



3730 kW (5000 hp), 2000V, 16 Pole, Slip Ring Induction Motor for Placerdome, South Deep Shaft

This motor is critical for the operation of this mine. When the motor failed, the mine knew that they had to contact the repairer with the reputation of being the fastest in the industry: Marthinusen and Coutts. The M&C engineering services division with our skilled site technicians assisted with the fault finding on site as well as with the disconnecting and removal of this ac electric motor.

This electric motor was transported to M&C to do a breakdown rewind, using M&C's proven full class F insulation system, based on the resin rich system.



Due to the size of the motor, it cannot be transported to the installation location in one piece. This General Electric motor is huge and the stator frame is split into two halves. This is another reason why a global VPI insulation system would not be practical. With the M&C coil manufacturing team's experience and the skills of our armature winders this requirement for a Resin Rich MV insulation system did not pose any difficulty.



The new Resin Rich coils are inserted into the stator core.



Our skilled armature winders insert the coils. This picture gives perspective on the size of this motor.



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After the winding of the stator frame has been completed, the connections are braided and taped to complete the class F insulation system.
(Remembering that this is one of the four specialised insulation systems M&C use, being a Resin Rich insulation system.)



Because of the size of the ac motor, it has to be turned on it's side in order to join the connections.



Here we can clearly see the section of the core where the stator coils are inserted, but now wedged. The reason for this is: This winder motor is so large that it cannot be transported down into the gold mine in one piece. The stator frame is thus split into two halves. The coils over the halving joints of the stator frame will then be removed. M&C's field service technicians will then wind these stator coils on site and conduct all