

TR2-170-171

R. 320

## MERRYWOOD COAL COMPANY

During preliminary operations of the washery at the works of the above company, samples were obtained on the 17th October, 1957, to determine grade and nature of washed coal and screen undersize.

The washing treatment consisted of a spiked roll crusher, crushing coal currently to minus one inch square mesh, and washing of the minus inch coal on two Deister tables. The coal gravitates to a wedge-bar de-watering screen with 1 mm. apertures.

## Washed Coal

	<i>Percent Analysis</i>	<i>Sizing</i>	<i>Percent</i>
Moisture .. ..	3.2	+ 2 mesh, Apt. (7/16)	59.2
V.C.M. .. ..	29.4	+ 4 mesh, Apt. (7/32)	26.8
F.C. .. ..	46.9	- 4 mesh	14.0
Ash .. ..	20.5		
B. Th. Units 11,190	—		

## Screen Undersize

	<i>Sizing</i>	<i>Percent</i>
Ash 57.5	+ 10 mesh	5.1
	+ 30 mesh	41.0
	- 30 mesh	53.9

## EXAMINATION OF PRODUCTS

(Ashes on moisture free basis)

## Washed Coal—Sink-Float Examination

<i>Product</i>	<i>Percent Weight</i>	<i>Percent Ash</i>	<i>Percent Distribution</i>
+ 2 mesh float 1.6 .. ..	56.8	17.9	49.9
float 1.8 .. ..	1.8	47.1	4.2
sink 1.8 .. ..	0.7	68.0	2.3

<i>Product</i>	<i>Percent Weight</i>	<i>Percent Ash</i>	<i>Percent Distribution</i>
+ 4 mesh float 1.6 .. ..	24.8	19.3	23.5
float 1.8 .. ..	1.4	49.8	3.4
sink 1.8 .. ..	0.6	68.6	2.0
- 4 mesh float 1.6 .. ..	12.4	17.0	10.3
float 1.8 .. ..	0.8	48.4	1.9
sink 1.8 .. ..	0.7	73.1	2.5
Composite.. ..	100.0	20.4	100.0
Composite 1.6 float .. ..	94.0	18.1	83.6
Composite 1.8 float .. ..	98.0	19.4	93.1

**Screen Undersize—Sink-Float Examination**

<i>Product</i>	<i>Wght%</i>	<i>Ash</i>	
		<i>%</i>	<i>%</i>
Float 1.6 .. ..	29.3	19.4	9.9
Float 1.8 .. ..	12.6	39.5	8.7
Sink 1.8 .. ..	58.1	80.7	81.4
Composite.. ..	100.0	57.5	100.0

Sizing of 1.6 floated screen undersize.

	<i>Percent</i>
+ 10 mesh (B.S.) ..	3.7
+ 30 mesh (B.S.) ..	54.3
- 30 mesh (B.S.) ..	42.0

**Flotation Test**

A sample was treated by flotation to separate coal from shale using kerosene and cresylic acid. Some of the coal is somewhat large for flotation, and a minor quantity was noted unfloted.

**Results**

	<i>Percent</i>	<i>Percent Ash</i>
Floated Coal .. ..	37.7	33.7
Shale .. ..	62.3	72.9
Composite.. ..	100.0	58.1

The reagents used were cresylic acid (0.4) and kerosene (0.3) lb. per ton of flotation feed.

The white mineral present in the coal as partings has been identified as a hydrous aluminium silicate and is probably kaolin.