

Triple Review

Coal Fired Power Plant Rolling Coal Mill / Coal Pulverizer

Rolling Coal Mills provide fine coal for efficient burning. The mills grind the coal into small uniform particles.

Analysis revealed the nature of the contamination was two fold. Particulate originating from coal in the 5-15 micron range and, more importantly, the analysis indicated wear of internal components.

Misalignment was contributing to this wear. As noted in the report; The equipment particle contraction (EPC) of 78,194 was higher than expected for this type of equipment.

Analytical results showed the presence of excessive concentrations of 120 micrometer (um) Cutting/Plowing wear particles. The vast majority of these Cutting/Plowing wear particles were composed of High Carbon (~12%) steel and to a lesser extent medium alloy steel.

The high concentration of this Cutting/Plowing wear particles indicated an alignment problem. The supposition of an alignment problem was further supported by the presence of 30um Copper Alloy (including Brass & Bronze) Rolling Contact (Bearing) wear particles and 25um white non-ferrous metal Rolling Contact (Bearing) particles.

This white non-ferrous metal is most likely Aluminum. However, Nickel, Chrome and Stainless Steel are also other possibilities.

SYSTEM

Volume 475 gal Mobil gear oil 632, ISO VG 320.

RESULTS

The initial sample obtained had an ISO code 21/17/13.

After 1 month with the Triple R filter contamination was reduced to 16/15/12.

After 3 months the cleanliness level was further reduced to an ISO code 15/13/7. Furthermore, the resin was totally removed.

