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separators. The magnetic content should be greater than 95 per cent as determined by the Davis Magnetic Tube Tester.

Before use the magnetite must be ground to the required size, after which it should not frit, slime or flocculate since deterioration in these regards would influence viscosity and magnetite recovery. Settling tests may be used to compare new material and material from the washery circuit. Such tests will indicate changes in viscosity due to entrained material, or loss of the fine magnetite fraction. Magnetite should be checked for soluble or chemically reactive material such as marcasite. The magnetite may be ground wet or dry, the latter avoiding the problems of dewatering and drying. While screen analyses may be used as a guide they do not ensure that the material contains the correct proportions of fine material necessary for a stable medium. The following is a guide:-

<u>Separation Density</u>	<u>Percentage minus 44 Microns</u>
1.35 - 1.50	92 - 95
1.50 - 1.80	60 - 65
2.25 - 2.50	45

Typical particle size distribution for two Australian magnetites are compared with an overseas product in the following Table for separations in the range 1.35 to 1.70.

<u>Particle Size (Microns)</u>	<u>Australian Magnetite</u>		<u>Foreign Magnetite</u>
	<u>Sample 1</u>	<u>Sample 2</u>	
208	0.1	0.1	-
147	0.1	0.1	2.0
104	0.4	0.3	2.0
74	1.2	1.3	9.1
44	7.3	16.7	29.4
31	14.7	12.0	10.8
22	12.3	25.8	10.5
16	14.7	12.9	8.3
11	12.0	8.5	8.1
8	7.6	5.3	5.3
- 8	29.6	17.0	16.5
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>