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	<u>Wt. % Recovery</u>	<u>Magnetite % Recovery</u>	<u>Ash %</u>
Coal concentrate	63.4	8.7	6.5
Magnetite concentrate	11.5	76.8	-
Reject	25.1	14.5	25.1
	<u>100.0</u>	<u>100.0</u>	

Higher recoveries have been obtained.

LOSSES OF MAGNETITE MEDIUM

There are wide variations in the amount of magnetite consumed. A general average appears to be 0.5 to 1.0 pound per ton of coal for heavy medium bath processes and 1.0 to 1.5 pound per ton for cyclones.

Losses of magnetite are normally governed by:

1. the particle size range of the coal being cleaned (effect of surface area),
2. the pollution of the medium circuit, especially by clay,
3. area and action of the washing screens and the disposition of the wash water (e.g. drops from shower boxes better than fine spray),
4. use of wetting agents to improve washing,
5. magnetic properties of the magnetite, e.g. magnetic susceptibility and coercive force (Use of demagnetising coils may be an advantage),
6. composition of the magnetite and the particle size range,
7. the effectiveness of the regeneration circuit.

PROCESSES

The dense medium separation process is characterised by its ability to handle large feed size, variable feed rates, variable feed grades and large feed particle size ranges. The separatory vessel may be of any shape, a more important factor being the method of product removal.

Floats may be displaced by new feed, transported by overflowing medium, or pushed forward by paddles.