

to another tower. This additional handling is found to pay, owing to the reduction of moisture by drainage.

The amount of water required in circulation is about 2000 gallons per minute, and is supplied by a 12-inch centrifugal pump direct connected to a 12 x 10 vertical engine, running at 250 revolutions per minute. This engine exhausts into a surface condenser, the circulating water of the condenser being used as mentioned above to flush down the coal over the shaking screen.

As originally laid down, a 100 H. P. engine supplied all the power necessary, but now electricity is used for motive power as follows: Crushing house complete, including elevators; one Westinghouse 75-H. P., 60-cycle, 3-phase, 200-volt, 650 revolutions per minute, induction motor; washer house proper, jigs, etc.; 50-H. P. induction motor of the same type; Bernard tower; 30-H. P. 220-volt induction motor.

The following analyses are in each case averages of many determinations, and represent as close an approximation to the actual composition of the products as can possibly be obtained. The raw coals from the separate collieries have been analyzed at regular intervals over a period of several consecutive months and give the following results.

Coll.	Vol. and				
	Moist.	Comb. Mat.	Fix. Carb.	Ash.	Sulphur.
A	4.86	29.11	56.73	14.87	2.14
B	5.96	28.38	57.38	14.23	2.09
C	6.51	23.11	54.27	22.61	2.45
Aver.	5.77	26.87	56.12	17.23	2.23

As the weight of coal received from each colliery for each month was known, the following analyses of the mixture received at the wash plant for each month were calculated, and are as follows:

ANALYSIS OF COAL MIXTURE DELIVERED AT THE WASH PLANT.

Month.	Vol. and				
	Moist.	Comb. Mat.	Fix. Carb.	Ash.	Sulphur.
1	5.62	27.71	56.48	15.93	2.17
2	5.61	27.82	56.50	16.08	2.18
3	5.67	27.75	56.54	15.83	2.16
4	5.69	27.40	56.31	16.43	2.19
5	5.68	27.25	56.28	16.72	2.20
Aver.	5.65	27.56	56.43	16.19	2.18