

### Motor Heater circuit electric shock

#### What happened?

During maintenance on a gas turbine the gearbox was to be removed along with the DC and AC lube oil pump motors servicing the gearbox.

The tasks were covered under Access Permit and isolations for the lube oil pump motors had been applied with circuit breakers isolated and checked.

The IP electrically disconnected the DC lube oil pump motor and disconnected the 415VAC lube oil pump motor without issue. He discovered a second smaller terminal block and assumed it was a low voltage thermistor for the motor and disconnected it, failing to check it was deenergised, and received an electric shock and burn to the palm of his left hand, when he touched a live conductor on what was an unisolated 230VAC motor heater circuit.

### Bay of Plenty

#### What did we learn?

Stop work and reassess the hazards and controls should the work scope change.

IP misidentified equipment and subsequently failed to test it was deenergised (*Electricity (Safety) Regulations 2010. Regulation 100 makes it mandatory to comply with standard AS/NZS 4836*). Always check a circuit is deenergised before working on it.

Motors can have more than a single power source. Ensure when applying isolations that this is understood.

To help with this understanding ensure

- Electrical drawings for motors with heaters or other circuits carry a warning and drawing reference to the heater or other circuit.
- All motors with heaters or other circuits carry a label stating this at the terminal box.

