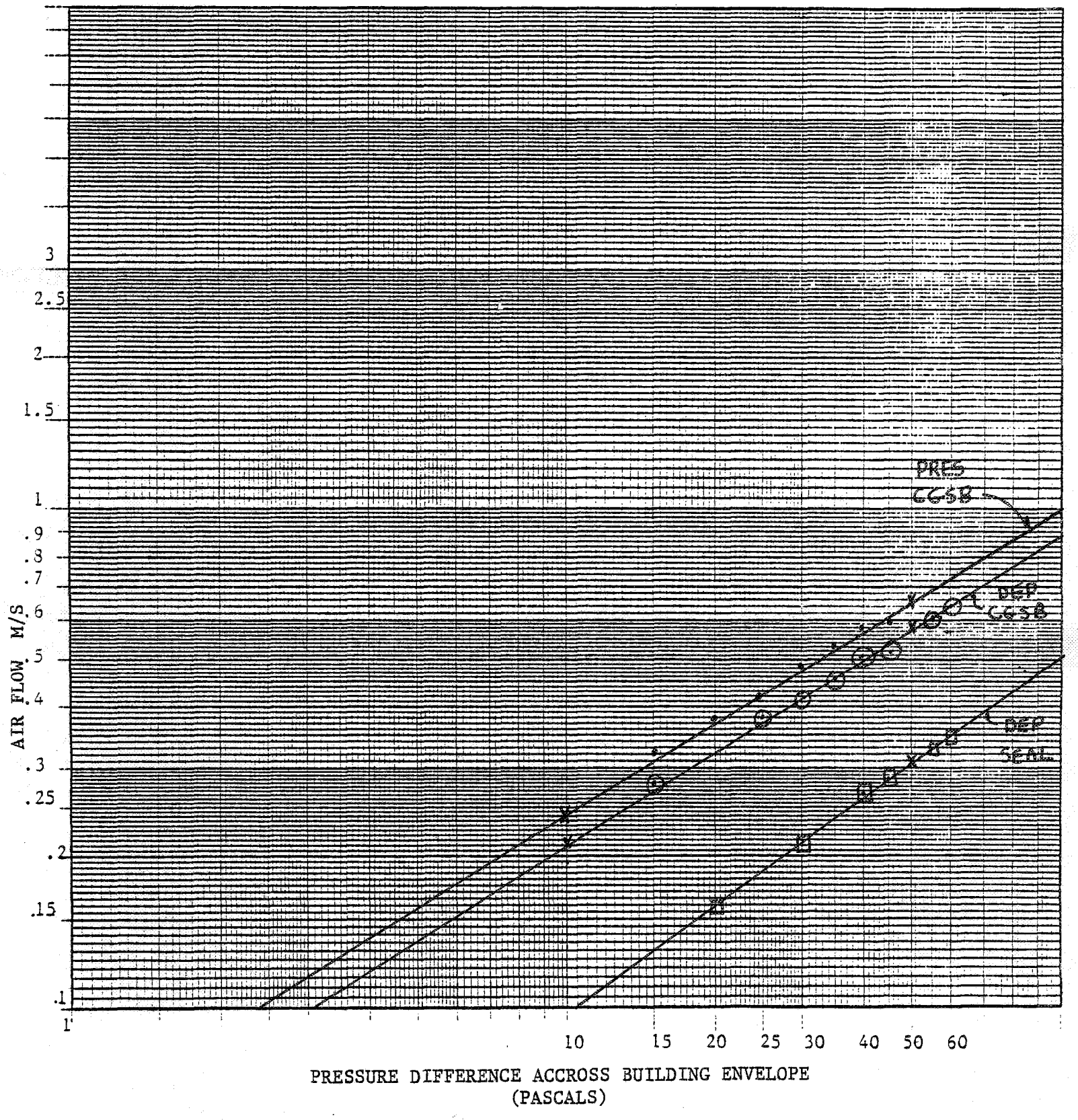
Retrospectors

HOUSE # 37

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	SEPT 15/82
TIME	12:00
TEST HOUSE	37
TECHNICIAN	FUGLER/PASQUINI
ENVELOPE AREA	330 m^2
VOLUME	635 m^3
FIREPLACE	NONE
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	11.8°C	22°C
REL. HUM	82%	65%
WIND(SPEED&DIR)	NE @ 19KPH	
AIR PRESSURE	102.0 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.224	10	0.227	10	-
15	0.316	15	0.287	15	-
20	0.374	20	0.351	20	0.176
25	0.441	25	0.405	25	0.203
30	0.458	30	0.441	30	0.227
35	0.509	35	0.462	35	0.259
40	0.538	40	0.544	40	0.287
45	0.599	45	0.572	45	0.304
50	0.645	50	0.606	50	0.328
55	0.683	55	0.631	55	0.351
60	-	60	0.677	60	0.379

EXPONENT (N)	0.620	EXPONENT N	0.607	EXPONENT N	0.696
CONSTANT (C)	0.056	CONSTANT C	0.056	CONSTANT C	0.021
CORRELATION	0.9951	CORRELATION	0.9985	CORRELATION	0.9991
AIR FLOW @ 10PA	0.236 M^3/S	AIR FLOW @ 10PA	0.227 M^3/S	AIR FLOW @ 10PA	0.107 M^3/S
AIR FLOW @ 50PA	0.642 M^3/S	AIR FLOW @ 50PA	0.605 M^3/S	AIR FLOW @ 50 PA	0.330 M^3/S
ELA	0.094 SQM @ 10PA	ELA	0.091 SQM @ 10PA	ELA	0.043 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	3.64	AIR CHNGS/HRS @ 50PA	3.43	AIR CHNGS/HRS @ 50PA	1.87

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Retrospectors

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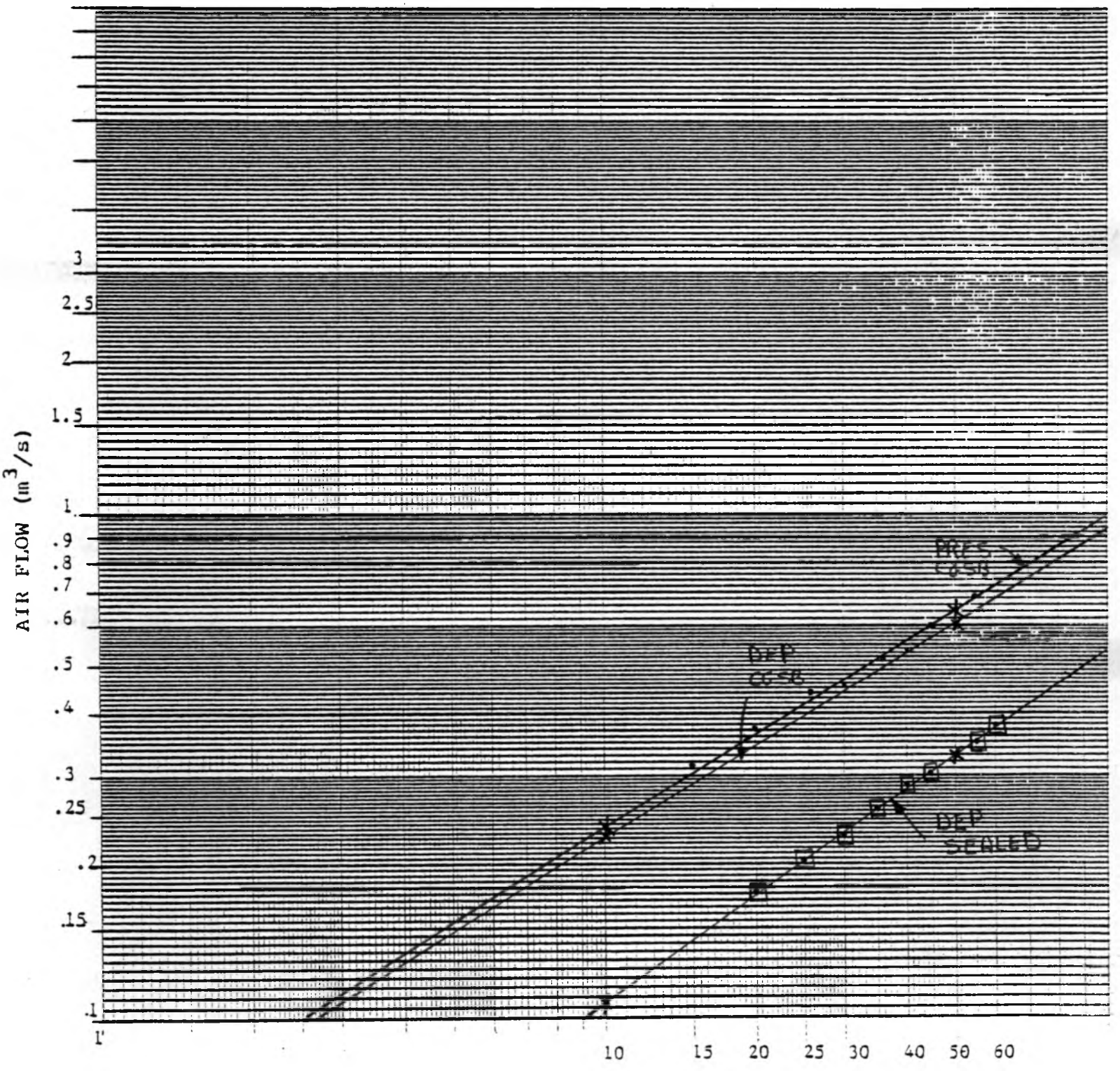
HOUSE # 37

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS ON DEP CGSB OMITTED DUE TO LACK OF SPACE

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN.24/83
TIME	11:40-12:10
TEST HOUSE	37
TECHNICIAN	SINHA/FUGLER
ENVELOPE AREA	330m²
VOLUME	635m³
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-0.5°C	18°C
REL. HUM	93%	46%
WIND(SPEED&DIR)	W@11KPH	
AIR PRESSURE	100.4 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15		0.250	
20		0.323	0.171
25		0.367	0.205
30		0.395	0.217
35		0.478	0.240
40		0.509	0.270
45		0.529	0.289
50		0.557	0.314
55		0.589	0.346
60		0.631	0.361
EXPONENT (N)		EXPONENT N 0.645	EXPONENT N 0.673
CONSTANT (C)		CONSTANT C 0.045	CONSTANT C 0.022
CORRELATION		CORRELATION 0.9940	CORRELATION 0.9953
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA 0.201 M^3/S	AIR FLOW @ 10PA 0.106 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA 0.568 M^3/S	AIR FLOW @ 50 PA 0.315 M^3/S
ELA	SQM @ 10PA	ELA 0.080 SQM @ 10PA	ELA 0.042 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA 3.22	AIR CHNGS/HRS @ 50PA 1.78

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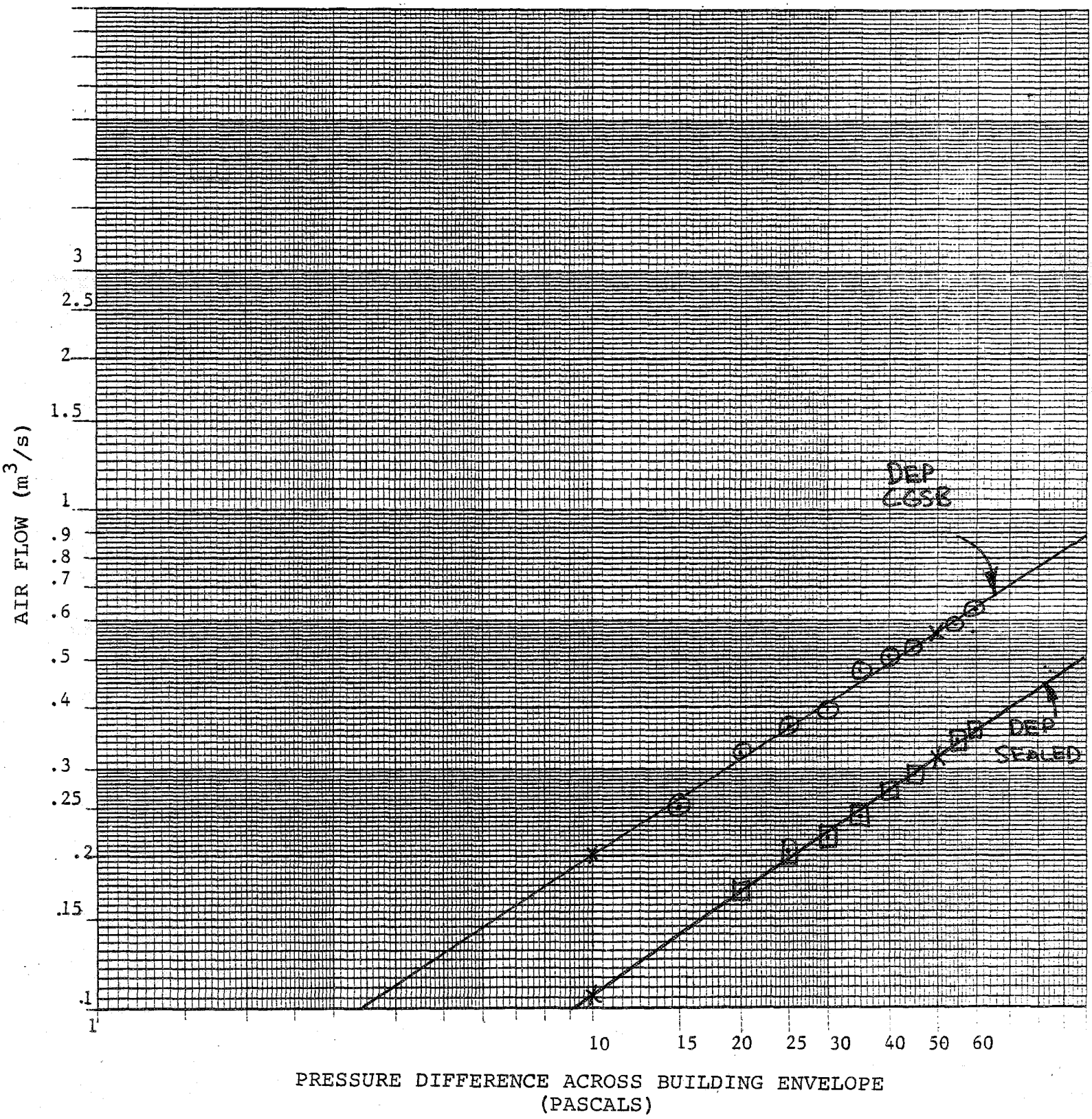
Retrospectors

HOUSE #37

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAR. 23/83
TIME	22:00
TEST HOUSE	39
TECHNICIAN	ROSENBERG
ENVELOPE AREA	375 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-2°C	14°C
REL. HUM	74%	
WIND(SPEED&DIR)	S @ 11 KPH	
AIR PRESSURE	101.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	DARK	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15			
20		0.533	0.375
25		0.629	0.444
30		0.689	0.500
35		0.757	0.542
40		0.805	0.611
45		0.842	0.653
50		0.970	0.743
55		1.010	0.778
60		1.025	0.816
EXPONENT (N)		0.599	0.713
CONSTANT (C)		0.089	0.044
CORRELATION		0.9943	0.9976
AIR FLOW @ 10PA	M^3/S	0.35 M^3/S	0.23 M^3/S
AIR FLOW @ 50PA	M^3/S	0.93 M^3/S	0.72 M^3/S
ELA	SQM @ 10PA	0.14 SQM @ 10PA	0.09 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		4.60	3.54

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Retrospectors

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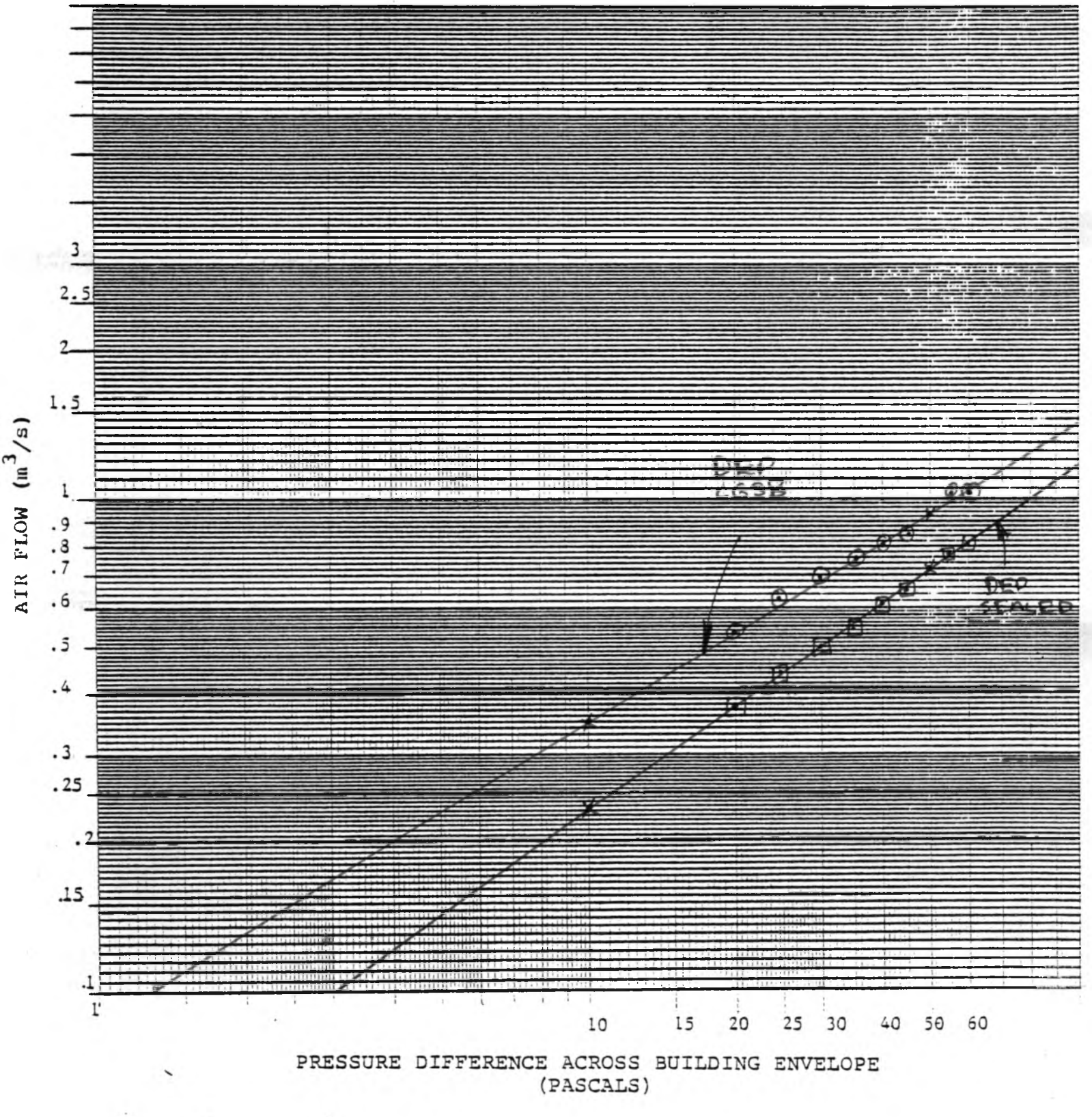
HOUSE # 39

PHASE 1

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	MAY 25/82
TIME	10:00 - 11:00
TEST HOUSE	39
TECHNICIAN	SETON/EUGLER
ENVELOPE AREA	375 m^2
VOLUME	730 m^3
FIREPLACE	NO
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	13 °C	17 °C
REL. HUM	82%	N.A.
WIND(SPEED&DIR)	SW@6KMH	
AIR PRESSURE	101.7 KPa	
PRECIPITATION	NONE	
SOLAR RAD.	S.E.	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	.376	10	.368	10	
15	.448	15	.427	15	
20	.549	20	.489	20	.276
25	.609	25	.540	25	—
30	.641	30	.620	30	.361
35		35	.652	35	.408
40		40		40	.421
45		45		45	.484
50		50		50	.526
55		55		55	.539
60		60		60	.539

EXPONENT (N)	.510	EXPONENT N	.468	EXPONENT N	.658
CONSTANT (C)	.115	CONSTANT C	.122	CONSTANT C	.038
CORRELATION	.9939	CORRELEATION	.9943	CORRELATION	.9917
AIR FLOW @ 10PA	0.37 M^3/S	AIR FLOW @ 10PA	.36 M^3/S	AIR FLOW @ 10PA	.17 M^3/S
AIR FLOW @ 50PA	.85 M^3/S	AIR FLOW @ 50PA	.76 M^3/S	AIR FLOW @ 50 PA	.50 M^3/S
ELA	0.150 SQM @ 10PA	ELA	0.144 SQM @ 10PA	ELA	0.069 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.22	AIR CHNGS/HRS @ 50PA	3.76	AIR CHNGS/HRS @ 50PA	2.48

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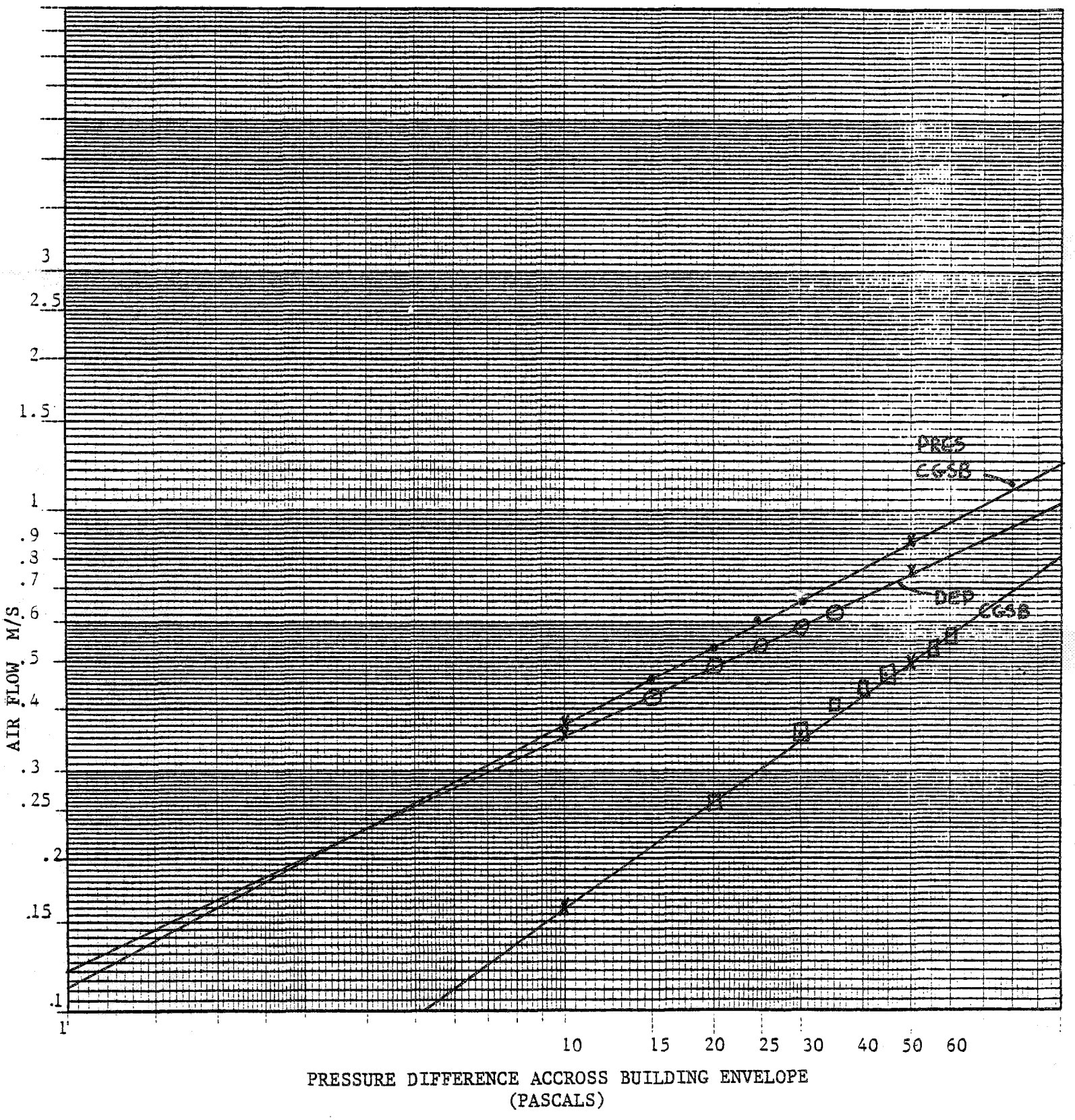
Retrospectors

HOUSE # 39

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: SEPT 23/82
TIME: 15:30 - 16:10
TEST HOUSE: 39
TECHNICIAN: FUGLER/PASQUINI
ENVELOPE AREA: 375m²
VOLUME: 730m³
FIREPLACE: YES
HEATING: GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	15°C	18°C
REL. HUM	77%	60%
WIND (SPEED&DIR)	NW @ 9 KPH	
AIR PRESSURE	100.9 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	CLOUDY	

UNFINISHED HOUSE

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	0.361	10	0.345	10	0.145
15	0.459	15	0.443	15	0.239
17.5	0.511	20	0.508	20	0.288
20	0.549	25	0.592	25	0.322
22.5	0.575	30	0.650	30	0.367
25	0.609	35	0.717	35	0.394
27.5	0.664	40		40	0.443
30	0.721	45		45	0.466
50		50		50	0.518
55		55		55	0.556
60		60		60	0.601

EXPONENT (N)	0.602	EXPONENT N	0.577	EXPONENT N	0.726
CONSTANT (C)	0.089	CONSTANT C	0.091	CONSTANT C	0.030
CORRELATION	0.9964	CORRELATION	0.9992	CORRELATION	0.9915
AIR FLOW @ 10PA	0.360 M^3/S	AIR FLOW @ 10PA	0.346 M^3/S	AIR FLOW @ 10PA	0.162 M^3/S
AIR FLOW @ 50PA	0.951 M^3/S	AIR FLOW @ 50PA	0.877 M^3/S	AIR FLOW @ 50 PA	0.524 M^3/S
ELA	0.144 SQM @ 10PA	ELA	0.139 SQM @ 10PA	ELA	0.065 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	4.69	AIR CHNGS/HRS @ 50PA	4.32	AIR CHNGS/HRS @ 50PA	2.58

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Retrospectors

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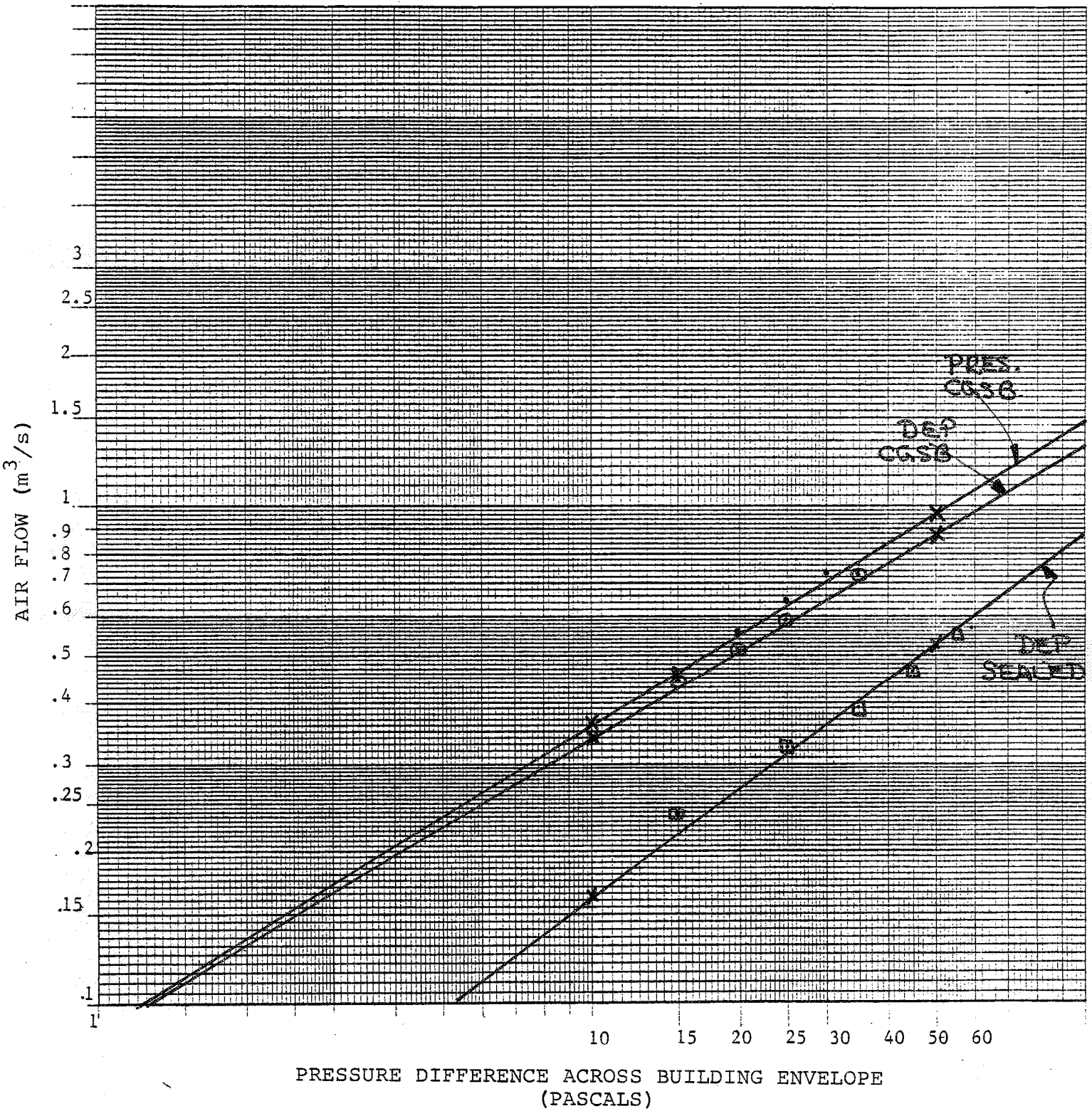
HOUSE # 39

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN. 6/83
TIME	10:40-11:15
TEST HOUSE	39
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	375 m^2
VOLUME	730 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	1°C	19°C
REL. HUM	86%	44%
WIND(SPEED&DIR)	W @ 3.0 KPH	
AIR PRESSURE	101.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	0.345	10	-
15		12.5	-	15	0.216
20		15.0	0.401	20	0.288
25		17.5	-	25	0.330
30		20.0	0.513	30	0.345
35		22.5	-	35	0.394
40		25.0	0.609	40	0.426
45		27.5	0.622	45	0.477
50		30.0	0.662	50	0.503
55		32.5	0.688	55	0.542
60		35.0	0.745	60	0.566
EXPONENT (N)		EXPONENT N	0.628	EXPONENT N	0.666
CONSTANT (C)		CONSTANT C	0.078	CONSTANT C	0.037
CORRELATION		CORRELATION	0.9925	CORRELATION	0.9951
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.332 M^3/S	AIR FLOW @ 10PA	0.172 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.914 M^3/S	AIR FLOW @ 50 PA	0.504 M^3/S
ELA	SQM @ 10PA	ELA	0.133 SQM @ 10PA	ELA	0.069 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	4.51	AIR CHNGS/HRS @ 50PA	2.49

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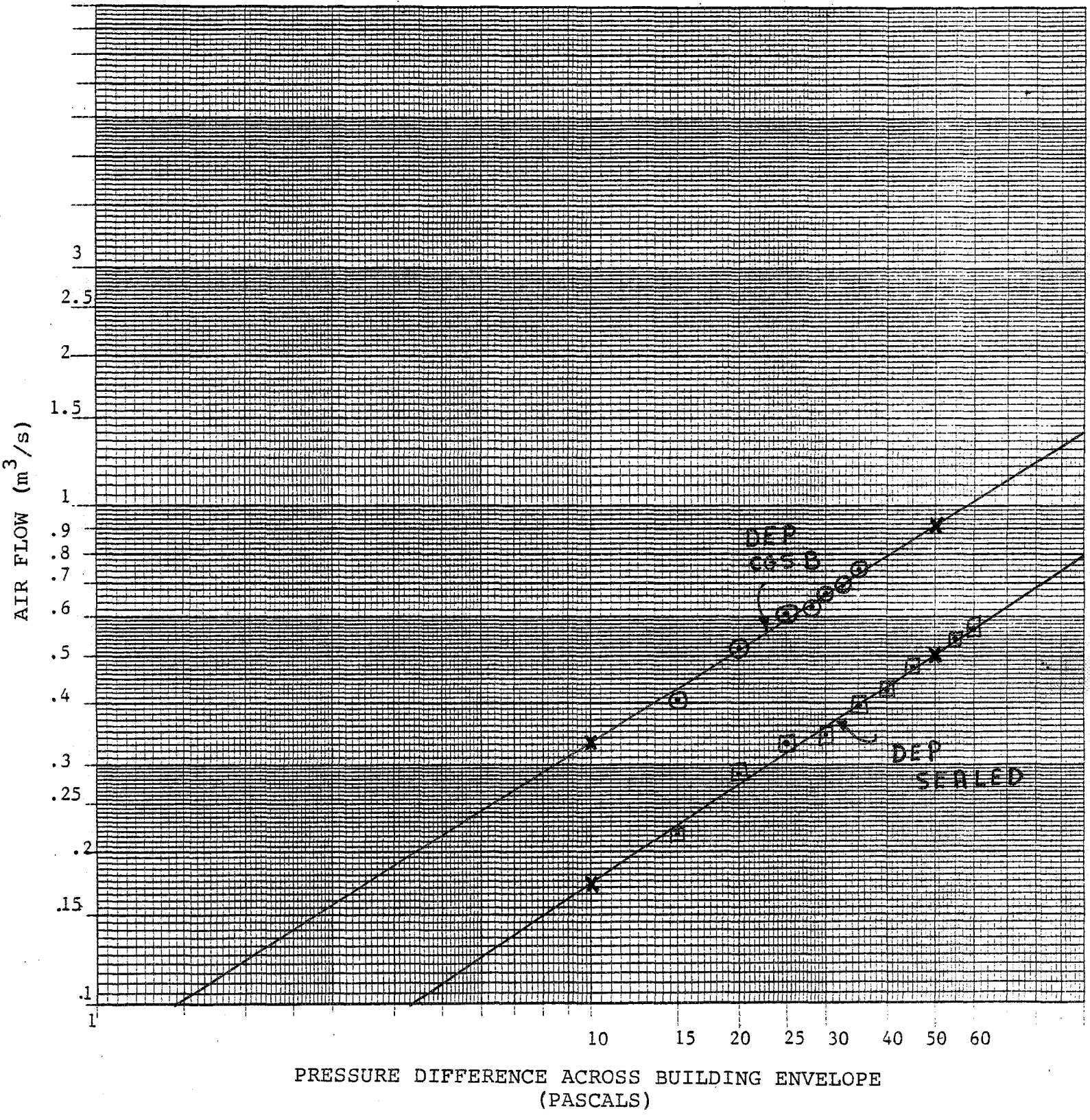
Retrospectors

HOUSE # 39

PHASE 4

AIR LEAKAGE PROFILE



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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	July 19/82
TIME	16:50 - 18:00
TEST HOUSE	50
TECHNICIAN	FUGLER/SETON
ENVELOPE AREA	500 m^2
VOLUME	923 m^2
FIREPLACE	YES
HEATING	Elect

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	29°C	29°C
REL. HUM	45%	65%
WIND(SPEED&DIR)	NW @ 22KPH	
AIR PRESSURE	100.7 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL, WEST	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10	-	10	-	10	-
15	0.242	15	0.220	15	-
20	0.317	20	0.301	20	0.243
25	0.341	25	0.358	25	0.318
30	0.392	30	0.400	30	0.350
35	0.431	35	0.432	35	0.381
40	0.499	40	0.484	40	0.407
45	0.525	45	0.526	45	0.495
50	0.563	50	0.601	50	0.515
55	0.616	55	0.660	55	0.545
60	0.625	60	-	60	0.583
EXPONENT (N)	0.684	EXPONENT N	0.788	EXPONENT N	0.766
CONSTANT (C)	0.038	CONSTANT C	0.027	CONSTANT C	0.025
CORRELATION	0.9961	CORRELATION	0.9946	CORRELATION	0.9914
AIR FLOW @ 10PA	0.187 M^3/S	AIR FLOW @ 10PA	0.166 M^3/S	AIR FLOW @ 10PA	0.148 M^3/S
AIR FLOW @ 50PA	0.564 M^3/S	AIR FLOW @ 50PA	0.594 M^3/S	AIR FLOW @ 50 PA	0.511 M^3/S
ELA	0.074 SQM @ 10PA	ELA	0.066 SQM @ 10PA	ELA	0.060 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.20	AIR CHNGS/HRS @ 50PA	2.31	AIR CHNGS/HRS @ 50PA	1.99

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Retrospectors

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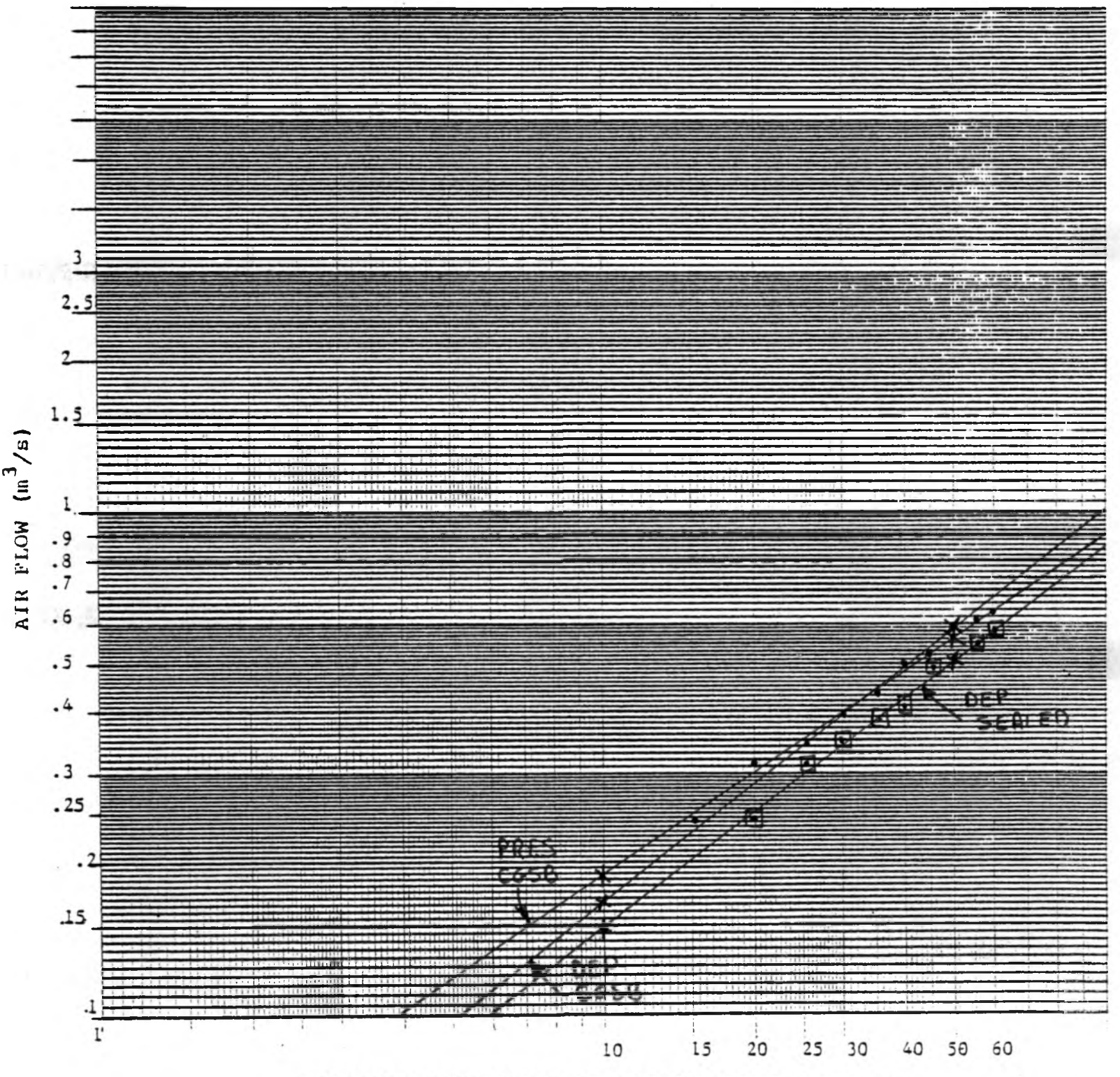
HOUSE #50

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS) NOTE: PTS ON DEP CGSB LINE OMMITED DUE TO LACK OF SPACE

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Retrospectors

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AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE: OCT. 28/82
TIME: 10:40 - 11:30
TEST HOUSE: 50
TECHNICIAN: EUGLER/SINHA
ENVELOPE AREA: 500 m^2
VOLUME: 923 m^3
FIREPLACE: YES
HEATING: ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	6.3°C	22.0°C
REL. HUM	100%	66%
WIND (SPEED&DIR)	SW @ 9 KPH	
AIR PRESSURE	102.5 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SOUTHEAST	
SKY/CLOUD COND	CLEAR	

1) HEAT EXCHANGER OFF/UNSEALED FOR CGSB TESTS

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	FLOW (M^3/S) DEP CGSB	FLOW (M^3/S) DEP SEALED
10	0.199	0.203	0.161
15	0.281	0.278	0.227
20	0.329	0.351	0.249
25	0.384	0.429	0.351
30	0.443	0.452	0.379
35	0.542	0.535	0.417
40	0.544	0.589	0.485
45	0.648	0.631	0.505
50	0.699	0.654	0.558
55	0.740		0.580
60			0.614
EXPONENT (N)	0.780	0.739	0.758
CONSTANT (C)	0.032	0.637	0.028
CORRELATION	0.9973	0.9973	0.9947
AIR FLOW @ 10PA	0.196 M^3/S	0.207 M^3/S	0.162 M^3/S
AIR FLOW @ 50PA	0.692 M^3/S	0.682 M^3/S	0.551 M^3/S
ELA	0.078 SQM @ 10PA	0.083 SQM @ 10PA	0.065 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	2.70	2.66	2.15

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Retrospectors

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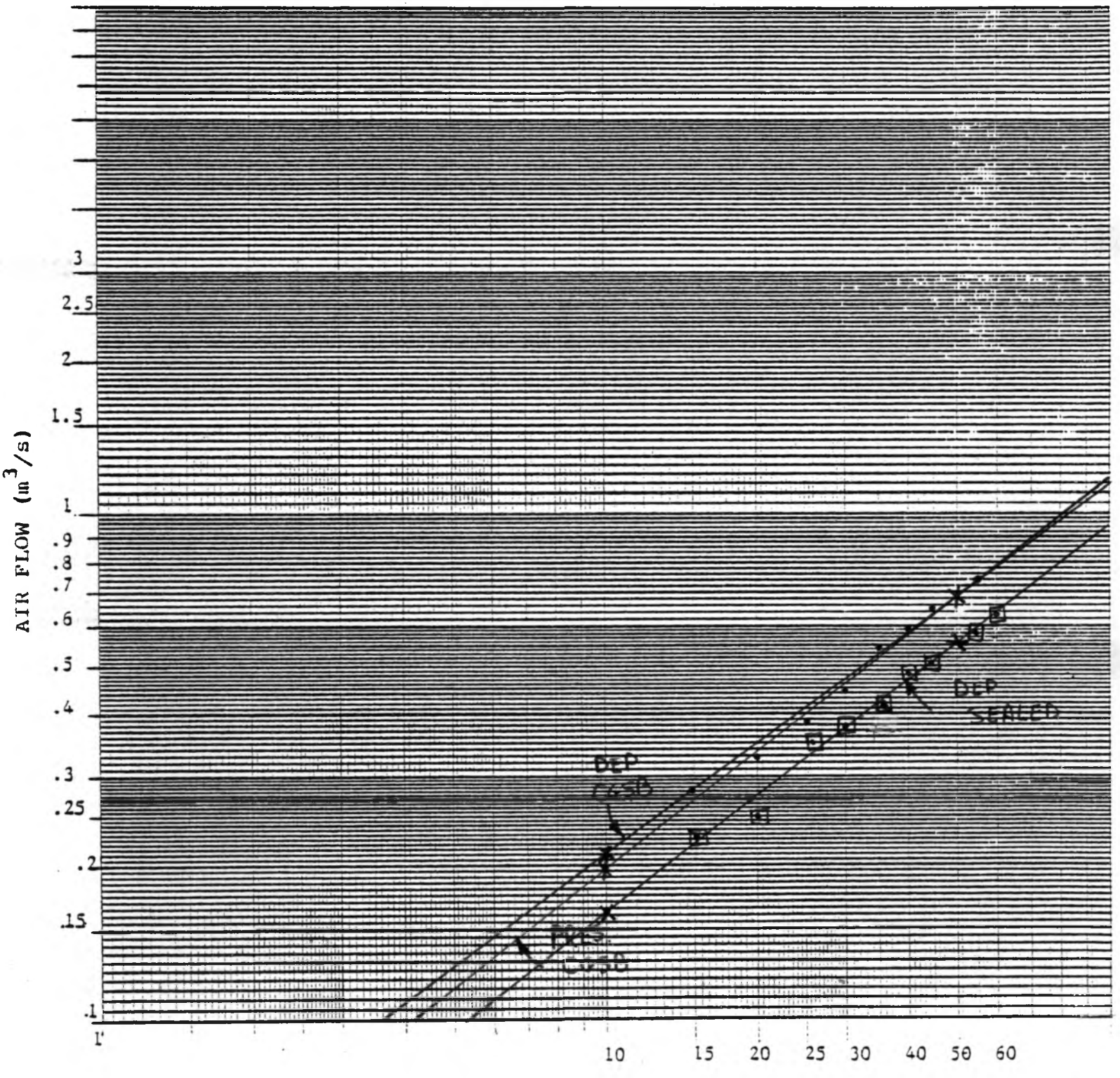
HOUSE #50

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS) NOTE: PTS ON DEP CGSB OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	JAN 28-83
TIME	11:30 - 12:00
TEST HOUSE	50
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	500 m^2
VOLUME	923 m^3
FIREPLACE	YES
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-9°C	19°C
REL. HUM	67%	52%
WIND (SPEED&DIR)	NNE @ 8 KPH	
AIR PRESSURE	102.7 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL SOUTH	
SKY/CLOUD COND	CLEAR	

NOTE : HEAT EXCHANGER OFF AND SEALED FOR BOTH TESTS

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10			
15		0.250	0.239
20		0.322	0.322
25		0.413	0.367
30		0.477	0.419
35		0.513	0.482
40		0.592	0.528
45		0.626	0.583
50		0.673	0.618
55		0.731	0.673
60			0.714

EXPONENT (N)		0.812	0.769
CONSTANT (C)		0.028	0.036
CORRELATION		0.9959	0.9984
AIR FLOW @ 10PA	___ M^3/S	0.186 M^3/S	0.181 M^3/S
AIR FLOW @ 50PA	___ M^3/S	0.691 M^3/S	0.626 M^3/S
ELA	___ SQM @ 10PA	0.074 SQM @ 10PA	0.072 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	___	2.69	2.44

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Retrospectors

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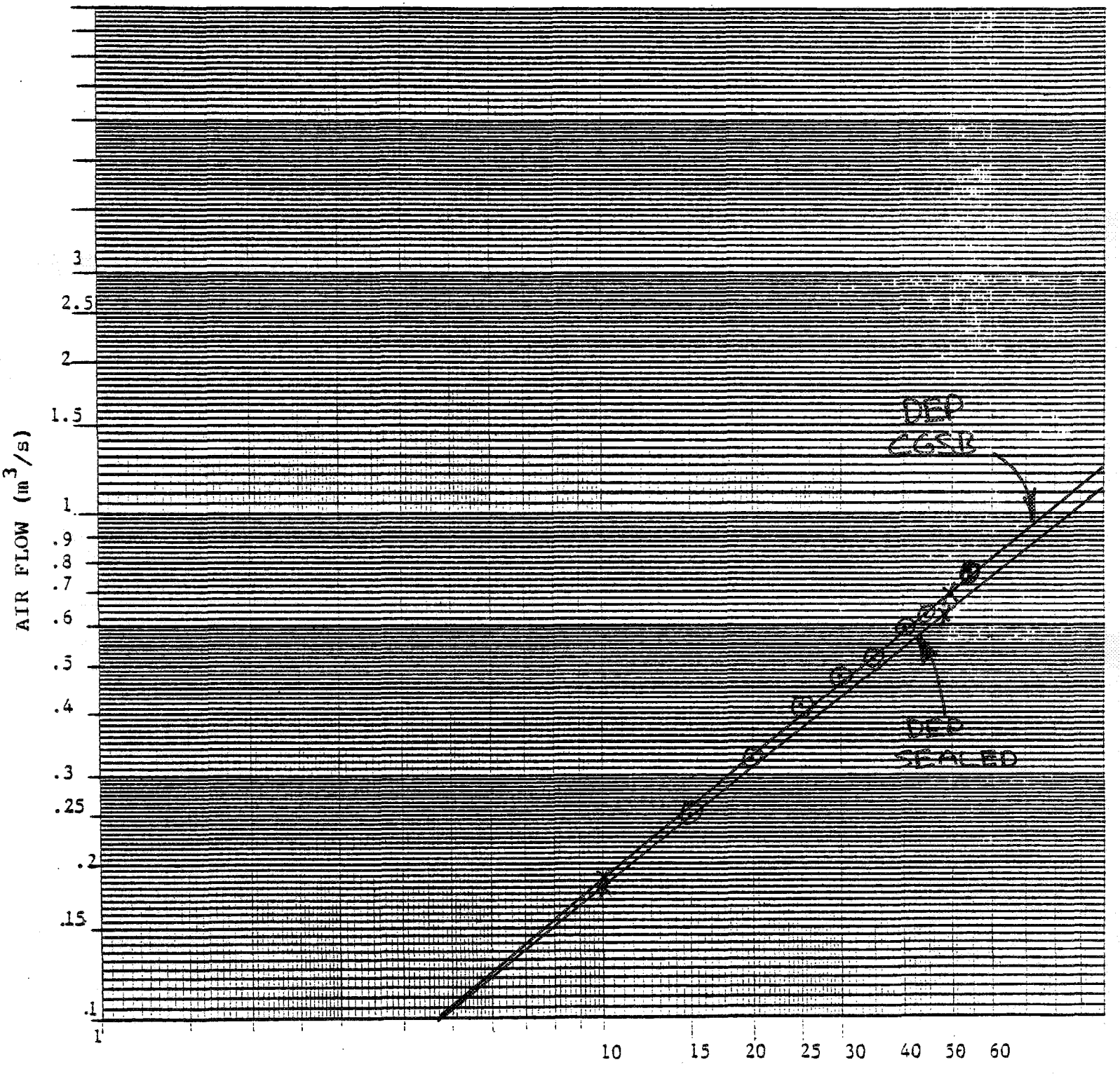
HOUSE # 50

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP SEALED" LINE OMITTED DUE TO LACK OF SPACE

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	Aug 30, 1982
TIME	13:30-14:30
TEST HOUSE	51
TECHNICIAN	DON EUGLER
ENVELOPE AREA	520 m^2
VOLUME	921 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	19.0°C	18.9°C
REL. HUM	49 %	68%
WIND(SPEED&DIR)	SW @ 20 KPH	
AIR PRESSURE	101.9 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	NONE	
SKY/CLOUD COND	OVERCAST	

NOTE: CGSB TEST — FURN., H.W. FLUE SEALED
COLD ROOM INTAKE VENT SEALED THROUGHOUT TEST
UNFINISHED BATHROOM VENTS SEALED THROUGHOUT TEST

TEST RESULTS

PA	FLOW (M^3/S) PRES CGSB	PA	FLOW (M^3/S) DEP CGSB	PA	FLOW (M^3/S) DEP SEALED
10		10		10	
15	0.191	15		15	
20	0.239	20	0.216	20	0.191
25		25		25	
30	0.297	30	0.279	30	0.250
35	0.314	35	0.306	35	
40	0.374	40	0.330	40	0.288
45	0.394	45	0.367	45	0.297
50	0.407	50	0.381	50	0.322
55	0.437	55	0.401	55	0.345
60	0.455	60	0.425	60	0.367
EXPONENT (N)	0.623	EXPONENT N	0.614	EXPONENT N	0.571
CONSTANT (C)	0.035	CONSTANT C	0.035	CONSTANT C	0.034
CORRELATION	0.9954	CORRELEATION	0.9987	CORRELATION	0.9961
AIR FLOW @ 10PA	0.151 M^3/S	AIR FLOW @ 10PA	0.142 M^3/S	AIR FLOW @ 10PA	0.129 M^3/S
AIR FLOW @ 50PA	0.411 M^3/S	AIR FLOW @ 50PA	0.381 M^3/S	AIR FLOW @ 50 PA	0.326 M^3/S
ELA	0.060 SQM @ 10PA	ELA	0.056 SQM @ 10PA	ELA	0.052 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	1.61	AIR CHNGS/HRS @ 50PA	1.49	AIR CHNGS/HRS @ 50PA	1.27

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Retrospectors

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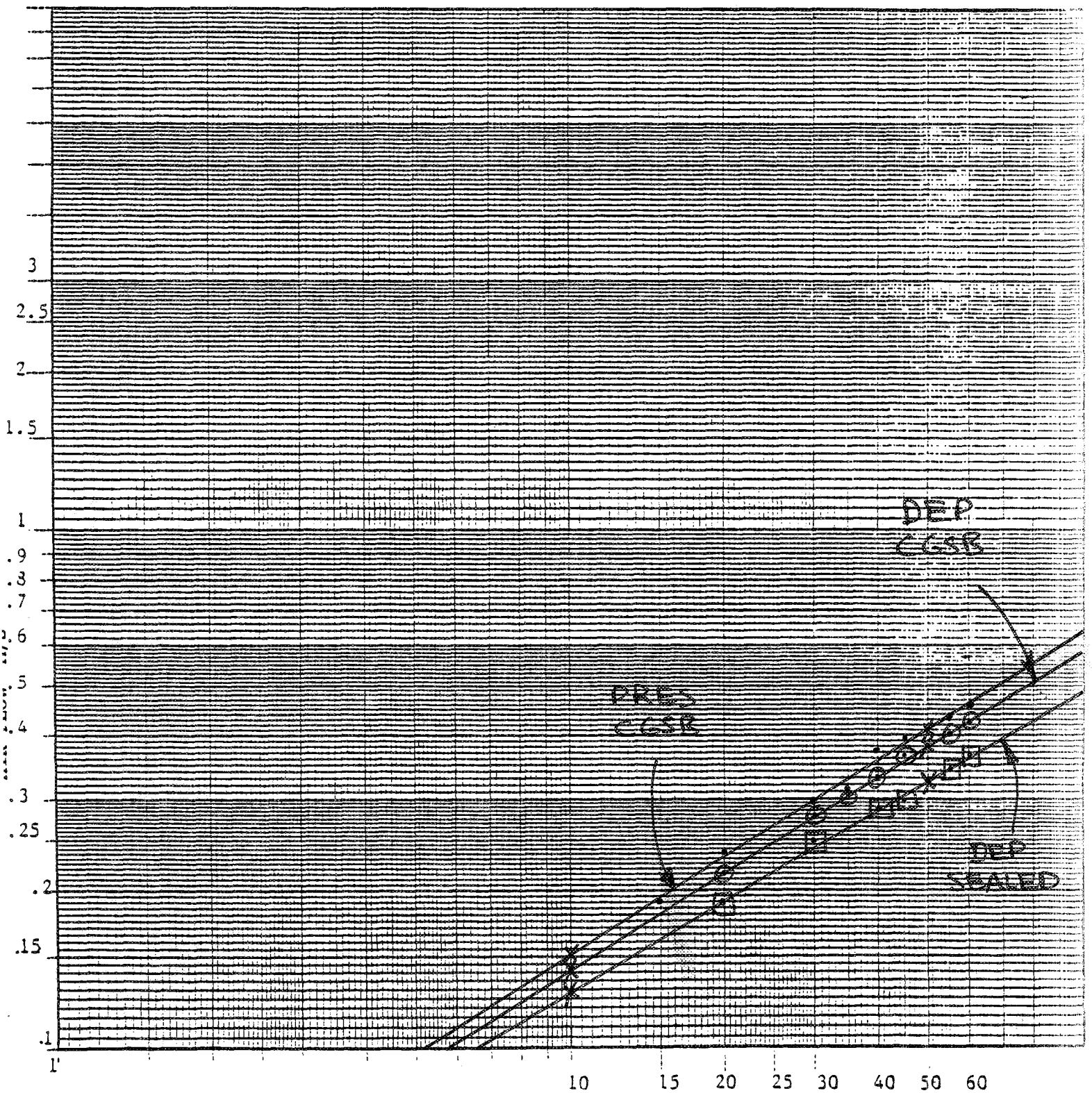
HOUSE # 51

PHASE 2

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACCROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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(613) 234-3282

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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	NOV.1/82
TIME	11:30-12:30
TEST HOUSE	51
TECHNICIAN	EUGLERISINHA
ENVELOPE AREA	520 m^2
VOLUME	922 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	17°C	21°C
REL. HUM	47%	63%
WIND(SPEED&DIR)	SW@ 5 KPH	
AIR PRESSURE	101.7 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL-SOUTH	
SKY/CLOUD COND	CLEAR	

NOTE: TWO BATHROOM VENT FANS UNSEALED IN SEALED TEST
COLD ROOM INTAKE VENT SEALED THROUGHOUT TEST

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP SEALED
10		10		10	
15	0.229	15	0.151	15	
20	0.271	20	0.203	20	0.161
25	0.298	25	0.227	25	0.190
30	0.323	30	0.249	30	0.203
35	0.368	35	0.287	35	0.227
40	0.421	40	0.304	40	0.249
45	0.433	45	0.321	45	0.269
50	0.468	50	0.359	50	0.296
55	0.489	55	0.379	55	0.313
60	0.520	60	0.393	60	0.321

EXPONENT (N)	0.601	EXPONENT N	0.662	EXPONENT N	0.639
CONSTANT (C)	0.044	CONSTANT C	0.026	CONSTANT C	0.023
CORRELATION	0.9957	CORRELEATION	0.9952	CORRELATION	0.9972
AIR FLOW @ 10PA	0.175 M^3/S	AIR FLOW @ 10PA	0.122 M^3/S	AIR FLOW @ 10PA	0.103 M^3/S
AIR FLOW @ 50PA	0.463 M^3/S	AIR FLOW @ 50PA	0.354 M^3/S	AIR FLOW @ 50 PA	0.289 M^3/S
ELA	0.070 SQM @ 10PA	ELA	0.048 SQM @ 10PA	ELA	0.041 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	1.80	AIR CHNGS/HRS @ 50PA	1.38	AIR CHNGS/HRS @ 50PA	1.13

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Retrospectors

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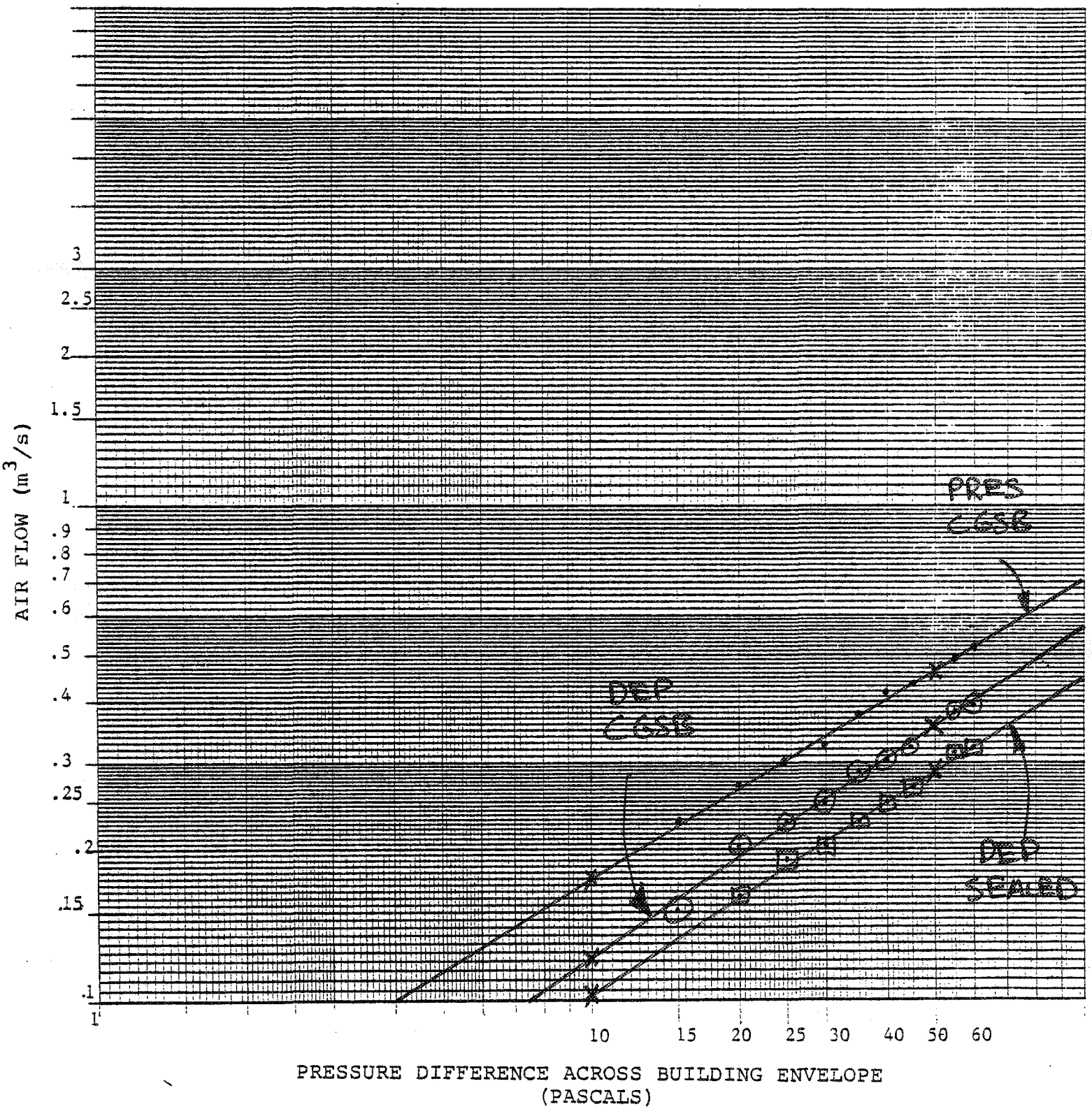
HOUSE # 51

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB.8/83
TIME	11:35-12:15
TEST HOUSE	51
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	520 m^2
VOLUME	922 m^3
FIREPLACE	YES
HEATING	GAS

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-7°C	19°C
REL. HUM	67%	36%
WIND(SPEED&DIR)	N.W @ 30KPH	
AIR PRESSURE	101.3KPA	
PRECIPITATION	NONE	
SOLAR RAD.	ALONG BACK	
SKY/CLOUD COND	CLEAR	

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10	-	10	-
15		15	-	15	-
20		20	-	20	0.162
25		25	0.228	25	0.204
30		30	0.260	30	0.228
35		35	0.288	35	0.239
40		40	0.322	40	0.270
45		45	0.353	45	0.288
50		50	0.387	50	0.314
55		55	0.401	55	0.330
60		60	0.431	60	0.345
EXPONENT (N)		EXPONENT N	0.734	EXPONENT N	0.662
CONSTANT (C)		CONSTANT C	0.021	CONSTANT C	0.023
CORRELATION		CORRELATION	0.998	CORRELATION	0.9942
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.116 M^3/S	AIR FLOW @ 10PA	0.107 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.379 M^3/S	AIR FLOW @ 50 PA	0.311 M^3/S
ELA	SQM @ 10PA	ELA	0.046 SQM @ 10PA	ELA	0.042 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	1.43	AIR CHNGS/HRS @ 50PA	1.21

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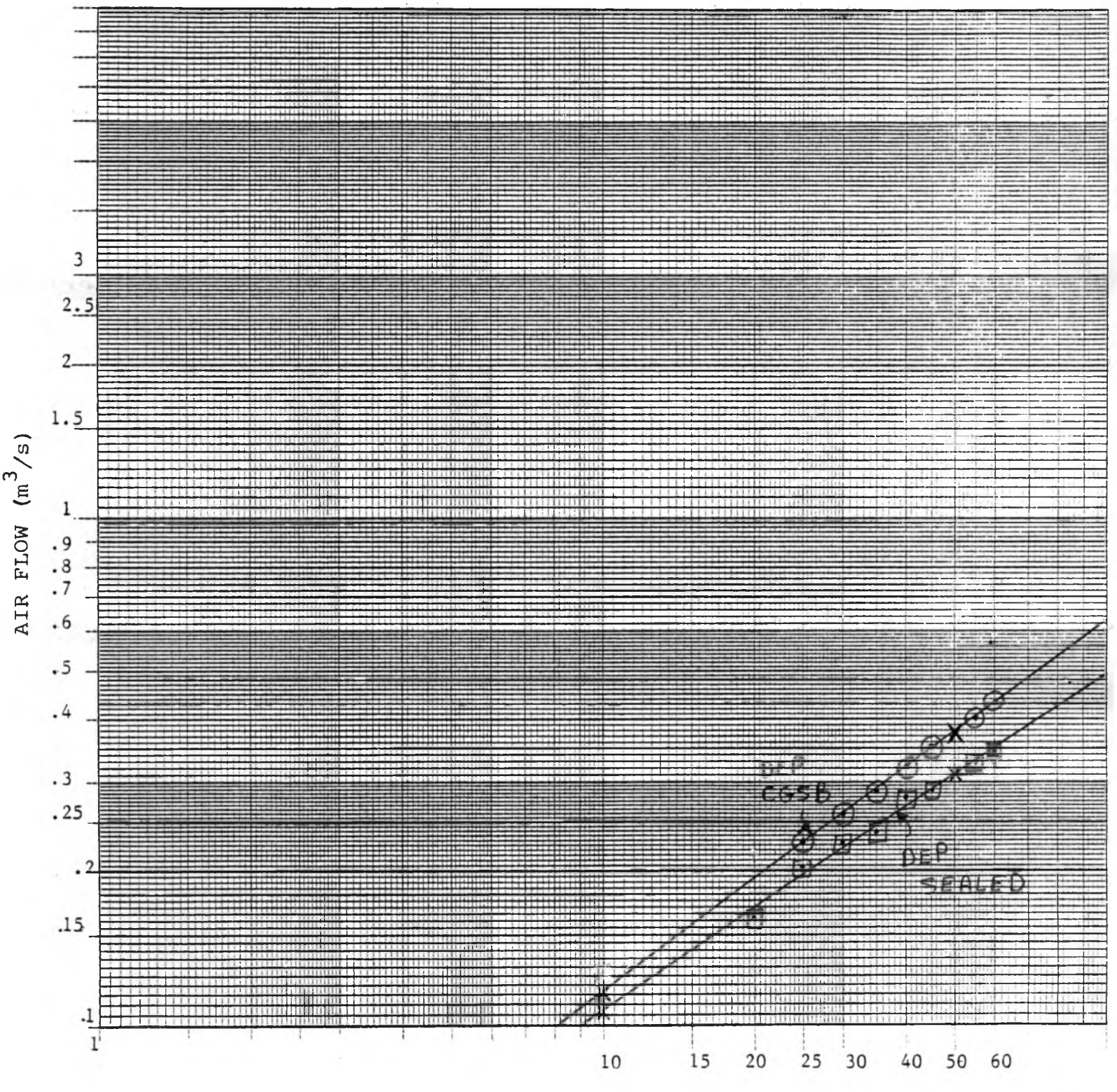
Retrospectors

HOUSE # 51

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

176 Bronson Ave.
Ottawa, Ontario
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Retrospectors

IDENTIFICATION

DATE	OCT. 26/82
TIME	11:00 - 12:00
TEST HOUSE	52
TECHNICIAN	FUGLER/SINHA
ENVELOPE AREA	292 m^2
VOLUME	864 m^3
FIREPLACE	WOODSTOVE
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	8°C	18°C
REL. HUM	71%	72%
WIND (SPEED&DIR)	N.E @ 12 KPH	
AIR PRESSURE	102.8 KPA	
PRECIPITATION	NONE	
SOLAR RAD.	FULL	
SKY/CLOUD COND	CLEAR	

NOTE: HEAT EXCHANGER VENTS SEALED THROUGHOUT TEST

TEST RESULTS

PA	FLOW (M^3/S) PRES. CGSB	FLOW (M^3/S) DEP. CGSB	FLOW (M^3/S) DEP. SEALED
10		0.145	
15		0.177	0.177
20		0.217	0.204
25		0.260	0.250
30		0.289	0.276
35	N.A.	0.323	0.306
40		0.353	0.338
45		0.381	0.353
50		0.408	0.395
55		0.432	0.420
60		0.449	0.444
			NOTE: STOVE VENT UNSEALED
EXPONENT (N)		0.653	0.673
CONSTANT (C)		0.031	0.028
CORRELATION		0.9985	0.9979
AIR FLOW @ 10PA	___ M^3/S	0.141 M^3/S	0.132 M^3/S
AIR FLOW @ 50PA	___ M^3/S	0.409 M^3/S	0.390 M^3/S
ELA	___ SQM @ 10PA	0.056 SQM @ 10PA	0.052 SQM @ 10PA
AIR CHNGS/HRS @ 50PA	___	1.68	1.62

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Retrospectors

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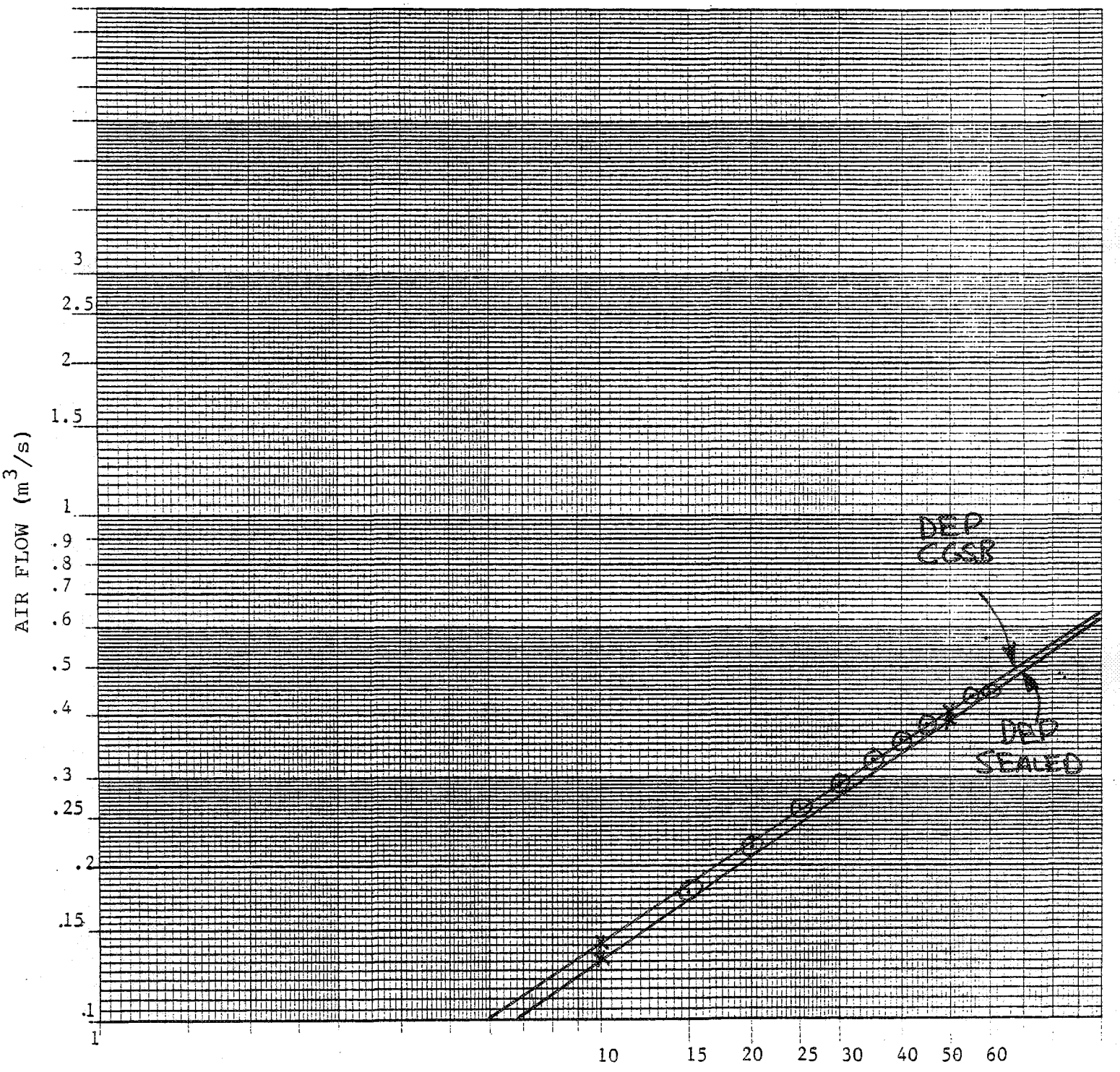
HOUSE # 52

PHASE 3

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE (PASCALS)

NOTE: PTS. ON "DEP" SEALED LINE OMITTED DUE TO LACK OF SPACE

176 Bronson Ave.
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Retrospectors

AIR TIGHTNESS TEST REPORT

IDENTIFICATION

DATE	FEB.11/83
TIME	17:15-17:30
TEST HOUSE	52
TECHNICIAN	EUGLER/SINHA
ENVELOPE AREA	292 m^2
VOLUME	864 m^3
FIREPLACE	WOODSTOVE
HEATING	ELECTRIC

TEST CONDITIONS

	OUTSIDE	INSIDE
TEMPERATURE	-14.°C	19°C
REL. HUM	43%	43%
WIND(SPEED&DIR)	NE.@12KPH	
AIR PRESSURE	103.2KPA	
PRECIPITATION	NONE	
SOLAR RAD.	SLIGHT	
SKY/CLOUD COND	HIGH CLOUD	

NOTE: HEAT EXCHANGER SEALED

TEST RESULTS

PA	FLOW (M^3/S) PRES: CGSB	PA	FLOW (M^3/S) DEP. CGSB	PA	FLOW (M^3/S) DEP. SEALED
10		10		10	
15		15	0.216	15	0.194
20		20	0.250	20	0.246
25		25	0.270	25	0.288
30		30	0.322	30	0.306
35		35	0.353	35	0.360
40		40	0.394	40	0.407
45		45	0.419	45	0.431
50		50	0.460	50	0.466
55		55	0.493	55	0.487
60		60	0.508	60	0.518
EXPONENT (N)		EXPONENT N	0.648	EXPONENT N	0.706
CONSTANT (C)		CONSTANT C	0.035	CONSTANT C	0.029
CORRELATION		CORRELATION	0.9951	CORRELATION	0.9972
AIR FLOW @ 10PA	M^3/S	AIR FLOW @ 10PA	0.159 M^3/S	AIR FLOW @ 10PA	0.148 M^3/S
AIR FLOW @ 50PA	M^3/S	AIR FLOW @ 50PA	0.452 M^3/S	AIR FLOW @ 50 PA	0.461 M^3/S
ELA	SQM @ 10PA	ELA	0.063 SQM @ 10PA	ELA	0.059 SQM @ 10PA
AIR CHNGS/HRS @ 50PA		AIR CHNGS/HRS @ 50PA	1.88	AIR CHNGS/HRS @ 50PA	1.92

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Retrospectors

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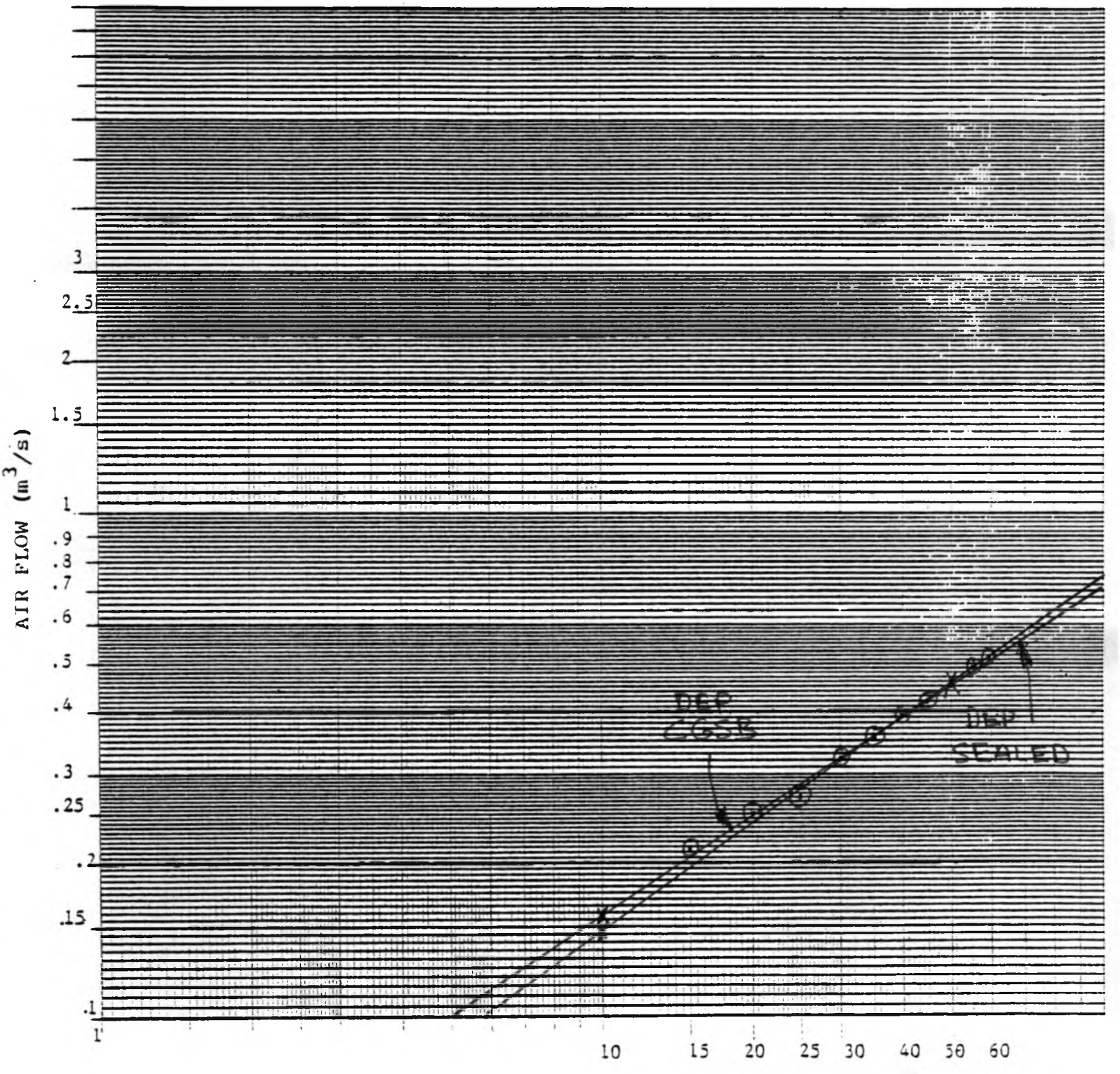
HOUSE # 52

PHASE 4

AIR LEAKAGE PROFILE



PRESSURE DIFFERENCE ACROSS BUILDING ENVELOPE
(PASCALS)

NOTE: PTS. ON "DEP. SEALED" LINE OMITTED DUE TO LACK OF SPACE

APPENDIX 2-C

AIR LEAKAGE SURVEY

176 Bronson Ave.
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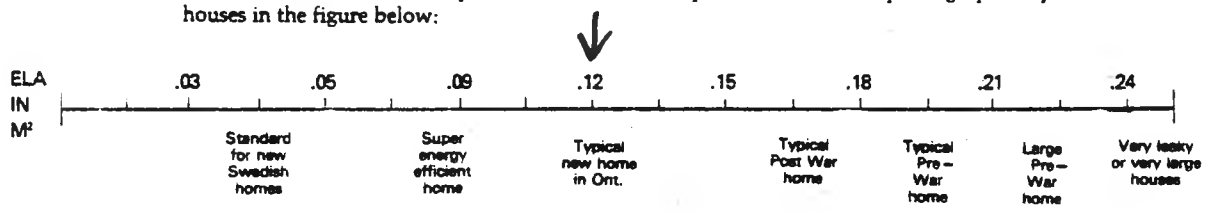
Retrospectors

HOUSEHOLDER REPORT

A convenient way of describing the 'leakiness' of houses is to imagine how big a hole your house would have if you could gather all the leaks into one place. This is referred to as an EQUIVALENT LEAKAGE AREA or ELA. With our specialized equipment we have determined that the ELA in your house is .12 M^2 (at a pressure difference of 10 pascals). This is compared graphically to other houses in the figure below:



Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER ☐

Kitchen
- Switch Covers ✓
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ☐

Family Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ✓
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER ☐
- EXT. DOOR THRESH ✓

Dining Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ☐

Bedroom ____
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom N.E
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window ~~Frame~~ CRANK ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom MAST.
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window ~~Frame~~ CRANK ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom 3
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐
- WIND CRANK ✓

Bathroom UP
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- OTHER ☐

Bathroom ____
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ☐
- OTHER ~~Baseboards~~ ✓
- I BEAM TO WALL ✓
- JOIST/HEADER ✓
- FURNACE DOOR THRESH ✓
- PANEL ✓✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐

Exterior Door ____
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

Attic NEEDS INSULATION
- Attic Hatch ✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ☐
- FRAME ✓

Exterior Door ____
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

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Retrospectors

HOUSEHOLDER REPORT

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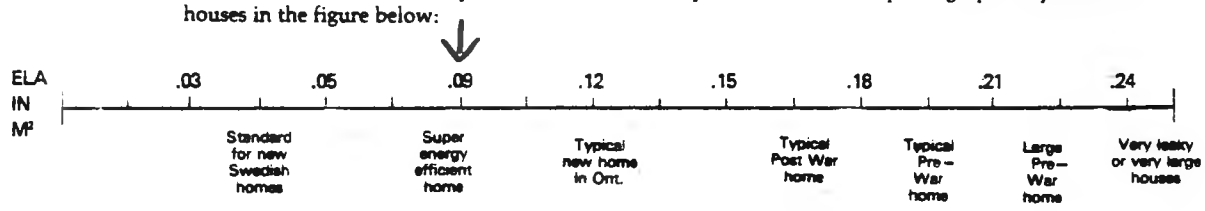

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ✓
- OTHER _____ ☐
- Fireplace doors ✓
- Lower R.P. vents ✓✓

Kitchen

- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ✓
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Family Area

- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Dining Area

- Switch Covers ☐
- Outlet Covers ✓✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ✓✓
- Baseboards ✓✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom S.E.

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐
- MASTER BATH.
- elec. outlet ✓
- Baseboards ✓

Bedroom N.E

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- EXT. Door ✓
- (esp hinge) ☐

Bedroom N.W.

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom MASTER (S.W.)

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐
- DUCTS ✓
- WATERPIPES ✓

Bathroom 1ST FLOOR

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ✓✓
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom 2ND FLOOR

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ✓✓
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Laundry Area

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Attic Living Area

- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

(no moldings on wdw)

Basement

- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ✓✓
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ✓
- Wall/Joist Joint ✓✓
- OTHER _____ ☐
- DOR TO FURNACE ✓✓
- OUTLETS ✓✓
- SWITCHCOVERS

Other

- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- _____ ☐
- _____ ☐
- _____ ☐

Attic

- Attic Hatch ✓✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door _____

- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door _____

- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

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Retrospectors

HOUSEHOLDER REPORT

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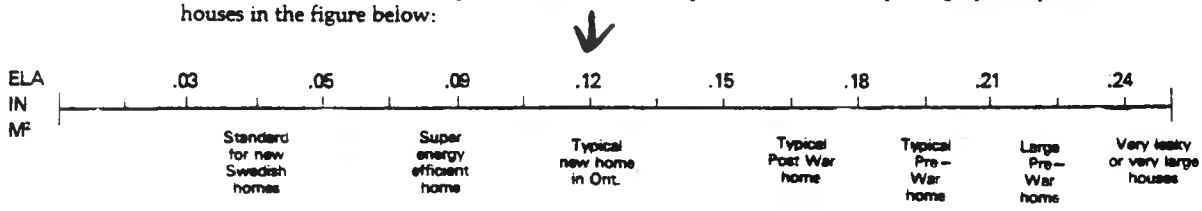

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER ☐

Kitchen
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ☐

Family Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ✓
- OTHER ☐
- F/Place ceil ✓✓
- F/Place door + side vents ✓✓

Dining Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ☐
- WDW/CRANK ✓✓

Bedroom N.E.
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom N.W
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom S.W.
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom master S.E.
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐
- master Bath wndw ✓✓
- " " outlets ✓

Bathroom UP
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- OTHER ☐

Bathroom DN
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ✓✓
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ✓✓
- Window Moldings ✓✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ✓
- OTHER circ. out ✓
- circ Panel ✓
- steel I Beam ✓✓
- Furnace door ✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐

Exterior Door Family Rm
- Threshold ✓✓
- Casing ✓
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

Attic
- Attic Hatch ✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ☐

Exterior Door garage
- Threshold ✓
- Casing ✓
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

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ELA IN M²: .03 | .06 | .09 | .12 | .15 | .18 | .21 | .24

Standard for new Swedish homes · Super energy efficient home · Typical new home in Ont. · Typical Post War home · Typical Pre-War home · Large Pre-War home · Very leaky or very large houses

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ✓
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Around T.V. Cable ☐
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ✓
- Fireplace/Wall Joint ☐
- OTHER ______ ☐

Kitchen
- Switch Covers ✓
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ✓
- Exhaust Fans ☐
- OTHER ______ ☐

Family Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER ______ ☐

Dining Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ______ ☐

Bedroom ______
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐

Bedroom MASTER
- Switch Covers ✓
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐

Bedroom OTHERS
- Switch Covers ✓
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐

Bedroom ______
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐

Bathroom UP
- Bathtub/Shower ☐
- Medicine Cabinet ✓
- Ceiling Vent ✓
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ✓
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ______ ☐

Bathroom ______
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ______ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ______ ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ______ ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ✓✓
- Window Moldings ✓✓
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ✓
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ☐
- OTHER Joist/header ✓
- I-beam to wall ✓
- Furnace room door ✓✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐

Attic
- Attic Hatch ✓✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER FRAME ✓

Exterior Door ______
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ______ ☐

Exterior Door ______
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ______ ☐

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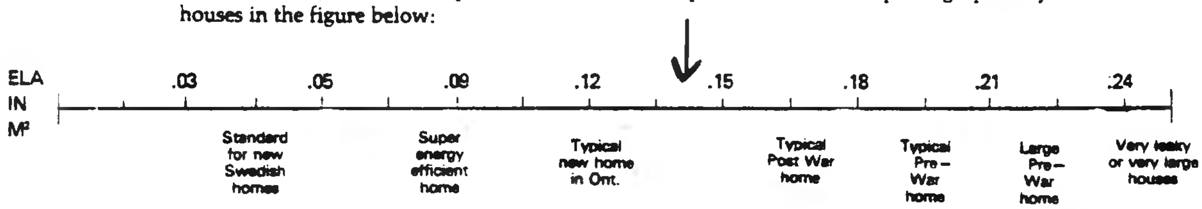

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Around T.V. Cable ✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ✓
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ✓
- OTHER ____ ☐
- F. Plc Door ✓✓
- ____ ☐

Kitchen
- Switch Covers ☐
- Outlet Covers ☐
- Window ~~Pane~~ channel ✓
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Family Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Dining Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ____ ☐
- CRANK ✓
- ____ ☐

Bedroom 2
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Bedroom ____
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Bedroom ____
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Bedroom ____
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Bathroom UP
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window ~~Pane~~ channel ✓
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Bathroom ____
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ✓
- OTHER outlets ✓
- Flue / wall exit ✓
- + Drums ✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- ____ ☐
- ____ ☐
- ____ ☐

Attic
- Attic Hatch ✓✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Exterior Door Fmly Rm
- Threshold ✓✓
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Exterior Door ____
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

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Retrospectors

HOUSEHOLDER REPORT

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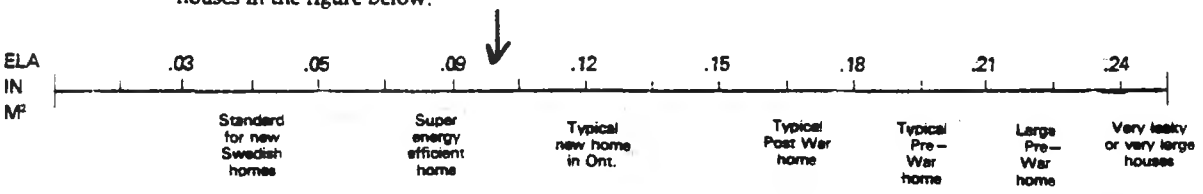

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers
- Outlet Covers
- Window Pane
- Window Frame ✓
- Window Moldings ✓
- Around T.V. Cable
- Baseboards ✓
- Ceiling Cracks
- Wall Cracks
- Ceiling Fixtures
- Dropped Ceiling
- Fireplace Damper
- Fireplace/Wall Joint
- OTHER
- WDW CRANK ✓

Kitchen
- Switch Covers
- Outlet Covers
- Window Pane
- Window Frame
- Window Moldings/TRACK ✓
- Baseboards
- Wall Cracks
- Ceiling Cracks
- Ceiling Fixtures
- Plumbing Holes
- Exhaust Fans
- OTHER

Family Area
- Switch Covers
- Outlet Covers
- Window Pane
- Window Frame
- Window Moldings
- Baseboards ✓
- Wall Cracks
- Ceiling Cracks
- Ceiling Fixtures
- Around T.V. Cable
- Fireplace Damper
- Fireplace Wall/Joint ✓
- OTHER
- FR/PLC CEIL ✓
- FR/PLC VENTS ✓

Dining Area
- Switch Covers
- Outlet Covers
- Window Pane
- Window Frame
- Window Moldings ✓
- Baseboards ✓
- Wall Cracks
- Ceiling Cracks
- Ceiling Fixtures
- OTHER
- WIND/CRANK ✓

Bedroom S.E.
- Switch Covers
- Outlet Covers ✓
- Ceiling Fixtures
- Baseboards ✓
- Window Panes
- Window ~~Frame~~ RUNNER ✓
- Window Moldings
- Ceiling Cracks
- OTHER

Bedroom N.E.
- Switch Covers
- Outlet Covers ✓
- Ceiling Fixtures
- Baseboards ✓
- Window Panes
- Window Frame/TRACK ✓
- Window Moldings
- Ceiling Cracks
- OTHER

Bedroom MSTR
- Switch Covers
- Outlet Covers ✓
- Ceiling Fixtures
- Baseboards ✓
- Window Panes
- Window Frame
- Window Moldings/CRANK ✓
- Ceiling Cracks
- OTHER

Bedroom S.W.
- Switch Covers
- Outlet Covers ✓
- Ceiling Fixtures
- Baseboards ✓
- Window Panes
- Window Frame
- Window Moldings
- Ceiling Cracks
- OTHER

Bathroom LWR
- Bathtub/Shower
- Medicine Cabinet
- Ceiling Vent ✓
- Switch Cover
- Outlet Cover
- Plumbing Penetrations
- Baseboards
- Window Pane
- Window Frame
- Window Moldings
- Baseboards
- OTHER

Bathroom MSTR
- Bathtub/Shower
- Medicine Cabinet
- Ceiling Vent
- Switch Cover
- Outlet Cover
- Plumbing Penetrations
- Baseboards ✓
- Window Pane
- Window ~~Frame~~ MAST ✓
- Window Moldings
- Baseboards
- OTHER

Laundry Area
- Switch Covers
- Outlet Covers
- Ceiling Fixtures
- Baseboards
- Wall Cracks
- Ceiling Cracks
- Window Panes
- Window Frames
- Window Molding
- Plumbing Penetrations
- Dryer Venthole
- OTHER

Attic Living Area
- Switch Covers
- Outlet Covers
- Chimney Cavity
- Around Chimney
- Heating Ducts
- Wiring Penetrations
- Exhaust Ventilation
- Window Panes
- Window Trim
- Window Moldings
- Baseboards
- Ceiling Fixtures
- Drawers into Knee Wall
- Top Plate
- OTHER

Basement
- Pluming Vent to Roof ✓
- Around Chimney
- Oil/Gas Wall Holes
- Basement/Crawl Space Joint
- Combustion Air Inlet
- Window Panes
- Window Frame ✓
- Window Moldings ✓
- Baseboards
- Ceiling Cracks
- Wall Cracks
- Ceiling Fixtures
- Wiring Hole to Upstairs
- Wiring Holes to Outside
- Wall/Sill Joint
- Wall/Sub Floor Joint
- Wall/Joist Joint ✓
- OTHER elec. Box ✓
- COLD AIR WALL ✓✓
- STEEL I BEAM/WALL ✓
- FURNACE DOOR ✓

Other
- Stair Risers
- Floor Level Changes
- Addition Attachment

Exterior Door LAUNDRY
- Threshold
- Casing ✓
- Frame
- Moldings
- Pane
- Mail Slot
- Panels
- OTHER

Attic
- Attic Hatch ✓✓
- Top Plate
- Junction Box
- Wiring Penetrations
- Chimney Cavity
- Exterior Walls
- Plumbing Stack
- OTHER

Exterior Door ____
- Threshold
- Casing
- Frame
- Moldings
- Pane
- Mail Slot
- Panels
- OTHER

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ELA IN M²: .03 — .05 — .09 — (↓ .10) — .12 — .15 — .18 — .21 — .24

- Standard for new Swedish homes
- Super energy efficient home
- Typical new home in Ont.
- Typical Post War home
- Typical Pre-War home
- Large Pre-War home
- Very leaky or very large houses

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ✓
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Kitchen
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Family Area
- Switch Covers ☐
- Outlet Covers ✓✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER FR/Plc ceil ✓✓
- ceil Track light ✓✓
- FRPlc. vents ✓✓

Dining Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bedroom ______
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bedroom ______
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bedroom ______
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bedroom ______
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bathroom ______
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bathroom ______
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ✓✓
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ✓✓
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- ______ ☐
- ______ ☐
- ______ ☐

Attic
- Attic Hatch ☐
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Exterior Door ______
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Exterior Door ______
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

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Retrospectors

HOUSEHOLDER REPORT

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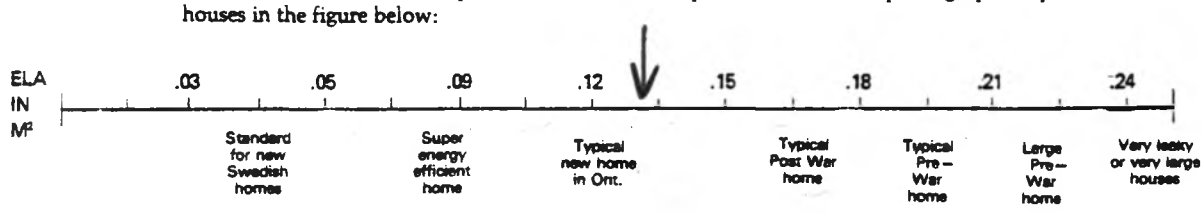

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER ☐

Kitchen

- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ✓
- Exhaust Fans ☐
- OTHER ☐
- Bay Window Frame ✓

Family Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER ☐
- Glass Door Frame ✓

Dining Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ☐

Bedroom N.W

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ✓
- Window Frame ✓
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER ☐

Bedroom MASTER

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER ☐

Bedroom N.E

- Switch Covers ✓
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐
- ATTIC HATCH ✓

Bedroom N.W

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bathroom UP

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- ~~Wall~~Ceiling Vent ✓
- Switch Cover ☐
- Outlet Cover ✓
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- OTHER ☐

Bathroom MASTER

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- OTHER ☐

Laundry Area

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ☐

Attic Living Area

- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ☐

Basement

- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ✓
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ✓
- Wall/Sub Floor Joint ✓
- Wall/Joist Joint ☐
- OTHER ☐
- Furnace Door ✓
- outlets ✓
- 20yer Plus ✓
- Small Room ✓

Other

- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐

Exterior Door ____

- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

Attic

- Attic Hatch ✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ☐

Exterior Door ____

- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

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Retrospectors

HOUSEHOLDER REPORT

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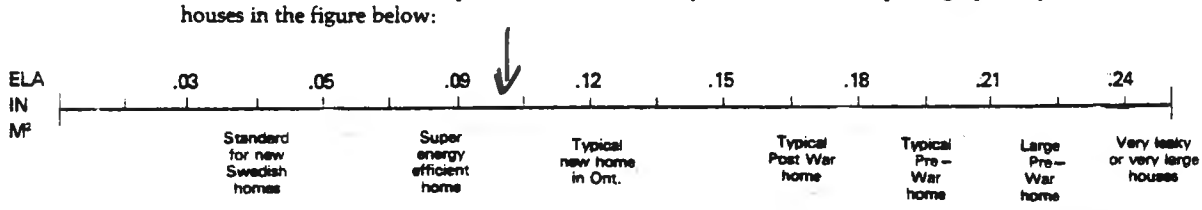

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER ☐

Kitchen

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ☐

Family Area

- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ✓
- Around T.V. Cable ☐
- Fireplace Damper ✓
- Fireplace Wall/Joint ✓
- OTHER ☐
- HEATERATOR VENTS ✓✓

Dining Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ☐

Bedroom ____

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom W

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom MASTER

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ✓
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom E

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bathroom MASTER

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- OTHER ☐

Bathroom HALL

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ☐

Laundry Area

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ☐

Attic Living Area

- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ☐
- ATTIC HATCH ✓

Basement

- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint: Beam ✓
- OTHER ☐

Other

- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- HALL WDW ✓

Exterior Door ____

- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

Attic

- Attic Hatch ☐
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ☐

Exterior Door FRONT

- Threshold ☐
- Casing HARDIE SIDE ✓
- Frame ☐
- Moldings ✓
- Pane ☐
- Mail Slot Bell ✓
- Panels ☐
- OTHER ☐
- SWITCH BY FRONT ✓
- OUTLET BY SIDEWALL ✓

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Retrospectors

HOUSEHOLDER REPORT

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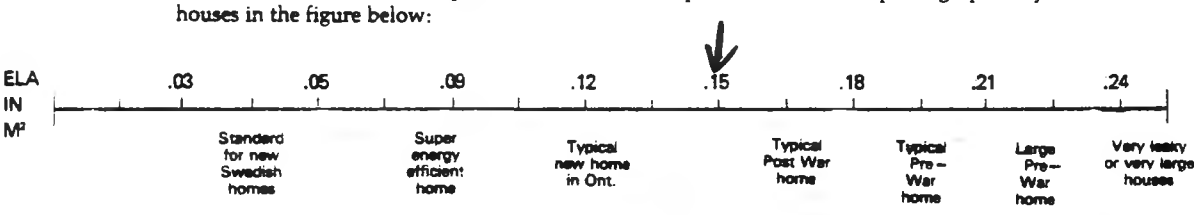

Leak Location Check List

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Living Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER ____ ☐

Kitchen
- Switch Covers ☐
- Outlet Covers ☐
- Window ~~Pane~~ CRANK ✓
- Window ~~Frame~~ CRANK ✓
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ____ ☐

Family Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER ____ ☐

Dining Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ____ ☐

Bedroom N
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window ~~Frame~~ CRANK ✓
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER ____ ☐

Bedroom S.E.
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window ~~Panes~~ TRACKS ✓
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐

Bedroom S.W
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window ~~Panes~~ TRACK ✓
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐

Bedroom ____
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐

Bathroom 1WR
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ✓
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ____ ☐

Bathroom UP
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- ~~Ceiling~~ Vent ✓
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ____ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ____ ☐
- ceiling light in front Vestibule ✓✓

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ____ ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil Gas Wall Holes ✓✓
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ✓
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ✓
- OTHER I Beam ✓✓
- elec. outlet ✓
- Farm Pool Table ✓
- elec. hole ✓✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐

Attic
- Attic Hatch ✓✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ____ ☐

Exterior Door REAR
- Threshold ✓✓
- Casing ☐
- Frame ✓✓
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ____ ☐

Exterior Door GARAGE
- Threshold ✓✓
- Casing ☐
- Frame ✓✓
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ____ ☐

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Retrospectors

HOUSEHOLDER REPORT

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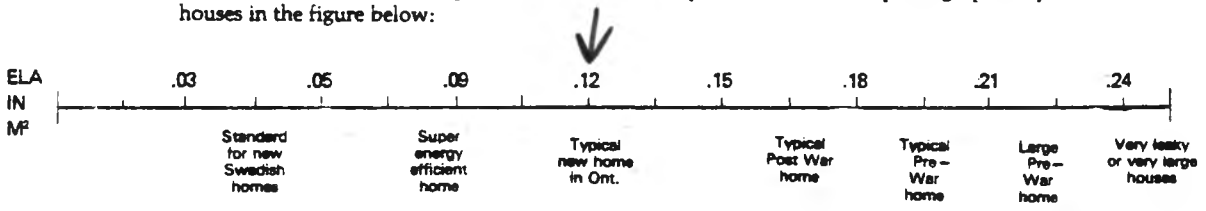

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER _____ ☐
- WDW CRACK ✓
- _____ ☐

Kitchen
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Family Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ✓
- OTHER _____ ☐
- LARGE WDW POOR ✓
- _____ ☐

Dining Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame TRIM ✓
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER _____ ☐
- WDW CRACK ✓
- _____ ☐

Bedroom MASTER
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- CRACK / WALL ✓

Bedroom 2
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes/Channel ✓
- Window Frame ☐
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom 3
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom _____
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- VENT ✓
- _____ ☐

Bathroom MASTER
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ✓
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom _____
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

STAIRWELL WDW
TRIM ✓
FRAME ✓
MOULDINGS ✓

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ✓
- OTHER: Beam/Wall ✓
- elec. line to Panel ✓
- elec. outlet ✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- _____ ☐
- _____ ☐
- _____ ☐

Attic
- Attic Hatch ✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door _____
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door _____
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

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HOUSEHOLDER REPORT

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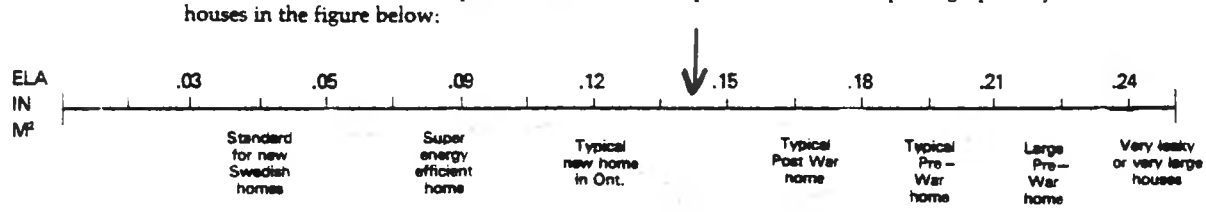

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Kitchen

- Switch Covers ✓
- Outlet Covers ✓
- Window Pane ☐
- Window Frame channel ✓
- Window Moldings ✓
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ____ ☐
- WDW CRANK ✓
- Cable Cover ✓

Family Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER ____ ☐
- Door Frame ✓
- Door Thres ✓

Dining Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moidings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ____ ☐
- WDW CRANK ✓
- ____ ☐

Bedroom N.E.

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐
- ATTIC HATCH ✓✓
- ____ ☐

Bedroom N.W.

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame channel ✓
- Window Moldings ☐
- wall Ceiling Cracks at joint ✓
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Bedroom S.E.

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Bedroom ____

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Bathroom up. main

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER VENT ✓
- ____ ☐
- ____ ☐

Bathroom master

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ____ ☐
- Ceil Light ✓✓
- ____ ☐

Laundry Area

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Attic Living Area

- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Basement

- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ✓
- Wall/Joist Joint ☐
- OTHER ____ ☐
- COLD AIR RET ✓
- HEADER ✓
- FURNACE DOOR THRESH ✓

Other

- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- UPSTAIRS ☐
- STRINGER ✓
- ____ ☐

Attic

- Attic Hatch ☐
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Exterior Door Back

- Threshold ☐
- Casing ☐
- Frame ✓
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

Exterior Door ____

- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ____ ☐
- ____ ☐
- ____ ☐

ELEC PANEL ✓
Steel Beam ✓
DRYER VENT ✓✓

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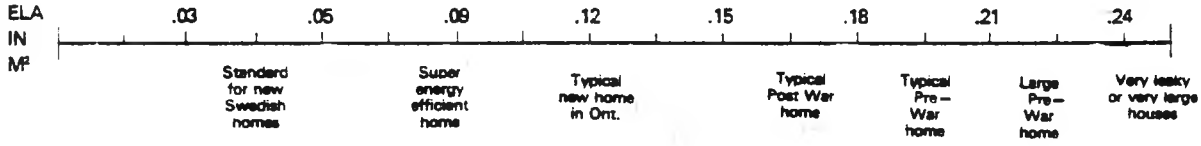

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓✓
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Kitchen
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings (Channel) ✓✓
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Family Area
- Switch Covers ✓✓
- Outlet Covers ✓✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ✓✓
- Baseboards ✓✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ✓✓
- Around T.V. Cable ✓
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Dining Area
- Switch Covers ☐
- Outlet Covers ✓✓
- Window Pane ☐
- Window Frame ✓✓
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER _____ ☐
- CRANK ✓✓
- _____ ☐

Bedroom N.W
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- Channel ✓
- _____ ☐

Bedroom N.W.
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom master
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ✓✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- CRANK ✓
- _____ ☐
- Bathroom Channel ✓

Bedroom _____
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom Down
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ✓
- Plumbing Penetrations ☐
- Baseboards ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- VENT _____ ✓
- _____ ☐

Bathroom _____
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

STAIRWAY
Base Boards ✓
WDW Runner ✓✓
Switch ✓

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

FRONT HALL
LIGHT ✓

elec. PANEL ✓
VENT TO COLD ROOM ✓✓
OUTLET ✓

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window ~~Panes~~ Trim ✓✓
- Window Frame ✓✓
- Window Moldings ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ☐
- OTHER _____ ☐
- Pissi Beam ✓
- Joist Sill ✓
- DRYER VENT/OUT ✓✓
- FURNACE DOOR ✓✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- _____ ☐
- _____ ☐
- _____ ☐

Attic
- Attic Hatch ✓✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door Back
- Threshold ✓
- Casing ☐
- Frame ✓✓
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door _____
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

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ELA IN M²: .03 — .06 — .09 — .12 (↓) — .15 — .18 — .21 — .24

ELA (M²)	Description
.04	Standard for new Swedish homes
.075	Super energy efficient home
.12	Typical new home in Ont.
.16	Typical Post War home
.19	Typical Pre-War home
.22	Large Pre-War home
.25	Very leaky or very large houses

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- [ ] Switch Covers
- [x] Outlet Covers
- [ ] Window Pane
- [x] Window Frame
- [ ] Window Moldings
- [ ] Around T.V. Cable
- [ ] Baseboards
- [ ] Ceiling Cracks
- [ ] Wall Cracks
- [ ] Ceiling Fixtures
- [ ] Dropped Ceiling
- [ ] Fireplace Damper
- [ ] Fireplace/Wall Joint
- [ ] OTHER ______

Kitchen
- [ ] Switch Covers
- [ ] Outlet Covers
- [x] Window ~~Pane~~ channel
- [ ] Window Frame
- [x] Window Moldings
- [ ] Baseboards
- [ ] Wall Cracks
- [ ] Ceiling Cracks
- [ ] Ceiling Fixtures
- [ ] Plumbing Holes
- [ ] Exhaust Fans
- [ ] OTHER ______

Family Area
- [ ] Switch Covers
- [ ] Outlet Covers
- [ ] Window Pane
- [ ] Window Frame
- [ ] Window Moldings
- [ ] Baseboards
- [ ] Wall Cracks
- [ ] Ceiling Cracks
- [ ] Ceiling Fixtures
- [ ] Around T.V. Cable
- [x] Fireplace Damper
- [ ] Fireplace Wall/Joint
- [ ] OTHER ______

Dining Area
- [ ] Switch Covers
- [x] Outlet Covers
- [x] Window Pane
- [ ] Window Frame
- [ ] Window Moldings
- [x] Baseboards
- [ ] Wall Cracks
- [ ] Ceiling Cracks
- [ ] Ceiling Fixtures
- [ ] OTHER ______

Bedroom MASTER
- [ ] Switch Covers
- [ ] Outlet Covers
- [ ] Ceiling Fixtures
- [ ] Baseboards
- [x] Window ~~Panes~~ channel
- [ ] Window Frame
- [x] Window Moldings
- [ ] Ceiling Cracks
- [ ] OTHER ______

Bedroom 3
- [ ] Switch Covers
- [x] Outlet Covers
- [ ] Ceiling Fixtures
- [x] Baseboards
- [x] Window ~~Panes~~ Channel
- [ ] Window Frame
- [x] Window Moldings
- [ ] Ceiling Cracks
- [ ] OTHER ______

Bedroom 2
- [ ] Switch Covers
- [x] Outlet Covers
- [ ] Ceiling Fixtures
- [x] Baseboards
- [x] Window ~~Panes~~ Channel
- [ ] Window Frame
- [x] Window Moldings
- [ ] Ceiling Cracks
- [ ] OTHER ______

Bedroom ______
- [ ] Switch Covers
- [ ] Outlet Covers
- [ ] Ceiling Fixtures
- [ ] Baseboards
- [ ] Window Panes
- [ ] Window Frame
- [ ] Window Moldings
- [ ] Ceiling Cracks
- [ ] OTHER ______

Bathroom MAIN
- [ ] Bathtub/Shower
- [ ] Medicine Cabinet
- [x] Ceiling Vent
- [ ] Switch Cover
- [ ] Outlet Cover
- [ ] Plumbing Penetrations
- [ ] Baseboards
- [ ] Window Pane
- [ ] Window Frame
- [ ] Window Moldings
- [ ] Baseboards
- [ ] OTHER ______

Bathroom MASTER
- [ ] Bathtub/Shower
- [ ] Medicine Cabinet
- [ ] Ceiling Vent
- [ ] Switch Cover
- [ ] Outlet Cover
- [ ] Plumbing Penetrations
- [x] Baseboards
- [ ] Window Pane
- [x] Window Frame
- [x] Window Moldings
- [ ] Baseboards
- [x] OTHER operator

Laundry Area
- [ ] Switch Covers
- [ ] Outlet Covers
- [ ] Ceiling Fixtures
- [ ] Baseboards
- [ ] Wall Cracks
- [ ] Ceiling Cracks
- [ ] Window Panes
- [ ] Window Frames
- [ ] Window Molding
- [ ] Plumbing Penetrations
- [ ] Dryer Venthole
- [ ] OTHER ______

Attic Living Area
- [ ] Switch Covers
- [ ] Outlet Covers
- [ ] Chimney Cavity
- [ ] Around Chimney
- [ ] Heating Ducts
- [ ] Wiring Penetrations
- [ ] Exhaust Ventilation
- [ ] Window Panes
- [ ] Window Trim
- [ ] Window Moldings
- [ ] Baseboards
- [ ] Ceiling Fixtures
- [ ] Drawers into Knee Wall
- [ ] Top Plate
- [ ] OTHER ______

Basement
- [ ] Pluming Vent to Roof
- [ ] Around Chimney
- [ ] Oil/Gas Wall Holes
- [ ] Basement/Crawl Space Joint
- [ ] Combustion Air Inlet
- [x] Window ~~Panes~~ Channel ✓✓
- [ ] Window Frame
- [x] Window Moldings
- [x] Baseboards
- [ ] Ceiling Cracks
- [ ] Wall Cracks
- [ ] Ceiling Fixtures
- [ ] Wiring Hole to Upstairs
- [ ] Wiring Holes to Outside
- [ ] Wall/Sill Joint
- [ ] Wall/Sub Floor Joint
- [x] Wall/Joist Joint
- [x] OTHER I Beam
- [x] outlet
- [x] Plumb. Pipes
- [x] elec. Panel

Other
- [ ] Stair Risers
- [ ] Floor Level Changes
- [ ] Addition Attachment

Attic
- [x] Attic Hatch ✓✓
- [ ] Top Plate
- [ ] Junction Box
- [ ] Wiring Penetrations
- [ ] Chimney Cavity
- [ ] Exterior Walls
- [ ] Plumbing Stack
- [x] OTHER trim ✓✓
- [x] moulding ✓✓

Exterior Door LAUNDRY
- [x] Threshold
- [ ] Casing
- [ ] Frame
- [ ] Moldings
- [ ] Pane
- [ ] Mail Slot
- [ ] Panels
- [ ] OTHER ______

Exterior Door FAMILY
- [x] Threshold
- [ ] Casing
- [ ] Frame
- [ ] Moldings
- [ ] Pane
- [ ] Mail Slot
- [ ] Panels
- [ ] OTHER ______

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HOUSEHOLDER REPORT

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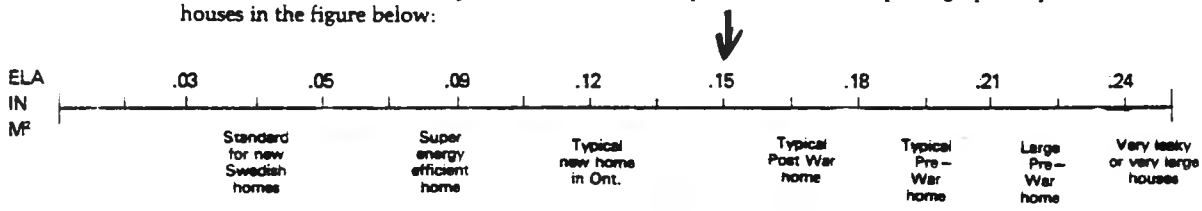

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ✓
- Window Frame ✓
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace / Wall Joint ✓✓
- OTHER ☐

Kitchen
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ☐

Family Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ✓
- Fireplace Damper ☐
- Fireplace Wall / Joint ☐
- OTHER Glass Door ✓

Dining Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ☐

Bedroom N.E.
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER ☐

Bedroom S.E.
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom W
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bedroom ____
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ☐

Bathroom ____
- Bathtub / Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ✓
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ☐

Bathroom MASTER
- Bathtub / Shower ☐
- Medicine Cabinet ✓✓
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame / Wood ✓
- Window Moldings ☐
- Baseboards ☐
- OTHER ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil / Gas Wall Holes ☐
- Basement / Crawl Space Joint ☐
- Combustion Air Inlet ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall / Sill Joint ☐
- Wall / Sub Floor Joint ☐
- Wall / Joist Joint ✓
- OTHER outlets ✓
- water pipe wall ✓
- steel beam ✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐

Exterior Door LAUNDRY
- Threshold ✓
- Casing ✓
- Frame ✓
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

Attic
- Attic Hatch ☐
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ☐

Exterior Door ____
- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ☐

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ELA IN M^2: .03 — .05 — ↓ (.07) — .09 — .12 — .15 — .18 — .21 — .24

- Standard for new Swedish homes
- Super energy efficient home
- Typical new home in Ont.
- Typical Post War home
- Typical Pre-War home
- Large Pre-War home
- Very leaky or very large houses

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ✓
- Outlet Covers ✓
- Window Pane ✓
- Window Frame ✓
- Window Moldings ✓
- Around T.V. Cable ✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER ______ ☐
- WND CRACK ✓

Kitchen
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER W. RUNNER ✓

Family Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ✓
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER ______ ☐

Dining Area
- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ✓
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ______ ☐
- WNW CRANK ✓✓

Bedroom S.E
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window ~~Moldings~~ TRK ✓
- Ceiling Cracks ☐
- OTHER ______ ☐

Bedroom MSTR
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ☐
- Window ~~Moldings~~ TRK ✓
- Ceiling Cracks ☐
- OTHER ______ ☐

Bedroom N
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐

Bedroom ______
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER ______ ☐

Bathroom MSTR
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ✓
- Baseboards ☐
- OTHER ______ ☐
- W. CRANK ✓
- LIGHT FIXTURES ✓

Bathroom MAIN
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ______ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ______ ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ______ ☐

Basement
- Pluming ~~Vent to Roof~~ CRACKS ✓
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- ~~Combustion Air Inlet~~ [illegible] ✓✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓✓
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ✓
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ✓
- OTHER OUTLETS ✓
- Foun. Door Thres ✓
- I Beam / wall ✓
- elec. Panel ✓

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐

Attic
- Attic Hatch ✓✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ______ ☐

Exterior Door FAM. RM
- Threshold ✓✓
- Casing ☐
- Frame ✓
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ______ ☐

Exterior Door GARAGE
- Threshold ✓✓
- Casing ☐
- Frame ✓
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ______ ☐

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ELA IN M²	.03	.06	.09	.12	.15	.18	.21	.24
	Standard for new Swedish homes	Super energy efficient home	Typical new home in Ont.	Typical Post War home	Typical Pre-War home	Large Pre-War home	Very leaky or very large houses	

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers
- Outlet Covers ✓
- Window ~~Pane~~ crank ✓
- Window Frame
- Window Moldings
- Around T.V. Cable
- Baseboards ✓
- Ceiling Cracks
- Wall Cracks
- Ceiling Fixtures
- Dropped Ceiling
- Fireplace Damper
- Fireplace/Wall Joint
- OTHER ______

Kitchen
- Switch Covers
- Outlet Covers
- Window Pane
- Window Frame
- Window Moldings
- Baseboards
- Wall Cracks
- Ceiling Cracks
- Ceiling Fixtures
- Plumbing Holes
- Exhaust Fans
- OTHER ______

Family Area
- Switch Covers
- Outlet Covers
- Window Pane
- Window Frame
- Window Moldings
- Baseboards
- Wall Cracks
- Ceiling Cracks
- Ceiling Fixtures
- Around T.V. Cable
- Fireplace Damper
- Fireplace Wall/Joint ✓✓
- OTHER ______

Dining Area
- Switch Covers
- Outlet Covers
- Window ~~Pane~~ crank ✓
- Window Frame
- Window Moldings
- Baseboards ✓
- Wall Cracks
- Ceiling Cracks
- Ceiling Fixtures
- OTHER ______

Bedroom ______
- Switch Covers
- Outlet Covers
- Ceiling Fixtures
- Baseboards
- Window Panes
- Window Frame
- Window Moldings
- Ceiling Cracks
- OTHER ______

Bedroom ______
- Switch Covers
- Outlet Covers
- Ceiling Fixtures
- Baseboards
- Window Panes
- Window Frame
- Window Moldings
- Ceiling Cracks
- OTHER ______

Bedroom ______
- Switch Covers
- Outlet Covers
- Ceiling Fixtures
- Baseboards
- Window Panes
- Window Frame
- Window Moldings
- Ceiling Cracks
- OTHER ______

Bedroom ______
- Switch Covers
- Outlet Covers
- Ceiling Fixtures
- Baseboards
- Window Panes
- Window Frame
- Window Moldings
- Ceiling Cracks
- OTHER ______

Bathroom ______
- Bathtub/Shower
- Medicine Cabinet
- Ceiling Vent
- Switch Cover
- Outlet Cover
- Plumbing Penetrations
- Baseboards
- Window Pane
- Window Frame
- Window Moldings
- Baseboards
- OTHER ______

Bathroom ______
- Bathtub/Shower
- Medicine Cabinet
- Ceiling Vent
- Switch Cover
- Outlet Cover
- Plumbing Penetrations
- Baseboards
- Window Pane
- Window Frame
- Window Moldings
- Baseboards
- OTHER ______

Laundry Area
- Switch Covers
- Outlet Covers
- Ceiling Fixtures
- Baseboards
- Wall Cracks
- Ceiling Cracks
- Window Panes
- Window Frames
- Window Molding
- Plumbing Penetrations
- Dryer Venthole
- OTHER ______

Attic Living Area
- Switch Covers
- Outlet Covers
- Chimney Cavity
- Around Chimney
- Heating Ducts
- Wiring Penetrations
- Exhaust Ventilation
- Window Panes
- Window Trim
- Window Moldings
- Baseboards
- Ceiling Fixtures
- Drawers into Knee Wall
- Top Plate
- OTHER ______

Basement
- Pluming Vent to Roof
- Around Chimney
- Oil/Gas Wall Holes
- Basement/Crawl Space Joint
- Combustion Air Inlet
- Window Panes
- Window Frame ✓✓
- Window Moldings ✓✓
- Baseboards ✓
- Ceiling Cracks
- Wall Cracks
- Ceiling Fixtures
- Wiring Hole to Upstairs
- Wiring Holes to Outside
- Wall/Sill Joint
- Wall/Sub Floor Joint
- Wall/Joist Joint ✓
- OTHER I Beam Wall ✓
- elc. outlet ✓
- elc. wire ✓✓
- Furn. Rm ground flue ✓✓

Other
- Stair Risers
- Floor Level Changes
- Addition Attachment

Attic
- Attic Hatch
- Top Plate
- Junction Box
- Wiring Penetrations
- Chimney Cavity
- Exterior Walls
- Plumbing Stack
- OTHER ______

Exterior Door Fam. Rm.
- Threshold ✓✓
- Casing
- Frame ✓
- Moldings
- Pane
- Mail Slot
- Panels
- OTHER ______

Exterior Door ______
- Threshold
- Casing
- Frame
- Moldings
- Pane
- Mail Slot
- Panels
- OTHER ______

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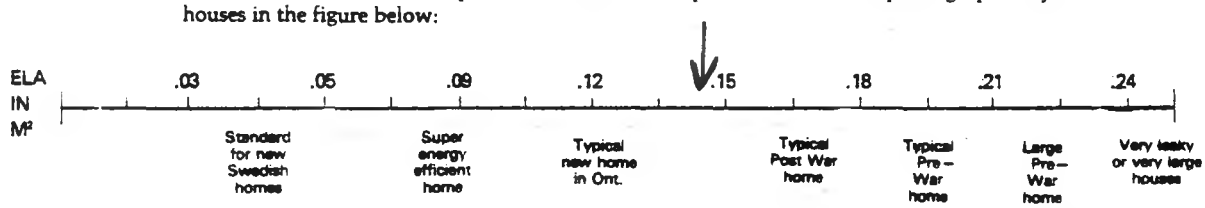

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ✓
- Around T.V. Cable ☐
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Kitchen
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Family Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ✓
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ✓
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Dining Area
- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom MASTER
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- CRANK ✓
- _____ ☐

Bedroom 4
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER CRANK ✓
- _____ ☐
- _____ ☐

Bedroom 3
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window ~~Panes~~ channel ✓
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom 2
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom ~~DOWN~~
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ✓
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom UP
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ✓✓
- Switch Cover ☐
- Outlet Cover ✓
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane (CHANNEL) ✓✓
- Window Frame ☐
- Window Moldings ✓
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window ~~Panes~~ TRIM ✓
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ✓
- OTHER I Beam ✓✓
- Elec. Panel ✓
- _____ ☐

Other
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- _____ ☐
- _____ ☐
- _____ ☐

Attic
- Attic Hatch ✓✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door FAMILY
- Threshold ✓✓
- Casing ☐
- Frame ✓
- Moldings ✓
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door LAUNDRY
- Threshold ☐
- Casing ☐
- Frame ✓
- Moldings ✓
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

2-311

HOUSE # 31 A-38

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HOUSEHOLDER REPORT

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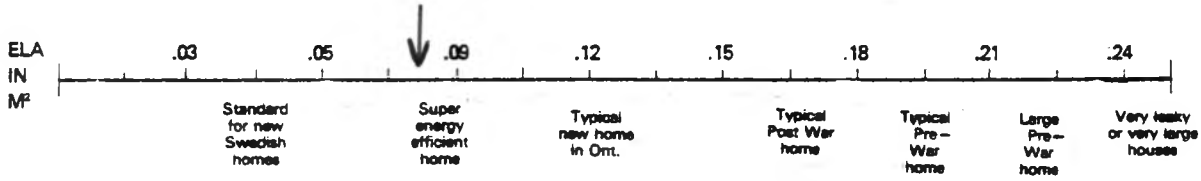

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓✓
- Window Moldings ✓
- Around T.V. Cable ☐
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER _____ ☐
- F/Pl. coil ✓
- _____ ☐
- _____ ☐

Kitchen

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ✓✓
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Family Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Dining Area

- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ✓✓
- OTHER Peor ✓
- _____ ☐
- _____ ☐

Bedroom MSTR

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom E

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom _____

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom _____

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom LWR

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ✓✓
- Baseboards ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom MSTR

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Laundry Area

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Attic Living Area

- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Basement

- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ✓
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Other

- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- _____ ☐
- _____ ☐
- _____ ☐

Attic

- Attic Hatch ✓
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER _____ ☐
- EXT. HATCH ✓
- _____ ☐

Exterior Door LAUNDRY

- Threshold ✓
- Casing ☐
- Frame ✓✓
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door _____

- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

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Retrospectors

HOUSEHOLDER REPORT

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ELA IN M²

.03	.05	.09	.12	.15	.18	.21	.24
Standard for new Swedish homes	Super energy efficient home		Typical new home in Ont.	Typical Post War home	Typical Pre-War home	Large Pre-War home	Very leaky or very large houses

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- [ ] Switch Covers
- [ ] Outlet Covers
- [ ] Window Pane
- [ ] Window Frame
- [ ] Window Moldings
- [ ] Around T.V. Cable
- [ ] Baseboards
- [ ] Ceiling Cracks
- [ ] Wall Cracks
- [ ] Ceiling Fixtures
- [ ] Dropped Ceiling
- [ ] Fireplace Damper
- [ ] Fireplace/Wall Joint
- [ ] OTHER ______

Kitchen
- [ ] Switch Covers
- [x] Outlet Covers ✓
- [ ] Window Pane
- [ ] Window Frame
- [ ] Window Moldings
- [ ] Baseboards
- [ ] Wall Cracks
- [ ] Ceiling Cracks
- [ ] Ceiling Fixtures
- [ ] Plumbing Holes
- [ ] Exhaust Fans
- [ ] OTHER ______

Family Area
- [ ] Switch Covers
- [x] Outlet Covers ✓
- [x] Window Pane ✓✓
- [ ] Window Frame
- [ ] Window Moldings
- [x] Baseboards ✓
- [ ] Wall Cracks
- [ ] Ceiling Cracks
- [ ] Ceiling Fixtures
- [ ] Around T.V. Cable
- [ ] Fireplace Damper
- [x] Fireplace Wall/Joint ✓✓
- OTHER
  - [x] Fixtures ✓✓
  - [x] F. Place ceil ✓✓

Dining Area
- [ ] Switch Covers
- [x] Outlet Covers ✓
- [ ] Window Pane
- [ ] Window Frame
- [ ] Window Moldings
- [x] Baseboards ✓
- [ ] Wall Cracks
- [ ] Ceiling Cracks
- [x] Ceiling Fixtures ✓✓
- OTHER
  - [x] Door T'Hold ✓

Bedroom S.E.
- [ ] Switch Covers
- [x] Outlet Covers ✓✓
- [ ] Ceiling Fixtures
- [x] Baseboards ✓
- [ ] Window Panes
- [ ] Window Frame
- [ ] Window Moldings
- [ ] Ceiling Cracks
- [ ] OTHER ______

Bedroom (Den)
- [ ] Switch Covers
- [ ] Outlet Covers
- [ ] Ceiling Fixtures
- [ ] Baseboards
- [ ] Window Panes
- [x] Window Frame ✓
- [x] Window Moldings ✓
- [ ] Ceiling Cracks
- [ ] OTHER ______

Bedroom S.W.
- [ ] Switch Covers
- [x] Outlet Covers ✓
- [ ] Ceiling Fixtures
- [x] Baseboards ✓
- [ ] Window Panes
- [ ] Window Frame
- [ ] Window Moldings
- [ ] Ceiling Cracks
- [ ] OTHER ______

Bedroom N
- [ ] Switch Covers
- [x] Outlet Covers ✓
- [ ] Ceiling Fixtures
- [x] Baseboards ✓
- [ ] Window Panes
- [ ] Window Frame
- [ ] Window Moldings
- [ ] Ceiling Cracks
- [ ] OTHER ______

Bathroom Down
- [ ] Bathtub/Shower
- [ ] Medicine Cabinet
- [ ] Ceiling Vent
- [ ] Switch Cover
- [ ] Outlet Cover
- [ ] Plumbing Penetrations
- [ ] Baseboards
- [ ] Window Pane
- [x] Window Frame ✓
- [x] Window Moldings ✓
- [ ] Baseboards
- [x] OTHER Hole on wall where vent was out ✓✓

Bathroom MSTR
- [ ] Bathtub/Shower
- [ ] Medicine Cabinet
- [ ] Ceiling Vent
- [ ] Switch Cover
- [ ] Outlet Cover
- [ ] Plumbing Penetrations
- [ ] Baseboards
- [ ] Window Pane
- [x] Window Frame ✓
- [ ] Window Moldings
- [ ] Baseboards
- [ ] OTHER ______

Laundry Area
- [x] Switch Covers ✓
- [ ] Outlet Covers
- [x] Ceiling Fixtures ✓✓
- [x] Baseboards ✓
- [ ] Wall Cracks
- [ ] Ceiling Cracks
- [ ] Window Panes
- [ ] Window Frames
- [ ] Window Molding
- [ ] Plumbing Penetrations
- [ ] Dryer Venthole
- [ ] OTHER ______

Attic Living Area
- [ ] Switch Covers
- [ ] Outlet Covers
- [ ] Chimney Cavity
- [ ] Around Chimney
- [ ] Heating Ducts
- [ ] Wiring Penetrations
- [ ] Exhaust Ventilation
- [ ] Window Panes
- [ ] Window Trim
- [ ] Window Moldings
- [ ] Baseboards
- [ ] Ceiling Fixtures
- [ ] Drawers into Knee Wall
- [ ] Top Plate
- [ ] OTHER ______

Basement
- [ ] Pluming Vent to Roof
- [ ] Around Chimney
- [ ] Oil/Gas Wall Holes
- [ ] Basement/Crawl Space Joint
- [ ] Combustion Air Inlet
- [ ] Window Panes
- [x] Window Frame ✓
- [x] Window Moldings ✓
- [ ] Baseboards
- [ ] Ceiling Cracks
- [ ] Wall Cracks
- [ ] Ceiling Fixtures
- [ ] Wiring Hole to Upstairs
- [ ] Wiring Holes to Outside
- [x] Wall/Sill Joint ✓✓
- [x] Wall/Sub Floor Joint ✓✓
- [ ] Wall/Joist Joint
- OTHER
  - [x] Furn Rm door ✓✓
  - [x] wall/split level joint ✓✓

Other
- [ ] Stair Risers
- [ ] Floor Level Changes
- [ ] Addition Attachment

Attic
- [x] Attic Hatch ✓✓
- [ ] Top Plate
- [ ] Junction Box
- [ ] Wiring Penetrations
- [ ] Chimney Cavity
- [ ] Exterior Walls
- [ ] Plumbing Stack
- [ ] OTHER ______

Exterior Door Laundry
- [x] Threshold
- [ ] Casing
- [x] Frame ✓
- [ ] Moldings
- [ ] Pane
- [ ] Mail Slot
- [ ] Panels
- [ ] OTHER ______

Exterior Door ______
- [ ] Threshold
- [ ] Casing
- [ ] Frame
- [ ] Moldings
- [ ] Pane
- [ ] Mail Slot
- [ ] Panels
- [ ] OTHER ______

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Retrospectors

HOUSEHOLDER REPORT

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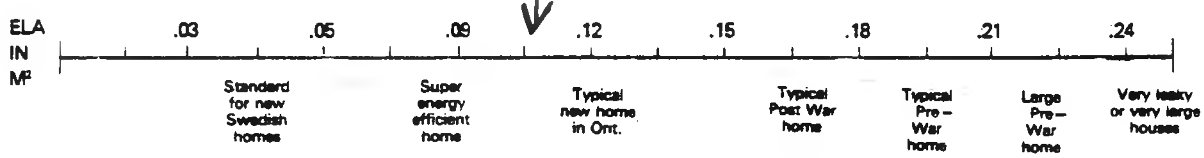

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area
- Switch Covers ✓✓
- Outlet Covers ✓✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ✓
- OTHER ______ ☐
- Door T'Holds ✓✓
- ______ ☐

Kitchen
- Switch Covers ✓
- Outlet Covers ✓✓
- Window Pane ✓✓
- Window Frame ☐
- Window Moldings ✓✓
- Baseboards ✓✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Family Area
- Switch Covers ☐
- Outlet Covers ✓✓
- Window Pane ✓✓
- Window Frame ☐
- Window Moldings ✓✓
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Dining Area
- Switch Covers ✓
- Outlet Covers ✓
- Window Pane ✓
- Window Frame ☐
- Window Moldings ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bedroom MASTER
- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Ceiling Cracks ✓
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bedroom N.W.
- Switch Covers ☐
- Outlet Covers ✓✓
- Ceiling Fixtures ☐
- Baseboards ✓✓
- Window Panes ✓✓
- Window Frame ✓
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bedroom N.E.
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓✓
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bedroom S.E.
- Switch Covers ☐
- Outlet Covers ✓✓
- Ceiling Fixtures ☐
- Baseboards ✓✓
- Window Panes ✓✓
- Window Frame ☐
- Window Moldings ✓
- Ceiling Cracks ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bathroom ______
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Bathroom ______
- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Laundry Area
- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ✓
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER ______ ☐
- EXT Doors ✓
- ______ ☐

Attic Living Area
- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ✓
- Window Trim ✓✓
- Window Moldings ✓
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Basement
- Pluming Vent to Roof ☐
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window Panes ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ✓
- Wall/Joist Joint ☐
- OTHER elec. outlet ✓✓
- heat vents to up ✓
- J.STS TO HOOD ✓

Other STAIRWAY AREA
- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- ______ ☐
- ______ ☐
- ______ ☐

Attic
- Attic Hatch ☐
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Exterior Door LAUNDRY
- Threshold ✓✓
- Casing ✓✓
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

Exterior Door ______
- Threshold ✓✓
- Casing ✓✓
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER ______ ☐
- ______ ☐
- ______ ☐

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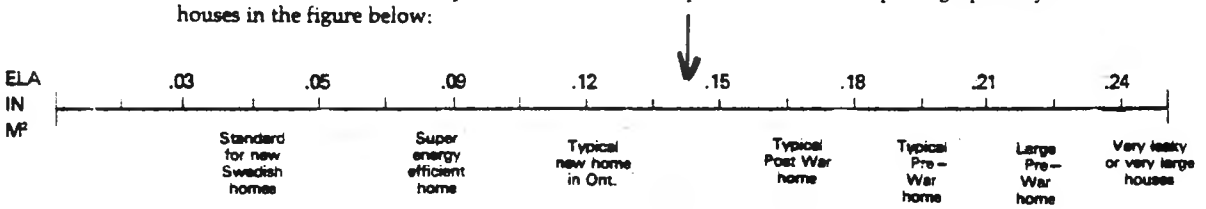

Leak Location Check List

A check list of leakage areas found in the test is listed below on a room by room basis. One check (✓) indicates a bad leak while two checks (✓✓) indicates a real problem area.

Living Area

- Switch Covers ☐
- Outlet Covers ✓
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Around T.V. Cable ☐
- Baseboards ✓
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Dropped Ceiling ☐
- Fireplace Damper ☐
- Fireplace/Wall Joint ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Kitchen

- Switch Covers ☐
- Outlet Covers ✓
- Window ~~Pane~~ Lower ✓
- Window ~~Frame~~ TRIM ✓
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Plumbing Holes ☐
- Exhaust Fans ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Family Area

- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- Around T.V. Cable ☐
- Fireplace Damper ☐
- Fireplace Wall/Joint ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Dining Area

- Switch Covers ☐
- Outlet Covers ☐
- Window Pane ☐
- Window Frame ☐
- Window Moldings ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Ceiling Fixtures ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom 2

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window ~~Panes~~ TRIM ✓
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom 4

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom 3

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ☐
- Window Panes ☐
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bedroom MSTR

- Switch Covers ☐
- Outlet Covers ✓
- Ceiling Fixtures ☐
- Baseboards ✓
- Window ~~Panes~~ TRIM ✓
- Window Frame ✓
- Window Moldings ☐
- Ceiling Cracks ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom MSTR

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ✓
- Window Pane ☐
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Bathroom UP

- Bathtub/Shower ☐
- Medicine Cabinet ☐
- Ceiling Vent ☐
- Switch Cover ☐
- Outlet Cover ☐
- Plumbing Penetrations ☐
- Baseboards ✓
- Window Pane ✓
- Window Frame ✓
- Window Moldings ☐
- Baseboards ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Laundry Area

- Switch Covers ☐
- Outlet Covers ☐
- Ceiling Fixtures ☐
- Baseboards ☐
- Wall Cracks ☐
- Ceiling Cracks ☐
- Window Panes ☐
- Window Frames ☐
- Window Molding ☐
- Plumbing Penetrations ☐
- Dryer Venthole ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Attic Living Area

- Switch Covers ☐
- Outlet Covers ☐
- Chimney Cavity ☐
- Around Chimney ☐
- Heating Ducts ☐
- Wiring Penetrations ☐
- Exhaust Ventilation ☐
- Window Panes ☐
- Window Trim ☐
- Window Moldings ☐
- Baseboards ☐
- Ceiling Fixtures ☐
- Drawers into Knee Wall ☐
- Top Plate ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Basement

- Pluming ~~Vent~~ Stack to Roof ✓✓
- Around Chimney ☐
- Oil/Gas Wall Holes ☐
- Basement/Crawl Space Joint ☐
- Combustion Air Inlet ☐
- Window ~~Panes~~ TRIM ✓✓
- Window Frame ✓✓
- Window Moldings ☐
- Baseboards ☐
- Ceiling Cracks ☐
- Wall Cracks ☐
- Ceiling Fixtures ☐
- Wiring Hole to Upstairs ☐
- Wiring Holes to Outside ☐
- Wall/Sill Joint ☐
- Wall/Sub Floor Joint ☐
- Wall/Joist Joint ☐
- OTHER I Beam ✓
- elec. Panel ✓
- OUTLETS ✓
- JOIST HANGER ✓

Other

- Stair Risers ☐
- Floor Level Changes ☐
- Addition Attachment ☐
- _____ ☐
- _____ ☐
- _____ ☐

Attic

- Attic Hatch ☐
- Top Plate ☐
- Junction Box ☐
- Wiring Penetrations ☐
- Chimney Cavity ☐
- Exterior Walls ☐
- Plumbing Stack ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door Family

- Threshold ✓
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐

Exterior Door _____

- Threshold ☐
- Casing ☐
- Frame ☐
- Moldings ☐
- Pane ☐
- Mail Slot ☐
- Panels ☐
- OTHER _____ ☐
- _____ ☐
- _____ ☐