Published by Authority of the HON. R. B. HANSON, K.C., M.P. 24-9-7-35
Minister of Trade and Commerce 500

DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
MINING, METALLURGICAL AND CHEMICAL BRANCH
OTTAWA - CANADA

Dominion Statistician: R. H. Coats, LL.D., F.R.S.C., F.S.S.(Hon.)
Chief - Mining, Metallurgical and Chemical Branch: W. H. Losee, B.Sc.

CHEMICALS AND ALLIED PRODUCTS

THE ACIDS, ALKALIES AND SALTS INDUSTRY, 1934.

Production from the acids, alkalies and salts industry (the heavy chemical industry) during 1934 was valued at $16,494,139 an increase of almost 30 per cent over the 1933 total of $12,713,045. Twelve firms in this group in 1934 operated 16 factories of which 10 were in Ontario, 2 in Quebec, 3 in British Columbia and 1 in Nova Scotia. These works employed capital amounting to $45,033,355, of which $29,775,661 represented the value of land, buildings and equipment.

The average number of employees in 1934 was 2,289, compared with 1,891 in 1933 and payments in salaries and wages increased to $2,841,853 from $2,315,425 for last year.

Production of sulphuric acid during 1934 totalled 205,325 short tons or 39 per cent more than in 1933 and 50 per cent over the tonnage made in 1932. Actual sales of sulphuric acid by the produc ers amounted to only 80,329 tons at $1,082,498 in 1934; the remainder of the output was used in the producers own works, chiefly at Trail, B. C., for the manufacture of fertilizers and at Copper Cliff, Ont., in making nitre cake for use in the nickel smelter at that point. Producers stocks of sulphuric acid at the end of 1934 amounted to 15,488 tons.

The directory appended to this report lists the names of the companies which have been included in this industry and also indicates the products made in each of the plants. Owing to the fact that each of these chemicals, except sulphuric acid, was made by only one or two concerns it is necessary to omit detailed figures of production. New products reported for the first time in 1934 include potassium chlorate, ferric chloride and calcium chloride.

The main materials used in manufacturing are listed in Table 7. The total cost at the works of these materials was $3,674,265 in 1934 compared with $2,463,958 in 1933.

Table 1 - PRINCIPAL STATISTICS OF THE ACIDS, ALKALIES AND SALTS INDUSTRY, 1930 - 1934.

Years	No. of plants	Capital employed	Average number of employees	Salaries and wages	Cost of materials at works	Selling value of products at works	Value added by manufacturing
		$		$	$	$	$
1930	17	52,314,567	2,409	3,502,834	4,712,471	20,111,602	15,399,131
1931	14	44,994,828	1,694	2,426,880	2,407,682	10,952,497	8,544,815
1932	14	44,067,194	1,679	2,211,467	2,283,076	11,357,649	9,074,573
1933	15	44,239,418	1,891	2,315,425	2,463,958	12,713,045	10,249,087
1934 -							
Ontario	10	26,528,580	1,318	1,687,622	2,566,153	11,236,025	8,669,872
Other provinces	6	18,504,775	971	1,154,231	1,108,112	5,258,114	4,150,002
CANADA	16	45,033,355	2,289	2,841,853	3,674,265	16,494,139	12,819,874

Table 2 - CAPITAL EMPLOYED, 1930-1934.

Years	Present value of lands, buildings, machinery, tools and other equipment	Inventory value of materials on hand, stocks in process fuel and other supplies	Inventory value of finished products	Operating capital (cash, bills and accounts receivable, etc.	TOTAL CAPITAL EMPLOYED
	$	$	$	$	$
1930	38,064,081		5,054,885	9,195,601	52,314,567
1931	31,608,809	2,483,133	902,586	10,000,300	44,994,828
1932	30,746,174	2,396,759	1,406,590	9,517,671	44,067,194
1933	29,840,246	2,223,840	1,246,403	10,928,929	44,239,418
1934 -					
Ontario	13,956,036	1,784,346	1,083,116	9,705,082	26,528,580
Other provinces	15,819,625	785,081	554,455	1,345,614	18,504,775
CANADA	29,775,661	2,569,427	1,637,571	11,050,696	45,033,355

Table 3 - EMPLOYEES, SALARIES AND WAGES, 1930-1934.

Years	AVERAGE NUMBER OF EMPLOYEES					Salaries	Wages	TOTAL SALARIES AND WAGES
	On salaries		On wages					
	Male	Female	Male	Female	TOTAL			
						$	$	$
1930	351	37	2,017	4	2,409	888,220	2,614,614	3,502,834
1931	341	26	1,324	3	1,694	771,271	1,655,609	2,426,880
1932	312	33	1,329	5	1,679	746,726	1,464,741	2,211,467
1933	327	39	1,521	4	1,891	780,267	1,535,158	2,315,425
1934 -								
Ontario	261	29	1,024	4	1,318	462,243	1,225,379	1,687,622
Other provinces	142	20	808	1	971	383,010	771,221	1,154,231
CANADA	403	49	1,832	5	2,289	845,253	1,996,600	2,841,853

Table 4 - WAGE-EARNERS, BY MONTHS, 1933 and 1934

Months	1933			1934		
	Male	Female	TOTAL	Male	Female	TOTAL
January	1,497	3	1,500	1,777	6	1,783
February	1,487	3	1,490	1,821	5	1,826
March	1,432	3	1,435	1,956	5	1,961
April	1,446	3	1,449	1,916	5	1,921
May	1,448	3	1,451	1,828	5	1,833
June	1,461	3	1,464	1,806	5	1,811
July	1,510	3	1,513	1,862	5	1,867
August	1,544	3	1,547	1,806	5	1,811
September	1,570	3	1,573	1,792	5	1,797
October	1,590	5	1,595	1,813	5	1,818
November	1,622	4	1,626	1,809	5	1,814
December	1,671	4	1,675	1,817	5	1,822
AVERAGE	1,521	4	1,525	1,832	5	1,837

Table 5 - FUEL AND ELECTRICITY USED, 1933 and 1934.

Kinds	Unit of measure	1933 Quantity	1933 Cost at works	1934 Quantity	1934 Cost at works
			$		$
Bituminous coal - Canadian ..	short ton	184	1,114	1,498	9,575
Foreign ...	short ton	90,333	317,881	119,728	526,784
Anthracite coal	short ton	282	2,078	291	2,152
Coke	short ton	439	3,931	935	9,080
Gasoline	Imp. gal.	1,950	393	3,407	646
Fuel oil	Imp. gal.	161,073	12,044	726,109	47,753
Other fuel	xx	...	19,497	...	19,440
Electricity purchased	K.W.H.	481,068,617	1,050,440	642,757,457	1,256,707
TOTAL.....	xxx	...	1,407,378	...	1,872,137
Electricity generated for own use	K.W.H.	52,647,877	...	64,724,128	...

Table 6 - POWER EQUIPMENT, 1933 and 1934.

Kinds	1933 Number of units	1933 Total rated horse power	1934 Number of units	1934 Total rated horse power
Steam engines and steam turbines	37	10,042	35	9,942
Gasoline, gas and oil engines	1	135	1	135
Hydraulic turbines and water wheels ...	5	8,250	5	8,250
Total Primary Equipment	43	18,427	41	18,327
Electric motors operated by purchased power	1,116	35,063	1,256	34,745
TOTAL	1,159	53,490	1,297	53,072
Electric motors operated by above primary units	397	5,972	477	8,309
Total Electric Motors	1,513	41,035	1,733	43,054
Boilers	33	9,788	34	9,988

Table 7 - MATERIALS USED IN MANUFACTURING, 1933 and 1934.

Materials	Unit of measure	1933 Quantity	1933 Cost at works	1934 Quantity	1934 Cost at works
			$		$
Aluminium sulphate	lb.	176,370	2,791	192,259	3,841
Ammonia liquor	lb. NH_3	212,930	9,149	268,015	9,978
Ammonia, anhydrous	lb.	16,447	3,241	11,700	2,293
Calcium carbonate (limestone)	ton	215,111	312,832	292,203	409,181
Calcium fluoride (fluorspar)	ton	1,520	13,815	2,177	29,790
Coke (not for fuel)	ton	61,046	397,164	75,777	497,161
Coal (not for fuel)	ton	18,290	112,659	17,553	106,603
Electrodes	ton	1,972	134,551	2,597	208,776
Iron sulphide (pyrites)	ton	13,140	89,009	10,947	75,352
Silica sand and quartz	ton	5,800	21,714	12,945	55,330
Sodium carbonate (soda ash)	ton	1,660	45,263	4,927	132,267
Sodium chloride (common salt) including brine (salt content)	ton	115,703	159,326	136,648	183,214
Sodium hydroxide (caustic soda)	ton	422	28,167	678	45,956
Sodium nitrate (Chile saltpetre)	ton	390	15,355	554	21,470
Sodium silicate (waterglass)	ton	459	14,886	1,797	50,028
Sodium sulphate (salt cake)	ton	9,929	141,322	26,075	368,576
Sulphur (brimstone)	ton	11,476	236,455	16,111	327,444
Sulphuric acid, 66° Be	ton	2,743	54,806	2,821	57,781
Containers and steel for containers .	xx	...	309,580	...	435,076
All other materials	xx	...	361,873	...	654,148
TOTAL	xx	...	2,463,958	...	3,674,265

LIST OF FIRMS INCLUDED IN THE ACIDS, ALKALIES AND SALTS INDUSTRY, 1934.

Names of Companies	Location of Plants	Products reported in 1934.
Dominion Steel & Coal Corporation Limited	Sydney, N.S.	Sulphuric acid.
Electric Reduction Company Limited	Buckingham, P.Q.	Phosphorus, phosphoric acid and ferro-phosphorus, sodium chlorate, acid calcium phosphate, potassium chlorate and atlacide(weed killer).
Shawinigan Chemicals Limited	Shawinigan Falls, P.Q.	Calcium carbide, acetylene, acetylen carbon black, glacial acetic acid, butyl acetate, ethyl acetate, paraldehyde, croton aldehyde, vinyl acetate, pentasol acetate, hydrated lim gelva and alvar (synthetic resins).
American Cyanamid Company	Niagara Falls, Ont.	Calcium cyanamide, sodium cyanide, and sodium silicate.
Brunner, Mond Canada, Limited	Amherstburg, Ont.	Sodium carbonate (soda ash), tanners alkali (sodium carbonate and sodium hydroxide), super-alkali (sodium carbonate and sodium hydroxide), and calcium chloride.
Canadian Hanson & Van Winkle Co. Ltd.	15 Morrow Ave., Toronto, Ont.	Plating and galvanizing salts (coppe cyanide, copper carbonate, zinc cyanide, nickel salts, etc.)
Canadian Industries Limited	Copper Cliff	Sulphuric acid, sodium bisulphate (nitre cake).
Canadian Industries Limited	Burlington St. Hamilton, Ont.	Hydrochloric acid, sulphuric acid, sodium sulphate (Glauber's salt), sodium sulphate (salt cake), soldering flux, sulphur dioxide (liquid), and sodium silicate, 40°.
Canadian Industries Limited	Sandwich, Ont.	Hydrochloric acid, liquid chlorine, sodium hydroxide (caustic soda), sodium hypochlorite, synthetic anhydrous ammonia, aqua ammonia, 26° sulphur dichloride and ferric chloride.
Electro Metallurgical Co. of Canada Ltd.	Welland, Ont.	Calcium carbide.
H. S. & T. Crystal Co. Ltd.	169 Yonge St., Toronto, Ont.	Satin white, solvents.
National Silicates Limited	New Toronto, Ont.	Sodium silicate.
The Nichols Chemical Company Limited	Sulphide, Ont.	Nitric acid, sulphuric acid, sodium bisulphate (nitre cake).
Canadian Industries Limited	New Westminster, B.C.	Sulphuric acid and hydrochloric acid.
Consolidated Mining & Smelting Company of Canada, Limited	Trail, B.C.	Hydrofluosilicic acid, sulphuric acid and iron sulphate.
The Nichols Chemical Company, Limited.	Barnet, B.C.	Sulphuric acid.