

The output of the several classes of coal mined in each inspection district is summarized as follows :—

Class of Coal.	Output of Coal during 1931.				Total Output to the End of 1931.
	Northern District (North Island).	West Coast District (South Island).	Southern District (South Island).	Total.	
Bituminous and sub-bituminous	Tons. 129,725	Tons. 849,911	Tons. ..	Tons. 979,636	Tons. 45,548,721
Brown	705,174	39,824	324,751	1,069,749	25,900,980
Lignite	..	759	107,612	108,371	4,548,846
Totals for 1931 ..	834,899	890,494	432,363	2,157,756	75,998,547
Totals for 1930 ..	766,312	1,286,071	489,709	2,542,092	73,840,791

The carbonizing and briquetting plant at Rotowaro, Waikato District, which is owned by Waikato Carbonization, Ltd., and which at present draws its supplies from the collieries owned by Taupiri Coal-mines, Ltd., and others, commenced operations in June, 1931, and has operated continuously, except for two or three months during last summer.

The capacity of the plant is 150 tons per day of eight hours, but so far it has not been required to work to its full capacity. The average daily quantity produced over the last six months was 55 tons per day (six days of eight hours each per week). The capacity of the carbonizing plant is 250 tons of raw coal per day (24 hours' continuous operation). The average daily (three shifts) throughput over the last six months was 95 tons per day.

The briquettes, being the main product, have, it is claimed, proved suitable for domestic purposes, central-heating plants, and industrial uses. By-products, such fuel-oil, creosote, and paint for steel and iron work, are items of production which, it is understood, have been tested with encouraging results.

The operations of the company are regarded as of national importance, as not only does it produce commodities which have to be imported, but it directly employs upwards of fifty men.

INVESTIGATIONS, NEW ZEALAND COALS.

The Under-Secretary has represented the Department on the Coal Research Association, and has assisted the staff of the association where possible in carrying out their work.

Space was afforded in one of the buildings on the State Coal premises, Herd Street, Wellington, for the erection of a small experimental briquetting plant purchased by the association. The plant, designed by Yeadon and Son, Leeds, allows quantities of from 30 lb. to several tons of any desired grade of briquette to be made, 1 oz. in weight and of ovoid shape. The maximum output per day of eight hours is $2\frac{1}{2}$ tons. Trials were made of Westport, Paparoa, and Reefton coals singly, and blends of Reefton and Waikato coals with varying quantities of bituminous coal. Briquettes of Westport and Paparoa coal proved excellent household fuel. Those from Reefton No. 4 coal alone were somewhat dull in an open fire, and were greatly improved when blended with 20 per cent. of Westport or Liverpool coal. Excellent though rather quick burning briquettes were made from blends of 80 per cent. Waikato coal and 20 per cent. strongly caking bituminous coal. Further experiments in blending swelling and non-swelling bituminous coals for utilization in gas-making were carried out at the Dominion Laboratory and the results circulated by the Department to all gas companies in New Zealand.

Progress abroad in treatment and utilization of coal, including hydrogenation for the production of oil, has been carefully followed, but during the year nothing outstanding has been put forward that would be applicable under New Zealand conditions.

It is to be regretted that owing to trade depression the coalowners have withdrawn from the Coal Research Association, and that in future coal research will be considerably curtailed.