

## CASE STUDY

### Critical motor, short lead time requirement and limited technical information available

#### CHALLENGE

Our customer was awarded a contract to carry out a stator rewind of a critical synchronous motor rated 4500HP, 13.2kV, 514 RPM machine used by a large Aggregates company. Due to production constraints, a tight outage window for the rewind was imposed which meant that a set of coils needed to be procured in advance of the motor being taken out of service.

Although winding data was available for this motor, it was found that some of the critical measurements were in doubt. The challenge in this case was to somehow validate the winding data so that a complete set of Resin Rich stator coils could be manufactured prior to the outage, that were guaranteed to fit in the stator.

#### SOLUTIONS

Using an original spare coil supplied by the customer, Preformed Windings were able to confirm the winding data using a precise mock up fixture to model the actual stator. Any discrepancies in the winding data were quickly identified and corrected based on the information taken from the stator mock up.

The Preformed Windings team was able to provide a coil design for a replacement set of Resin Rich stator coils. Since it was possible for the winding data to be validated, Preformed Windings was very confident that the new coils would provide a good fit in the stator to ensure a problem free rewind.

A detailed set of CAD drawings was sent to the customer for their review and acceptance prior to commencement of the coil production.

#### BENEFITS

- a faster turnaround time on the rewind could be offered
- high quality rewind carried out on critical motor
- QualCoil HV diamond coil specification results in longer service life of machine

#### AT A GLANCE

##### Challenges

- short repair turnaround time
- missing and inaccurate coil data
- critical motor requiring high-quality repair

##### Benefits

- shorter machine downtime
- coils designed for long service life
- avoided delay by identifying data errors



“This rewind project was a resounding success for our company and we could not have achieved this outcome without the excellent support of Preformed Windings. It was a pleasure working with the Preformed Windings team right from the design phase to delivery and then onto the installation of a high quality set of coils”

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