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THE ADHESIVES INDUSTRY

1957

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NOTICE

The annual reports prepared by the Industry and Merchandising Division of the Bureau of Statistics are divided into 3 volumes, as follows: **Volume I** – The Primary Industries, including mining, forestry and fisheries; **Volume II** – Manufacturing; **Volume III** – Merchandising and Services. The volumes are made up of parts, and the parts in turn are subdivided according to the industries or provinces which they comprise.

Volume II consists of the following parts, the first two of which deal with manufacturing as a whole and the balance with the major manufacturing groups.

- I – General Review of the Manufacturing Industries
- II – The Manufacturing Industries of Canada, (7 sections, as follows:)
 - Section A. Summary for Canada
 - Section B. Atlantic Provinces
 - Section C. Quebec
 - Section D. Ontario
 - Section E. Prairie Provinces
 - Section F. British Columbia
 - Section G. The Manufacturing Industries of Canada, Regional Distribution
- III – Foods and Beverages
- IV – Tobacco and Tobacco Products
- V – Rubber Products
- VI – Leather Products
- VII – Textile Mills
- VIII – Knitting Mills
- IX – Clothing
- X – Wood and Paper Products
- XI – Printing Trades
- XII – Iron and Steel Products
- XIII – Transportation Equipment
- XIV – Non-ferrous Metal Products
- XV – Electrical Apparatus and Supplies
- XVI – Non-metallic Mineral Products
- XVII – Products of Petroleum and Coal
- XVIII – Chemicals and Allied Products
- XIX – Miscellaneous Manufactures

The present report belongs in Part XVIII, Chemicals and Allied Products. It is punched to permit of filing in a ring binder along with others of the group. The reports in this group are:

- A – General Review
- B – The Acids, Alkalies and Salts Industry
- C – The Fertilizers Industry
- D – The Fertilizer Trade in Canada
- E – The Medicinal and Pharmaceutical Preparations Industry
- F – The Paints, Varnishes and Lacquers Industry
- G – The Primary Plastics Industry
- H – The Soaps, Washing Compounds and Cleaning Preparations Industry
- I – The Toilet Preparations Industry
- J – The Vegetable Oils Industry
- K – The Inks Industry
- L – The Adhesives Industry
- M – The Polishes and Dressings Industry
- N – The Compressed Gases Industry
- O – The Coal Tar Distillation Industry
- P – The Miscellaneous Chemical Products Industry

Prices of most reports released after January 1, 1959 have been increased. Information on the new prices of particular issues is available on request from the Information Services Division of the Dominion Bureau of Statistics.

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THE ADHESIVES INDUSTRY

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This report on the Adhesives Industry in Canada covers the operations of all factories which made glue, mucilage, paste or special adhesives cements as their chief products. In 1957 there were 29 establishments in this group, 15 being located in Ontario, 10 in Quebec, 3 in British Columbia and 1 in Manitoba.

Factory shipments by firms in the Adhesives Industry were valued at \$13,707,648 in 1957, an increase of 11.2 per cent over the \$12,329,512 reported in 1956. The number of employees increased from 611 to 627, with a corresponding increase in salaries and wages from \$2,152,918 in 1956 to \$2,321,588 in 1957. The cost of fuel and electricity at \$456,150 was up over the \$412,238 reported in 1956 and the value of materials used directly in manufacturing processes was 19.4 per cent higher at \$6,475,344.

Output of adhesives during 1957, including small amounts from other industries, was as follows: linoleum cement, 15,959,000 pounds at \$1,312,000;

rubber cement, 1,405,000 gallons at \$3,060,000; bone and hide glue, 11,312,000 pounds at \$2,649,000; casein glue, 839,000 pounds at \$237,000; flexible glue, 2,669,000 pounds at \$624,000; synthetic resin glue, 37,930,000 pounds at \$5,579,000; vegetable glues, 23,238,000 pounds at \$2,865,000; mucilage and paste valued at \$435,000; fish glue valued at \$761,000 and miscellaneous adhesives at \$2,392,000. The total value of all adhesives, including mucilage and paste was \$19,914,000 in 1957 compared with \$17,392,000 in 1956 and \$15,208,000 in 1955.

Note: Due to lack of inventory data, figures for value added by manufacture prior to 1954 were obtained by subtracting the cost of materials used, including fuel and electricity, from the total value of factory shipments. In 1954 and 1955 the "Value added" adjustment incorporated the increase or decrease to shipments values resulting from changes in the value of inventories over the period. For these two years, the adjustments that were made used only the change in finished product inventory owned by manufacturers. Beginning with 1956 the calculation of the "Value added" figure was further adjusted to take into account the "Goods in process" as well as the finished goods held at plant or plant warehouse.

**TABLE 1. Principal Statistics of the Adhesives Industry, Significant Years 1929 - 1957
and by Provinces, 1956 and 1957**

Year and province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost of materials at plant	Value added by manufacture ¹	Gross selling value of products ¹
1929	13	267	321,296	68,157	962,940	799,547	1,830,644
1932	14	229	263,142	53,300	457,146	576,769	1,087,215
1937	18	416	483,819	116,842	901,194	886,101	1,904,137
1939	19	427	520,662	89,573	905,411	1,115,822	2,110,806
1943	22	651	1,091,721	211,889	3,037,649	2,486,613	5,736,151
1946	22	674	1,223,032	222,384	3,749,579	2,812,350	6,784,313
1949	25	749	1,727,848	339,839	4,218,359	3,266,366	7,824,564
1953	29	707	2,144,997	403,118	6,490,797	5,138,200	12,082,115
1954	28	621	1,987,142	367,922	6,213,522	5,946,176	12,772,801
1955	29	576	1,934,597	369,578	5,030,858	5,368,263	10,908,938
1956							
Quebec	10	133	441,293	43,947	1,570,023	1,531,944	3,109,967
Ontario	15	463	1,665,659	365,400	3,691,104	4,615,101	8,736,178
British Columbia	3	15	45,966	2,891	162,561	309,485	483,367
Manitoba	1						
Canada	29	611	2,152,918	412,238	5,423,688	6,456,530	12,329,512
1957							
Quebec	10	133	477,883	47,527	1,623,128	1,458,489	3,137,698
Ontario	15	478	1,794,008	405,439	4,637,970	4,956,575	10,051,918
British Columbia	3	16	49,697	3,184	214,246	305,297	518,032
Manitoba	1						
Canada	29	627	2,321,588	456,150	6,475,344	6,720,361	13,707,648

¹ See footnote to Text.

Note: Profits or losses cannot be calculated from the above figures as data are not available for general expense items, such as interest, rent, depreciation, taxes, insurance, advertising, etc.

TABLE 2. Inventories,¹ 1957

	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
	dollars			
Opening:				
Quebec	249,962	3,938	154,492	408,842
Ontario	718,092	70,917	912,913	1,701,922
Other provinces	37,249	—	23,897	61,146
Canada	1,005,303	74,855	1,091,752	2,171,910
Closing:				
Quebec	264,137	2,588	147,738	414,463
Ontario	749,483	60,894	871,002	1,681,379
Other provinces	47,803	—	28,592	76,395
Canada	1,061,423	63,482	1,047,332	2,172,237

¹ (a) Book value of all manufacturing inventories owned and held at plant and plant warehouses.

(b) Beginning with 1954, information on the value of year-end inventory holdings at plant and plant warehouses is being collected as part of the annual Census of Industry. These data were formerly collected by a separate survey. The summarized results for the Adhesives Industry for the year under review are shown in the above table.

(c) The opening inventory for 1957 does not necessarily agree with the closing inventory for 1956, because of the addition of new plants, the transfer of plants to other industries and plants going out of business, etc. However, the value added figures for the previous year have not been recalculated to allow for the changes mentioned above.

TABLE 3. Products Made in the Adhesives Industry, 1956 and 1957

Product	1956		1957	
	Quantity	Value of factory shipments	Quantity	Value of factory shipments
		\$		\$
Cement:				
Linoleum lb.	9,638,580	467,802	8,875,850	409,831
Other (rubber, etc.) gal.	663,044	684,813	—	1,198,211
Glue:				
Bone and hide lb.	9,239,593	2,261,877	11,311,955	2,649,121
Casein "	302,231	79,973	533,356	148,916
Flexible "	2,716,358	630,861	2,668,561	624,473
Synthetic resin "	9,453,819	2,237,016	10,240,538	2,614,898
Vegetable:				
Dry "	2,859,341	353,641	2,863,603	375,174
Liquid "	20,367,789	2,144,228	20,373,670	2,489,749
Other —	—	555,255	—	521,568
Mucilage and paste lb.	4,598,257	538,360	3,759,849	337,083
All other products ¹	—	2,375,686	—	2,338,624
Total	—	12,329,512	—	13,707,648

¹ Includes sealing wax, grease, tallow, tankage, blended starches, dextrines, steamed bone and other such products which were reported by only one or two firms in this industry.

TABLE 4. Materials Used in the Adhesives Industry, 1956 and 1957

Material	1956		1957	
	Quantity	Cost at works \$	Quantity	Cost at works \$
Acid, hydrochloric (muriatic)	lb. 9,936	453	26,357	1,007
Acid, sulphuric (as 100%)	" 715,890	9,940	1,846,882	26,819
Alcohol, ethyl, denatured or not (including tax)	Imp. gal. 39,862	37,860	38,879	33,988
Alcohol, isopropyl	lb. 5,371	565	29,241	2,877
Alcohol, methyl	Imp. gal. 10,141	6,427	14,000	10,319
Bones	ton 14,185	457,866	15,193	498,949
Borax	lb. 906,304	38,448	766,074	33,470
Hides and hide trimmings	ton 15,159	193,568	18,509	247,543
Casein	lb. 385,172	91,216	466,775	116,183
China-clay	" 4,374,903	61,401	6,457,940	91,855
Dextrine	" 8,650,918	760,129	8,311,374	793,633
Flour:				
Potato	" 316,765	25,145	165,582	13,153
Soyabean	" 6,464	502	6,679	517
Tapioca	" 806,231	74,311	421,820	46,626
Wheat	" 3,865,770	151,543	2,777,735	124,541
Other	" 52,740	3,525	263,305	16,048
Formaldehyde	" 103,708	10,242	2,460,578	108,743
Glucose	" 689,386	50,692	619,724	45,114
Glue:				
Bone and hide	" 956,640	234,104	1,068,423	265,320
Fish	" 653,397	137,970	736,453	144,319
Glycerine	" 153,359	48,315	135,987	39,667
Gums and resins, natural	" 285,793	69,867	292,411	67,895
Lignin liquor	Imp. gal. 464,576	59,667	343,634	43,279
Lime	ton 424	7,088	587	9,738
Phenol	lb. 9,485	2,537	15,217	3,218
Resins, synthetic	" 3,381,280	600,479	4,992,169	916,070
Rubber or latex	" 878,476	265,882	1,016,774	289,414
Sodium carbonate (soda ash)	" 66,884	2,309	75,973	2,727
Sodium fluoride	" 40,779	5,218	46,843	6,380
Sodium hydroxide (caustic soda)	" 145,327	7,992	183,367	10,301
Solvents (benzol, naphtha, etc.)	Imp. gal. 198,973	116,307	227,921	166,095
Starch, corn	lb. 2,067,492	155,085	1,320,468	97,668
Sulphur	" 82,750	1,474	153,730	2,824
Tallow and fat	" 79,260	8,252	105,047	18,185
Urea, crystal	" 348,926	37,113	1,302,058	85,620
Whiting	" 247,692	7,559	230,140	4,877
Zinc sulphate	" 94,105	5,793	147,113	8,279
Containers and packing materials	-	687,491	-	715,371
All other materials	-	989,353	-	1,366,712
Total	-	5,423,688	-	6,475,344

TABLE 5. Factory Shipments of Adhesives, From All Industries, 1956 and 1957

Item	1956		1957	
	Quantity	Value of factory shipments	Quantity	Value of factory shipments
		\$		\$
Cement:				
Linoleum lb.	15,755,000	1,260,000	15,959,000	1,312,000
Rubber gal.	1,310,000	2,675,000	1,405,000	3,060,000
Other	—	71,000	—	627,000
Glue:				
Bone and hide lb.	9,240,000	2,262,000	11,312,000	2,649,000
Casein "	688,000	200,000	839,000	237,000
Flexible "	2,716,000	631,000	2,669,000	624,000
Fish	836,000	310,000	2,410,000	761,000
Synthetic resin lb.	37,666,000	5,149,000	37,930,000	5,579,000
Vegetable:				
Dry	2,859,000	354,000	2,864,000	375,000
Liquid	20,368,000	2,144,000	20,374,000	2,490,000
Other	—	555,000	—	522,000
Mucilage and paste	—	650,000	—	435,000
Adhesives, other	—	1,131,000	—	1,243,000
Total	—	17,392,000	—	19,914,000

TABLE 6. Principal Statistics of the Adhesives Industry, Classified According to Type of Ownership 1956 and 1957

Type	Estab-lish-ments	Employees	Salaries and wages	Cost at plant of materials used	Selling value of factory shipments
	number		dollars		
1956					
Individual ownership	3	10	28,845	65,799	142,194
Partnerships	1				
Incorporated companies	25	601	2,124,073	5,357,889	12,187,318
Total	29	611	2,152,918	5,423,688	12,329,512
1957					
Individual ownership	4	14	33,475	64,041	157,866
Partnerships	1				
Incorporated companies	24	613	2,288,113	6,411,303	13,549,782
Total	29	627	2,321,588	6,475,344	13,707,648

TABLE 7. Principal Statistics of the Adhesives Industry in Canada, Grouped According to Size of Establishment, 1956 and 1957

Establishments reporting value of factory shipments	Estab-lish-ments	Employees	Salaries and wages	Cost at plant of materials used	Selling value of factory shipments
1956					
Under \$10,000	2	8	17,035	14,836	45,059
\$10,000 to \$24,999	2				
\$25,000 to \$49,999	2				
\$50,000 to \$99,999	2	13	35,707	81,344	215,267
\$100,000 to \$199,999	5				
\$200,000 to \$499,999	7	86	268,646	1,071,930	2,093,342
\$500,000 to \$999,999	6				
\$1,000,000 to \$4,999,999	3	221	692,271	1,662,640	4,208,661
Total	29	611	2,152,918	5,423,688	12,329,512
1957					
Under \$10,000	2	7	12,675	12,868	43,251
\$10,000 to \$24,999	2				
\$25,000 to \$49,999	1	12	31,180	60,116	174,842
\$50,000 to \$99,999	2				
\$100,000 to \$199,999	6	43	154,021	604,974	1,040,392
\$200,000 to \$499,999	7				
\$500,000 to \$999,999	4	129	561,562	1,492,741	3,304,792
\$1,000,000 to \$4,999,999	5	368	1,328,442	2,958,739	6,951,814
Total	29	627	2,321,588	6,475,344	13,707,648

TABLE 8. Capital and Repair Expenditures in the Adhesives Industry, 1952 - 1957

Year	Total capital and repair expenditures	Year	Total capital and repair expenditures
1952	789	1955	445
1953	578	1956	872
1954	598	1957 ¹	640

¹ Preliminary.

TABLE 9. Employees and their Earnings in the Adhesives Industry, 1956 and 1957

Province	Number of employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
1956								
Quebec	29	33	68	3	133	204,737	236,556	441,293
Ontario	100	52	283	28	463	646,697	1,018,962	1,665,659
Manitoba and British Columbia	5	2	8	—	15	21,121	24,845	45,966
Canada	134	87	359	31	611	872,555	1,280,363	2,152,918
1957								
Quebec	36	33	63	1	133	246,403	231,480	477,883
Ontario	91	56	308	23	478	636,200	1,157,808	1,794,008
Manitoba and British Columbia	5	3	8	—	16	24,108	25,589	49,697
Canada	132	92	379	24	627	906,711	1,414,877	2,321,588

TABLE 10. Production Workers in the Adhesives Industry, by Months, 1956 and 1957

Month	1956			1957		
	Male	Female	Total	Male	Female	Total
	number					
January	354	31	385	387	23	410
February	351	31	382	375	23	398
March	349	34	383	379	22	401
April	356	41	397	371	23	394
May	354	36	390	372	23	395
June	349	34	383	375	24	399
July	351	33	384	372	22	394
August	361	31	392	376	24	400
September	366	26	392	382	25	407
October	362	29	391	385	25	410
November	385	26	411	388	25	413
December	382	25	407	386	25	411
Average	359	31	390	379	24	403

TABLE 11. Imports of Adhesives, 1956 and 1957

Item	1956		1957	
	pounds	\$	pounds	\$
Glue:				
Animal	2,621,056	463,145	4,126,209	707,837
Synthetic resin	1,836,294	569,835	2,460,582	776,522
Vegetable	40,055	6,426	22,869	3,133
Other	248,809	83,601	180,701	59,713
Mucilage and adhesive paste	323,983	83,524	352,755	90,130
Rubber cement	—	1,263,408	—	932,067

TABLE 12. Fuel and Electricity Used in the Adhesives Industry, 1956 and 1957

Kind	1956		1957	
	Quantity	Cost at works	Quantity	Cost at works
		\$		\$
Bituminous coal:				
(a) From Canadian mines	ton 7,779	81,712	5,905	66,258
(b) Imported	ton 17,328	185,146	21,254	231,019
Coke	" 23	545	46	1,012
Gasoline (including gasoline used in cars and trucks)	Imp. gal. 85,290	29,891	91,721	34,456
Fuel oil	" " 362,849	48,480	442,060	55,519
Wood	cord 20	454	8	176
Manufactured gas	M cu. ft. 1,679	1,986	—	—
Natural gas	" —	—	1,753	1,905
Other fuel	—	11,241	—	8,331
Electricity	kwh. 4,466,830	52,783	5,203,080	57,474
Total	—	412,238	—	456,150
Electricity generated for own use	kwh. 1,440,000	—	1,140,000	—

List of Firms in the Adhesives Industry, 1957

Name	Address
Quebec:	
Arol Chemical Co. Ltd.	2520 Bates Rd. Montreal
B.B. Chemical Co. of Canada	2610 Bennett Ave., Montreal
Canadian Adhesives Ltd.	420 Marier Ave., Montreal
Dominion Flour Paste Co., The	2619 Charlemagne, Montreal
Dural Products Ltd.	41 Marshall Ave., Dorval Station
General Adhesives	St. Janvier
Industrial Adhesives Ltd.	2425 Bois Franc Rd., Ville St. Laurent
National Adhesives (Canada) Limited	2125 Remembrance Road, Lachine
Swift Canadian Co. Ltd.	215 Maguire St., Montreal
Wolverine Products & Sales Limited	1501 Bercy St., Montreal
Ontario:	
Borden Chemical Co. (Canada) Ltd., The	West Hill
Canada Glue Co. Limited	Mohawk Road, Brantford
Continental Chemical Company	8 Bansley Ave., Toronto
Deplex Adhesives Ltd.	120 Atlantic Ave., Toronto
Harris, W., & Co. Limited	200 Keating St., Toronto
Industrial Adhesives Ltd.	90 Tycos Drive, Toronto
Le Page's Inc.	404 Kipling Ave., Toronto
Machon Sealing Wax Company, The	678 Parliament St., Toronto
McCormick & Co. (Canada) Limited	164 Bentworth, Toronto
National Adhesives (Canada) Limited	363-379 Wallace Ave., Toronto
Perkins Glue Company of Canada, Limited	629 Queen St. S., Kitchener
Stadex-Pirie Ltd.	119 Water St., Brockville
Stein-Hall Limited	1130 Dupont St., Toronto
Swift Canadian Co. Ltd.	1960 St. Clair Ave. W., Toronto
Wolverine Cement Company Limited	200 Grand River Ave., Brantford
Manitoba:	
Swift Canadian Co. Ltd.	Archibald St., St. Boniface
British Columbia:	
B.C. Linoleum Cement Mfgs., Ltd.	505 East Georgia St., Vancouver
Swift Canadian Co. Ltd.	Brunette St., New Westminster
Universal Enterprises Ltd.	236 Esplande E., N. Vancouver

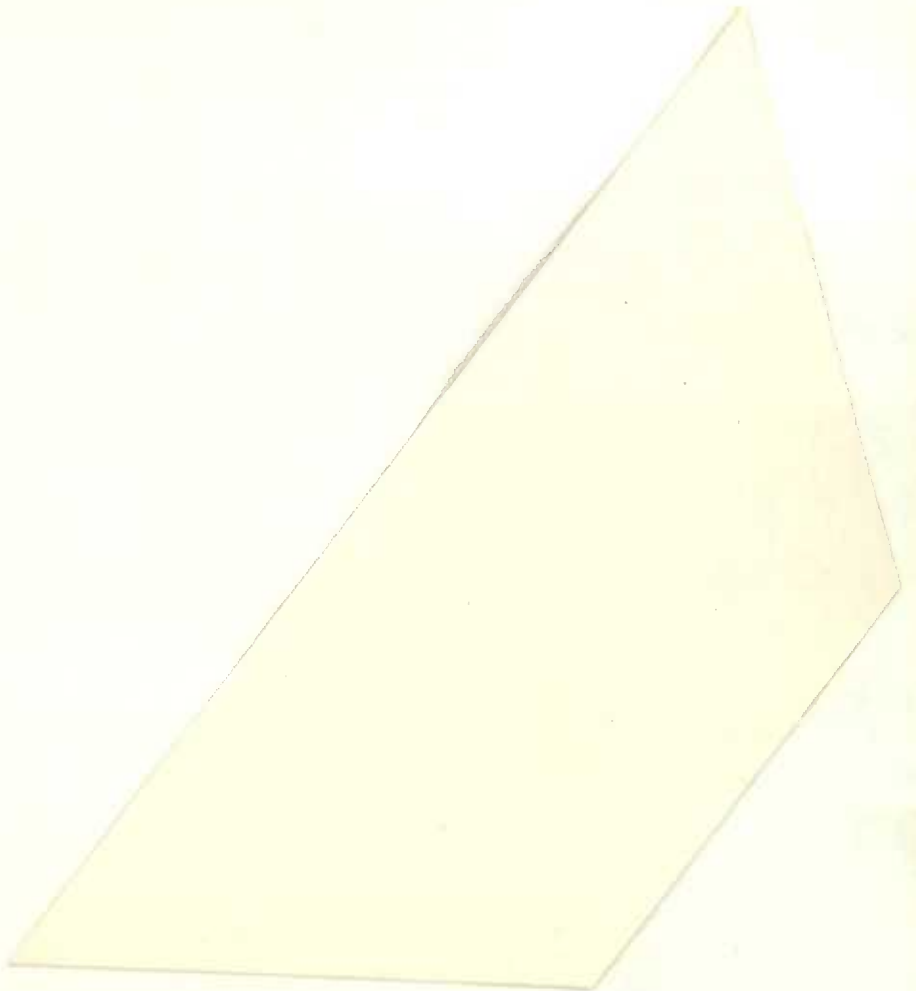
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<p>1. The first part of the paper discusses the general theory of the subject. It is divided into two main sections: the first section deals with the theoretical aspects, and the second section deals with the practical aspects. The theoretical aspects are discussed in terms of the general theory of the subject, and the practical aspects are discussed in terms of the application of the theory to the subject.</p>	<p>2. The second part of the paper discusses the general theory of the subject. It is divided into two main sections: the first section deals with the theoretical aspects, and the second section deals with the practical aspects. The theoretical aspects are discussed in terms of the general theory of the subject, and the practical aspects are discussed in terms of the application of the theory to the subject.</p>
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<p>3. The third part of the paper discusses the general theory of the subject. It is divided into two main sections: the first section deals with the theoretical aspects, and the second section deals with the practical aspects. The theoretical aspects are discussed in terms of the general theory of the subject, and the practical aspects are discussed in terms of the application of the theory to the subject.</p>	<p>4. The fourth part of the paper discusses the general theory of the subject. It is divided into two main sections: the first section deals with the theoretical aspects, and the second section deals with the practical aspects. The theoretical aspects are discussed in terms of the general theory of the subject, and the practical aspects are discussed in terms of the application of the theory to the subject.</p>
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<p>5. The fifth part of the paper discusses the general theory of the subject. It is divided into two main sections: the first section deals with the theoretical aspects, and the second section deals with the practical aspects. The theoretical aspects are discussed in terms of the general theory of the subject, and the practical aspects are discussed in terms of the application of the theory to the subject.</p>	<p>6. The sixth part of the paper discusses the general theory of the subject. It is divided into two main sections: the first section deals with the theoretical aspects, and the second section deals with the practical aspects. The theoretical aspects are discussed in terms of the general theory of the subject, and the practical aspects are discussed in terms of the application of the theory to the subject.</p>
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