

Subject: Quality of Brake liner.

Investigation into incidents of over-winding/ rough-landing of cages in the winding system in the mines has revealed that the brakes of such winders did not function properly due to use of substandard brake liner.

It is obvious that use of sub-standard brake liner can cause nonfunctioning of brakes in the haulages used widely in the mines. Therefore brake liners conforming to the following standard shall be used in winding and haulage brake system :-

- (1) **General description and construction** : Flexible, solid woven, asbestos based friction material made from yarn spun around brass wires.
- (2) **Physical properties** :
 - (a) Specific Gravity _ 1.65 gm/c.c .+ 0.1 gm/c.c.
 - (b) Tensile strength_ 246 kg,/ cm² ± 4kg/cm²
 - (c) Compressive strength_ 630 kg,/cm² ± 5kg/cm²
 - (d) Rivet holding capacity_ 895± 5kg/cm²
 - (e) Co-efficient of friction_ 0.36± 0.2
- (3) **Suitable for the service condition where** –
 - (i) Operating temperature – 260⁰ C
 - (ii) Maximum continuous temperature - 125⁰ C

While procuring, user industry shall ensure test certificate from the manufactures. The test certificate should mention the batch numbers of the product supplied and each brake liner roll should be marked with –

- (i) Name of the Manufacturer
- (ii) Type
- (iii) Batch No.

As a quality cheek, user Industry may insist fro testing of such brake liner at any test house as agreed between the User Industry and the Manufacture.

The above recommendations shall be complied with strictly in the interest of safety.

Sd/-
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