

# Manufacturing Drainage Bond Panel in Workshop

Issue date: 27/02/08

Review date: 21/02/11

<b>SWMS number:</b> <b>SMS-06-SW-1116</b>	<b>SWMS Name:</b> Manufacturing Drainage Bond Panel			<b>SWMS Team:</b> Emilio Carreto, Paul Greenwood, Cynthia Lee
<b>Custodian (Position):</b> Electrolysis Engineer	<b>Assumptions:</b> Task undertaken inside Homebush Electrolysis Workshop			<b>Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group)</b> Maurizio Di Bartolomeo, Manager Network Monitoring
<b>Approving Authority (Position):</b> Manager Network Inspection	<b>Plant/Equipment/Tools:</b> <ul style="list-style-type: none"> <li>Power Drill</li> <li>Pliers</li> <li>Shifter/s</li> <li>File/s</li> <li>Screwdriver</li> <li>Emery Cloth</li> <li>Cutters</li> <li>Hacksaw</li> </ul>	<b>Records/Reporting:</b> <ul style="list-style-type: none"> <li>SMS-06-SW-0479 Power Drills</li> <li>Plant &amp; Equipment Inspection and Maintenance</li> <li>SMS-06-FM-0278 Electrical Equipment Inspection &amp; Test Record</li> </ul>	<b>Permits/licences required:</b> NA	<b>PPE required:</b> <ul style="list-style-type: none"> <li>Safety Boots,</li> <li>Protective Clothing -long sleeve Shirt and long trousers,</li> <li>Low Impact Safety Glasses</li> <li>Insulating Gloves</li> </ul> PPE Guide SMS-06-GD-0323
<b>Applicable Standards, Codes of Practice and guidance:</b> <ul style="list-style-type: none"> <li>OHS Regulation 2001</li> <li>Electrolysis Services Procedures R77P03</li> <li>Electrolysis From Stray DC Current EP 1230 00 01SP</li> <li>WorkCover Code of Practice for Low Voltage Electrical Work</li> </ul>	<b>Inspection requirements</b> Prestart visual inspection of leads for damage and check safety switch is working 6 monthly test of leads and appliances	<b>Service schedule:</b> Electrolysis Engineer	<b>Training/Qualifications required:</b> <ol style="list-style-type: none"> <li>RISI Rail Industry Safety Induction</li> <li>Rail Safety Protection Officer Class 1</li> <li>Electrical Safety Awareness</li> <li>ACA NSW Authorised Tester Certificate</li> </ol>	

# Manufacturing Drainage Bond Panel in Workshop

Issue date: 27/02/08

Review date: 21/02/11

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed In accordance with (name associated documentation)
1	Drainage Bond Panel Construction: Determine tools for task and assemble on bench	Electrical shock due to defective power tool	C+	<ul style="list-style-type: none"> <li>• Inspection of lead and plug for damage before use</li> <li>• Check safety switch before use and test 6 monthly</li> <li>• Ensure tool/s clean and dry</li> <li>• Testing and tagging 6 monthly</li> </ul>	D	Electrolysis Technician	SMS-16-SR-0057 Inspection and Testing
		Cuts and abrasions due to sharp corners & edges	C+	<ul style="list-style-type: none"> <li>• file sharp edges corners</li> <li>• wear gloves</li> <li>• care in handling tools</li> </ul>	D	"	SMS-06-GD-0323 PPE
2	Select correct size panel board	Minor cuts from panel board	C+	<ul style="list-style-type: none"> <li>• file sharp edges corners</li> <li>• wear gloves</li> </ul>	D	"	SMS-06-GD-0323 PPE
3	Mark out and drill holes in panel	Electrical shock from faulty drill	B+	<ul style="list-style-type: none"> <li>• Safety switch installed</li> <li>• checked tag and visual inspection before use</li> <li>• ensure drill in clean and dry condition</li> </ul>	C+	"	SMS-16-SR-0057 Inspection and Testing  SMS-06-SW-0479 Power Drills
		Cuts from mishandling drill or template	C+	<ul style="list-style-type: none"> <li>• due care in handling drill &amp; template</li> <li>• wear gloves</li> </ul>	D	"	SMS-06-GD-0323 PPE
4	Mount all hardware and components e.g. lamps, resistors, bolts, nuts, electrical wire for connection	Cuts and abrasion to hands from mishandling hand tools, heat sink, brackets and wire ends	C+	<ul style="list-style-type: none"> <li>• due care in handling pliers, shifters &amp; screwdrivers</li> <li>• dress sharp edges with Emery cloth prior to installation</li> <li>• PPE wear insulation gloves</li> </ul>	D	Electrolysis Technician	SMS-06-GD-0323 PPE
		Foreign body to eyes	C+	<ul style="list-style-type: none"> <li>• Wear low impact safety glasses</li> </ul>	D	"	SMS-06-GD-0323 PPE

# Manufacturing Drainage Bond Panel in Workshop

Issue date: 27/02/08

Review date: 21/02/11

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed In accordance with (name associated documentation)
5	Final testing drainage bond panel	Electrical Shock from faulty tool and power point	B	<ul style="list-style-type: none"> <li>• safety switch installed</li> <li>• handling test supply connection &amp; controls only when required</li> <li>• due care not to touch potentially hot resistors &amp; lamps</li> <li>• visual inspection</li> </ul>	C+	"	SMS-16-SR-0057 Inspection and Testing  Electrolysis From Stray DC Current EP 1230 00 01SP
		Burns to hands and fingers	C+	<ul style="list-style-type: none"> <li>• PPE wear insulation gloves</li> </ul>	D	"	SMS-06-GD-0323 PPE

# Manufacturing Drainage Bond Panel in Workshop

Issue date: 27/02/08

Review date: 21/02/11

**NOTE: Each work group or team member must sign off on the SWMS to acknowledge they have been briefed about or instructed in the SWMS**

Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date	Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date

# Manufacturing Drainage Bond Panel in Workshop

Issue date: 27/02/08

Review date: 21/02/11

RailCorp Level 2 Risk Matrix - Regional & Local (Workplace)		Likelihood/Frequency							<u><b>Definition for Use - Regional &amp; Local level (Workplace)</b></u>
		Event Frequency	Less than once every 1000 years	Once every 100 to 1,000 years	Once every 10 to 100 years	Once every 1 to 10 years	More than once per year up to and including 10 times per year	More than 10 times per year	
		Historical (Likelihood)	Unheard of in the rail industry	Has occurred once or twice in the rail industry	Has occurred many times in the rail industry, but not in NSW	Has occurred once or twice in NSW	Has occurred frequently in NSW	Has occurred frequently at specific locations	
Consequence		Workplace Predictive (Likelihood)	Not expected to occur	May occur only in exceptional circumstances	Could occur at some time but not likely	You would expect it to occur at least once in the next 10 years performing similar activities	You would expect it to occur at least once this year performing similar activities	You would expect it to occur at least once this month performing similar activities	As an example, the Level 2 scale would be used when examining the risk of slips, trips and falls on specific RailCorp platforms within a region or at a particular station, or the risk of fire within a depot.
			F1	F2	F3	F4	F5	F6	
Consequence		Incredible	Improbable	Remote	Occasional	Probable	Frequent		There are 3 options for descriptors which can be used to determine the frequency category. One set of descriptors is provided for frequency, one for historical likelihood, and one for predictive likelihood in the workplace. Choose the most appropriate.
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A	To score the risk, follow the steps:
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	A	1. Identify the magnitude of the credible consequence if the risk were to occur. If applicable, risks should be considered in terms of the safety (this matrix), commercial and environmental impact (using other matrices).
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A	2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A	3. Score the risk using the combination of likelihood and consequence ranking.
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+	Note: Where there are a range of credible consequences which may lead to a different level of risks and/or where the controls may be different. It may be useful to score the risk more than once.
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-	