

1. TRIASSIC COALS

These coals are found in the eastern Midlands and south-eastern parts and form the principal portion of the reserves of the State. The maximum number of seams in this system is eight. The thickness of the seams being mined ranges up to six feet. The principal working mines are grouped about the South Esk River between Avoca and St. Marys.

The coals are generally of one type, the semi-bituminous, but show slight variation from district to district.

The range of analysis of the usual type is:

Moisture, 1-4%; volatile matter, 18-28%;
fixed carbon, 42-60%; ash, 15-30%;
sulphur, 0.2-0.6%

A typical analysis may be taken as:

Moisture, 4.3%; volatile matter, 21.27%;
fixed carbon, 51.84%; ash, 22.64%;
sulphur, 0.6%.

The semi-bituminous types have the content of volatile matter as low as 8% and the fixed carbon as high as 60%.

Calorific values range from 9,100 B.T.U. to 12,133 B.T.U. (gross), and it is assumed that a typical figure is 10,145 B.T.U.

The coal is generally non-coking, which restricts its value for gas making. The ash content is rather high, but in spite of this the calorific value is fairly high, and the coal therefore has a use for steam-raising purposes. The coals have ignition points from 125°C upwards, over 60% being over 150°C. They are therefore safe under dangerous conditions and could be used in the pulverised form. The best results would probably be obtained from the coal in this form.

2. PERMIAN COALS

These occur at Preolenna, Barn Bluff, and Mersey River districts in the north-west of the State, and near Cygnet in the south. The coals are generally of the bituminous type, with a tendency towards the variety known as cannel. They contain, in the former two districts, lenses of more typical cannel coal or oil shales known as kerosene shale and pelionite. In the Mersey River district the coals are more typically bituminous. In the Cygnet district the coals have been somewhat metamorphosed and are now of semi-bituminous types.

Typical analyses are:-

	Moisture	Volatile Matter	Fixed Carbon	Ash	Sulphur
Preolenna	1.52	32.46	52.30	13.72	5.87
Illamatha	13.58	36.28	45.30	4.84	4.39
Spreyton	13.42	35.06	46.88	4.64	4.04
Cygnat	1.10	10.36	66.04	22.50	0.41

The outstanding features of the analyses of the coals from Northern Tasmania are their relatively low ash content, their high content of volatile matter and correspondingly low fixed carbon content, and their high content (4-5%) of sulphur.

The calorific values (gross) are :

Preolenna, 12,204 B.T.U.;
 Illamatha, 11,056 B.T.U.;
 Spreyton, 10,711 B.T.U.; and
 Cygnat, 11,336 B.T.U.

Except for the disability of a relatively high sulphur content and excluding the Cygnat seams, the coals are well suited for steam raising, gas-making and domestic purposes.

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