



Procedure

Preventing Electrical Incident Due to Ingress of Water or Other Conductive Material

Key Control Data Sheet

Procedure Number: RSK-PRO-KCD-231

Scope of Application: Ok Tedi Mining Limited

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Document Owner: Manager – OHS & Training

Why is the Control Important –

Use of electrical enclosures, switches and outlets / sockets that are rated for protection against ingress, and subject to planned maintenance and inspection programs to maintain their ingress protection rating, is critical in preventing severe electric shock as a result of ingress of water, conductive materials or corrosive chemicals into electrical equipment.

Exemption – No exemptions permitted.

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Operational Requirements

1. Performance Metrics

Electrical equipment (e.g. enclosures, switches, sockets, outlets etc.) containing live electrical conductors are rated for the level of ingress protection relevant for the area.	Extension leads are located so that plug and socket connections are not subject to ingress from water or other liquids.
Approved extension leads and power tool leads are fitted with plugs rated for the level of ingress protection relevant for the area.	Electrical equipment and components, including fixed and portable, are subject to a planned maintenance and inspection program which includes maintaining the ingress protection rating of the equipment.

2. Utilisation

Required in all areas where electrical equipment and components may come into contact with water, conductive materials or corrosive chemicals.

3. Safety Critical Defeat Requirements

Equipment that does not meet the required ingress protection rating for the area must be approved for use by the Responsible Electrical Engineer (REE), and the conditions of use defined.

Duration of approved use must be noted in the approval documentation.

4. Testing & Verification

Compliance of electrical equipment with the required ingress protection rating for the area must be audited as part of the annual HSE auditing cycle.

Records of the maintenance and inspection of electrical equipment and components must be kept and audited as part of the annual HSE auditing cycle.

5. Maintenance

Electrical equipment and components, including fixed and portable, must be inspected and maintained in accordance with the established program.

6. Training & Competency

People performing maintenance or inspection activities on electrical equipment must be competent in the required tasks.

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Task Requirements

The following are the key day to day requirements operators/maintainers and supervisors must follow to ensure the control is being used correctly.

1. Task Requirements

No.	Supervisor	Operator/Maintainer
1	Verify that electrical equipment brought into the area has the correct ingress protection rating for the area.	Inspect electrical equipment, including enclosures, switches, sockets, plugs etc, before use for condition and inspection / expiry date.
2	Verify that electrical equipment has been inspected and maintained in accordance with the established program.	Report signs of electrical equipment damage to a supervisor.
3		Locate extension leads to prevent contact with water and other liquids.
4		Do not use unprotected electrical equipment in wet or corrosive environments.

2. Skills Requirements

No additional requirements.

3. Permits

No additional requirements.

4. Task Specific PPE Requirements

No additional requirements.

5. Special Task Related Tooling

Electrical tools and equipment brought into an area must have the minimum ingress protection rating for the area.

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Design Requirements

1. Design Standard

Local or international standards for ingress protection of electrical equipment e.g.:

- IEC 60529 – Degrees of protection provided by enclosures (IP Code)
- NEMA 250 – Enclosures for Electrical Equipment (1000 Volts Maximum)

2. Safety Parameters

Ingress protection ratings must be determined with consideration to the likely environment to which the equipment may be exposed (e.g. outdoor location, potential for hose down, chemical ingress etc).

3. Design Life

Not applicable.

4. Safe Separation

Not applicable.

5. Special Requirements

No additional requirements.