

NS
622.33
77

Sand and	
Peroxide of	
Alumina	
Sulphate of lime	3.05
Lime	} 0.23
Magnesia	
Phosphoric acid, decided traces	
Manganese, traces	
Chlorine, traces	
	100 00

GAS RETURNS,

By G. Buist, Esq., Manager of Halifax Gas Works,
(On samples furnished by me.)

Gas (average of 4 tests) per ton of 2240 lb. 8200 cubic feet.
Coke 1295 lb., of good quality.
Illuminating power of gas (average of 6 tests) 8 candles.

The details above given explain the well known high favour in which this Coal has been held for upwards of forty years for domestic use, and also for steam producing by those who have employed it carefully.

The amount of ash is 1.29 per cent less than was found by Johnson in the American Navy Trials in 1842-3, so that there is some gain in this important respect. The percentage of volatile combustible matter in my analysis is greater than that given by Johnson, being 31.14 against 23.81, but as he makes no mention of the rate of coking it is impossible to compare closely on this point; it would seem, however, not only from these results, but on comparing the statement by Dawson in 1855, "that the Sydney Coal yields less gas than Picton Coal," and the present yield of gas by Picton Coals, given in the Report of the Geological Survey for 1870, with that of the Sydney Coal in this report, that this last has become of a somewhat more gas producing nature since the date of former examinations. Thus, the average of five trials of the G. M. Association's Albion Mines Coal is stated at 7400 cubic feet per ton, and of the whole 11 trials of these and other Picton Coals at 6955 c. ft., the highest yield, 8000 ft. being from the "Foord" Pit coal, while Mr. Buist finds for the Sydney an average of 8200 c. ft. per ton. The low illuminating power of this gas, however, and the presence of a larger quantity of sulphur