



## Summary



<b>Industry:</b>	Other
<b>Application:</b>	Partial Discharge Test on High Voltage Motors
<b>Actual Saving:</b>	£50-90,000
<b>Payback Period:</b>	Undisclosed



# ERIKS Carry Out a Partial Discharge Test to Improve HV Motor Reliability

ERIKS Electro Mechanical Service reduce machine failures and loss of production through a Partial Discharge Test

## ISSUE

ERIKS were approached by one of our cement manufacturers and power station clients regarding issues with their raw mill 1500kW 11KV and boiler feed 7087kW 11KV motors. They were brought into the Chesterfield Electro Mechanical Service workshop for inspection and overhaul.

By carrying out a Partial Discharge Test during a high voltage (HV) machine overhaul, ERIKS can detect potential future failure points on the winding main cable and terminal bushing. If remained undetected this would lead to future reliability risks and potential electrical breakdown failure in service.

## SOLUTION

Following an initial examination of the raw mill 1500kW 11KV motors, ERIKS carried a Partial Discharge Test for the cement manufacturer. The experienced HV machine engineers identified that the high discharge was due to the stator cables discharging to parts of the metal frame and support brackets. ERIKS incorporated additional insulation for the stator leads and retested, showing a low partial discharge level.

After carrying out a Partial Discharge Test, it was identified the boiler feed 7087kW 11KV motor was discharging due to the cable end supply lead bushings discharging to a metal terminal plate. This was removed, repaired and replaced with an insulated plate, vastly reducing the partial discharge levels.

The above examples clearly show the benefit of carrying out Partial Discharge Testing of high voltage (above 4000V) stators during overhaul. Without this test the failed areas would not have been highlighted and eventually a break down would occurs causing machine failure, loss of production, fire risk, damage to the winding and other parts of the machine.

## OTHER BENEFITS

- Technical Know-How
- Cost Savings
- Reduced Health and Safety Risks
- Avoided Loss of Production

## FURTHER COMMENTS...

The client is happy with the outcome and reduction in any health and safety risks. In addition, the long term saving will benefit the two customers, operationally.

## MORE INFORMATION

### ERIKS Industrial Services

Amber Way, Halesowen,  
West Midlands B62 8WG

**Tel: 0845 006 6000**

**Web: [www.eriks.co.uk](http://www.eriks.co.uk)**