



Summary



Industry:	Metals
Application:	AM 375 D.C.Crane Motor Modifications
Actual Saving:	£ N/A
Payback Period:	N/A



Motor Failure Prevented by Reducing Contamination

ERIKS makes significant alterations to crane motor to improve product life span

ISSUE

The motor pictured above is fitted on overhead cranes which work above all four main furnaces for a large steel customer. The contamination, containing very fine iron particles, travels up into the atmosphere and drops onto the upper surface of the crane where the motor and gear box are fitted. This contamination causes the brush gear, slip ring and terminal block of the 625KW motor to fail regularly due to the build up of dust penetrating the motor covers.

SOLUTION

After many site visits, discussions and reviewing the atmospheric conditions, ERIKS' recommendations were carried out, with the customer's agreement, and the following modifications were made to the motor:

- Modification to the main top inspection hole by fabricating and welding in place a machine faced flange with 12 threaded studs.
- All the inspection covers were increased in thickness from 5mm to 10mm plate
- Increased the number of side inspection holes from 4 to 14 threaded holes
- The gasket material was changed from 1mm Nebar cork to 3mm rubber for better sealing
- The stator windings were fitted with PT100 Thermistors to monitor the internal temperature
- The mica terminal bar insulation replaced with high temperature G11 epoxy glass tube
- The bakelite terminal flash guards were replaced with high temperature G11 epoxy glass board
- The mica brush gear arm insulation was replaced and covered with high temperature resin glass
- Replaced the stator and rotor supply leads with high voltage/high temperature sewokal cable
- The entry from the terminal box into the stator body was sealed with epoxy putty

OTHER BENEFITS

- Improved uptime
- Positive pollution reduction
- Improved product longevity

FURTHER COMMENTS...

The above modifications realised an improved M.T.B.F.

Electrical Engineer
Large Steel Manufacturer

MORE INFORMATION

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