

GENERAL INFORMATION

INDUSTRY

Energy and gas

MACHINE

Synchronous generator – 6,3 MVA

TECHNOLOGY USED

Electrical measurements / Visual inspection

PROBLEM ENCOUNTERED

Following an inspection check done during a partial overhaul, a high level of contamination of the windings of the stator and the rotor was discovered. The value of the isolation resistance and of the polarization index (IDP) was notable but within the limits of conformity.

Generator



RESULTS OF ANALYSIS

DIAGNOSIS

The modest value of the isolation resistance and of the polarization index (IDP) was probably caused by the raised level of contamination present on the windings.

EVALUATION

Serious

RECOMMENDATIONS

To plan a procedure of cleaning the rotor and stator windings at the earliest programmed shut-down.

Generator – stator and rotor windings contamination



RESULTS OF ACTION TAKEN

RESULTS OF INSPECTION / CHECK UP

Subsequent tests on the alternator after the cleaning process, highlighted an improvement in the isolation resistance and the polarization index (IDP).

AVOIDED OCCURENCE

Potential damage to the machine due to the degraded condition of the insulation of the rotor winding.

AVOIDED DOWNTIME

Data unavailable

COST BENEFIT OF LOST PRODUCTION AVOIDED

Data unavailable

Generator – stator and rotor windings contamination

