Remediation Guideline **Asset:** Conveyor CV815
Defect ID: SC-31 **Location:** Chute gate

Purpose: This document outlines the governance framework, procedures, and compliance requirements for the Repair of the Bolted Connection (Defect ID: SC-31) on Conveyor CV815 located at Chute gate. The repair process addresses structural damage caused by continuous mining operations and degradation over time, ensuring compliance with Australian Standards.

Scope: The guideline involves the repair of the existing Bolted Connection to restore functionality and structural integrity, followed by post-repair inspection and testing, and the application of protective coatings in compliance with relevant Australian Standards. All activities shall be undertaken to restore structural integrity and ensure safe operation of the Conveyor CV815.

Asset Code: Conveyor CV815

Reference Drawings:

- J641MCA001-9
- J641MCA001-7

MATERIAL RISKS, HAZARDS AND CONTROLS		
Risk	**Description of Risk**	**Critical Controls**
	Hot conditions	Consider the local site conditions and assess the risk of heat stress and dehydration. Follow the prescribed procedure, assess the risks associated with working in hot conditions and implement control measures plus any rescue or first aid measures.
	Manual handling	Follow the prescribed procedure and wear prescribed PPE, assess the risks and implement control measures.
	Uneven or loose ground	Visually check the work area prior to commencing task and remove any trip hazards.
	Loud noises	Wear (double) hearing protection as required.
	Pinch points	Consider the local site conditions and assess the risk of pinch points. Assess the risks of injury or harm and implement control measures.
	Dropped objects	Secure tools and materials at heights, use toe boards and debris nets, conduct exclusion zone planning.

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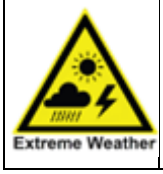
MATERIAL RISKS, HAZARDS AND CONTROLS

Risk	Description of Risk	Critical Controls
	Extreme weather incident	Develop and implement severe weather policies, ensure access to shelter, and provide training for weather-related emergencies.

ADDITIONAL PPE REQUIRED

 Foot Protection	 Head Protection	 Breathing Protection	 Protective Clothing	 Safety Harness	 Eye Protection	 High Visibility	 Hand Protection	 Face Protection	 Hearing Protection	 Sun Protection
X	X	X	X		X	X	X	X		

SPECIFIC COMPETENCIES, KNOWLEDGE AND SKILLS REQUIRED

1. Structural and Welding Personnel

- Proficiency in AS/NZS 1554 welding standards for structural repairs.
- Knowledge of oxy-fuel and plasma cutting techniques for structural modifications.
- Experience in material thickness assessment and patch reinforcement.

2. Site Engineers and Inspectors

- Understanding of AS 4100 steel structure requirements for column installations.
- Competency in non-destructive testing (NDT) to assess weld integrity.
- Knowledge of load-bearing principles and steel member replacements.
- Ability to interpret structural drawings and verify compliance during structural repairs.

3. Safety Officers and Risk Management Personnel

- Certifications in risk assessment methodologies and emergency response planning.
- Familiarity with hot work permitting, atmospheric monitoring and site safety protocols.

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TOOLING AND EQUIPMENT REQUIRED
Removal Equipment
Torque wrench
Abrasive blasting equipment
Degreasing agent
Oxy cutting torch
Installation Equipment
Torque wrench
Alignment tools
Welding equipment
Paint sprayer

DEFECT INFORMATION
Description
Corrosion observed in the gate of the head chute along bolted connections. The defect is likely caused by prolonged exposure, leading to material degradation and potential weakening of the bolted connections. If left unaddressed, this condition may result in loosening of bolts, structural instability, and operational disruptions. Recommended corrective actions include applying anti-corrosion treatments, replacing compromised bolts, and reapplying protective coatings. Monitoring and periodic reassessment are advised to prevent further deterioration and mitigate associated risks.
Risk Rating
Major [13]

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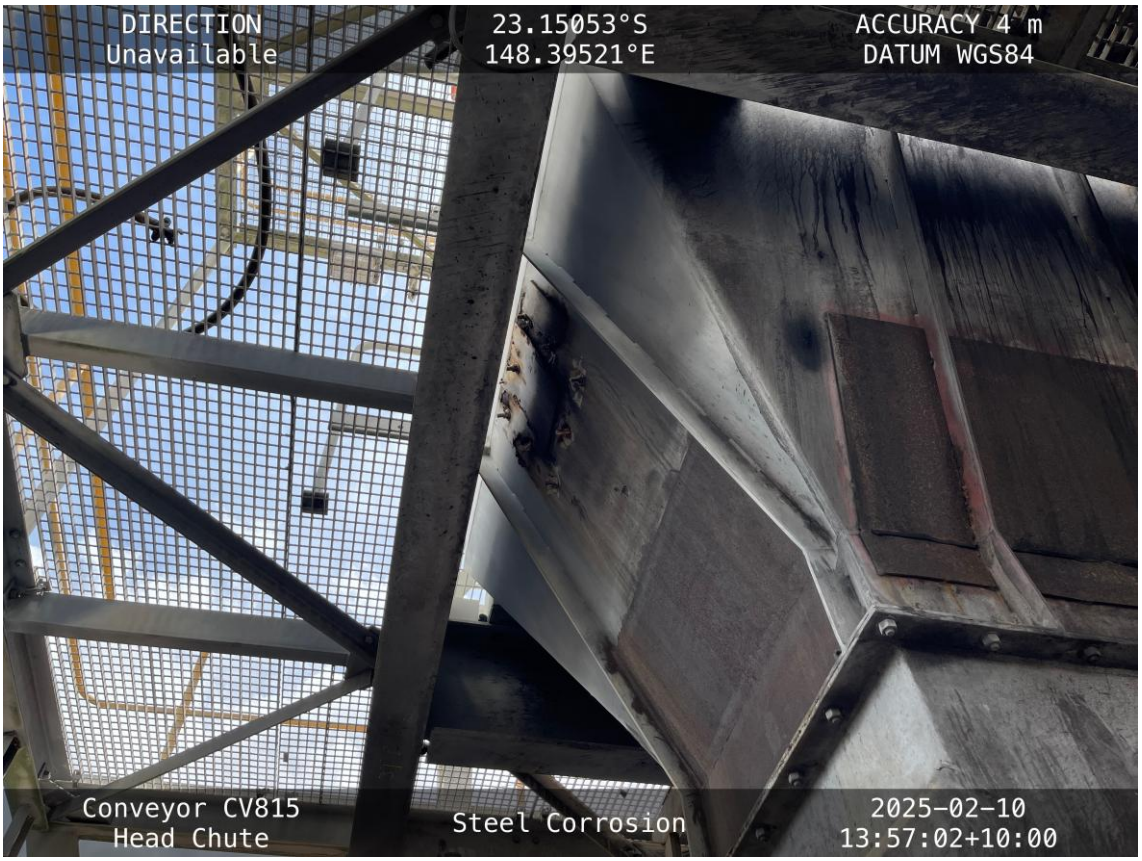
DEFECT INFORMATION



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DEFECT INFORMATION

Remediation Guideline **Asset:** Conveyor CV815
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REMOVAL AND REPAIR OF DAMAGED STRUCTURAL MEMBERS
Phase 1: Pre-Tasks
Conduct a Job Safety Analysis (JSA) review focusing on the risks associated with working at heights and handling heavy equipment.
Set up scaffolding with secure access to the chute gate third level east of Conveyor CV815, ensuring stability and compliance with AS/NZS 1576.
Check all repair equipment and tools, including abrasive blasting units, welding machines, and torque wrenches, to ensure they are in good working condition.
Verify the calibration of torque tools and welding equipment against AS4100 and AS/NZS 1554.1 standards.
Establish a safety perimeter with signage and barriers to prevent unauthorized access to the repair site.
Phase 2: Assessment Phase
Inspect the bolted connection and surrounding area for the extent of corrosion and structural integrity.
Document the condition of existing bolts, noting any that are severely corroded or loosened.
Measure and record the alignment and gap tolerances of the bolted connection against specifications in AS4100.
Assess the need for replacement of bolts or addition of reinforcement based on the structural degradation observed.
Determine the surface preparation requirements for effective welding and coating adherence.
Phase 3: Preparation Phase
Isolate the repair area by masking off non-target surfaces with fire-retardant sheeting and masking tape.
Perform abrasive blasting on the bolted connection to achieve a class 2½ finish, removing all rust, scale, and old coatings.
Clean all mating surfaces (flanges, splice plates, washers) using a wire brush or solvent to remove oil, rust, paint, or debris.
Apply a solvent degreasing agent if necessary to ensure a clean surface for effective welding and bolting.
Verify surface cleanliness and anchor profile depth in accordance with the coating manufacturer's technical datasheet.
Phase 4: Repair Phase
Position and align new or cleaned bolts through the aligned holes, hand-tighten nuts to bring components into firm contact.
Using a calibrated torque wrench, tighten bolts to the specified torque values as per AS4100, ensuring washers are placed under turning elements.
Weld reinforcement plates to the bolted connection area, ensuring surface roughness and fit-up tolerances meet AS/NZS 1554.1 requirements.
Apply tack welds at corners and mid-points of the reinforcement plates to secure them before completing full welds.
Inspect welds visually to ensure they are continuous and free from defects such as cracks or porosity.

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REMOVAL AND REPAIR OF DAMAGED STRUCTURAL MEMBERS
Phase 5: Finishing Phase
Apply a single stripe coat of anti-corrosion paint to all welded and blasted surfaces, ensuring full coverage.
Complete the application of protective coatings following industry standards to prevent future corrosion.
Conduct a final visual inspection to verify the integrity of the repair and the completeness of the protective coatings.
Remove all masking materials and clean the repair area of any residual debris or blasting media.
Dismantle scaffolding and clear the site, ensuring all tools and equipment are accounted for and stored properly.

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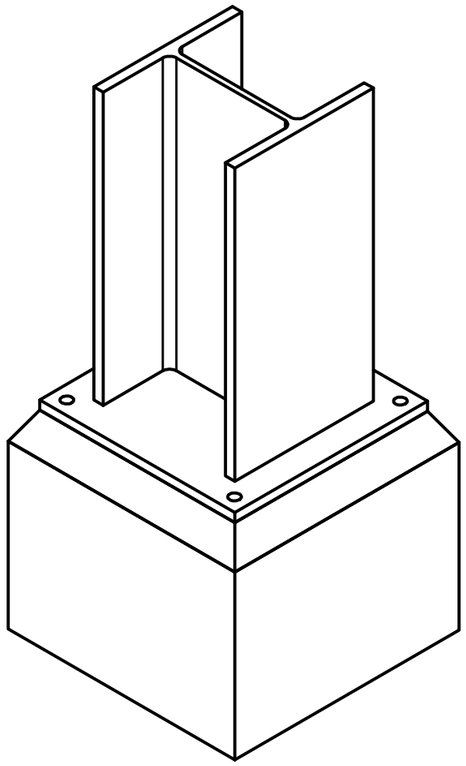
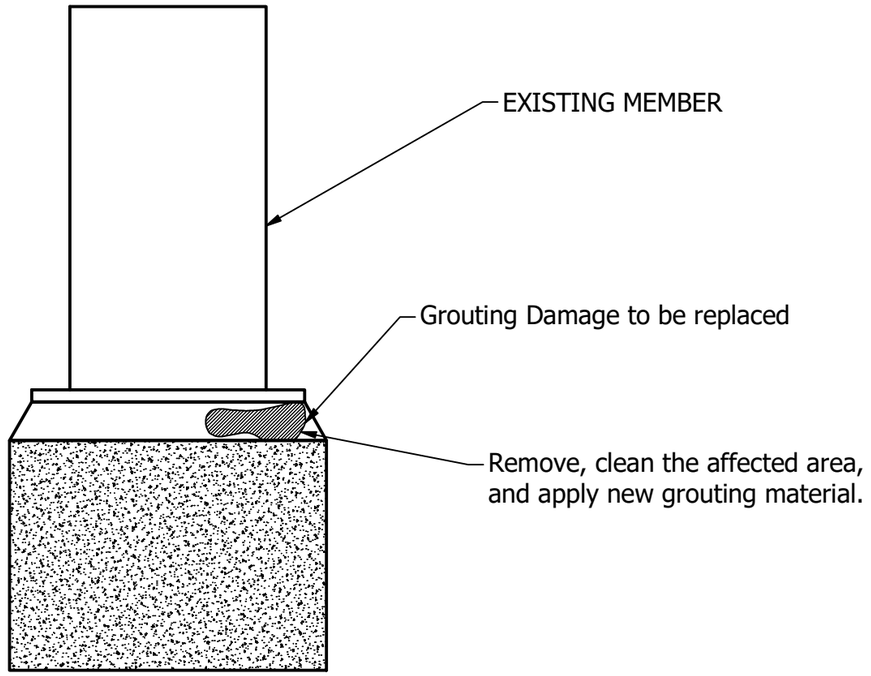
MATERIAL LIST			
Item	**Dimensions**	**Quantity**	**Total Cost**
Steel Plate Grade 300	200x200m2	2	$ 7,04
GMA Garnet 30/60 mesh	3m2	-	$ 105,00
Welding Wire E7018	0.4kg	-	$ 20,00
Primer (Zinch-rich Epoxy) Intermediate (Epoxy) Topcoat (Polyurethane)	4m2	-	$ 280,00

LABOUR COST		
Labour	**Hours**	**Total Cost**
General Labour	12	$ 792,00
Painter Labour	12	$ 792,00
Sandblasting Labour	12	$ 1056,00
Rigger Labour	16	$ 1496,00
Dogger Labour	8	$ 660,00
Boilemaker Labour	16	$ 1584,00

COSTS SUMMARY	$	AUD
Material Cost	**$**	**412,04**
Indirect Material Cost	**$**	**460,19**
Labour Cost	**$**	**6380,00**
Indirect Labour Cost	**$**	**3593,20**
Total Cost	**$**	**10845,43**



ISOMETRIC VIEW
SCALE 1 : 8



FRONT VIEW
SCALE 1 : 8

GENERAL NOTES:

1. ALL CONCRETE REMEDIATION WORKS TO COMPLY WITH AS 3600, AS 5215, AS 3735 & RELEVANT MANUFACTURER DATA SHEETS U.N.O.
2. PRIOR TO REPAIR WORKS, ALL DEFECT AREAS TO BE IDENTIFIED, MARKED, AND CONFIRMED BY THE SITE ENGINEER.
3. PROVIDE PROTECTION TO ADJACENT SURFACES, FIXTURES, OR STRUCTURAL ELEMENTS DURING REPAIR OPERATIONS.
4. CARRY OUT CONCRETE REMOVAL USING MECHANICAL MEANS THAT PREVENT DAMAGE TO SOUND CONCRETE OR REINFORCEMENT.
5. APPLY APPROVED CORROSION PROTECTION TO EXPOSED STEEL WHERE REQUIRED, IN STRICT ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.
6. DRILL AND FIX ADDITIONAL BARS WHERE DIRECTED TO RESTORE STRUCTURAL CAPACITY OF CORRODED SECTIONS.
7. PRIOR TO PATCHING, ENSURE SUBSTRATE IS CLEAN, STRUCTURALLY SOUND, AND FREE OF DEBRIS.
8. SURFACE FINISH OF PATCHES TO MATCH SURROUNDING CONCRETE IN TEXTURE AND PLANE.
9. PROTECT FRESHLY PLACED REPAIR MATERIAL FROM WIND, DIRECT SUNLIGHT, VIBRATION AND EARLY DEHYDRATION.
10. CURE ALL PATCHES IN ACCORDANCE WITH MATERIAL SUPPLIER'S INSTRUCTIONS; MINIMUM 7-DAY CURING FOR CEMENTITIOUS MORTARS.
11. GROUT REPLACEMENT SHALL BE CARRIED OUT UNDER SUPERVISION; CLEAN BASEPLATE SURFACES AND MAINTAIN CORRECT GAP WIDTHS.
12. DO NOT PLACE ANY LOADS ON REPAIRED AREAS UNTIL STRENGTH REQUIREMENTS ARE MET OR MINIMUM CURING TIME HAS ELAPSED.
13. ALL DIMENSIONS ARE IN MILLIMETRES.
14. DO NOT SCALE DRAWINGS.
15. SEE THE DOCUMENT "J641-Remediation Guideline Defect" BEFORE CONSTRUCTION.

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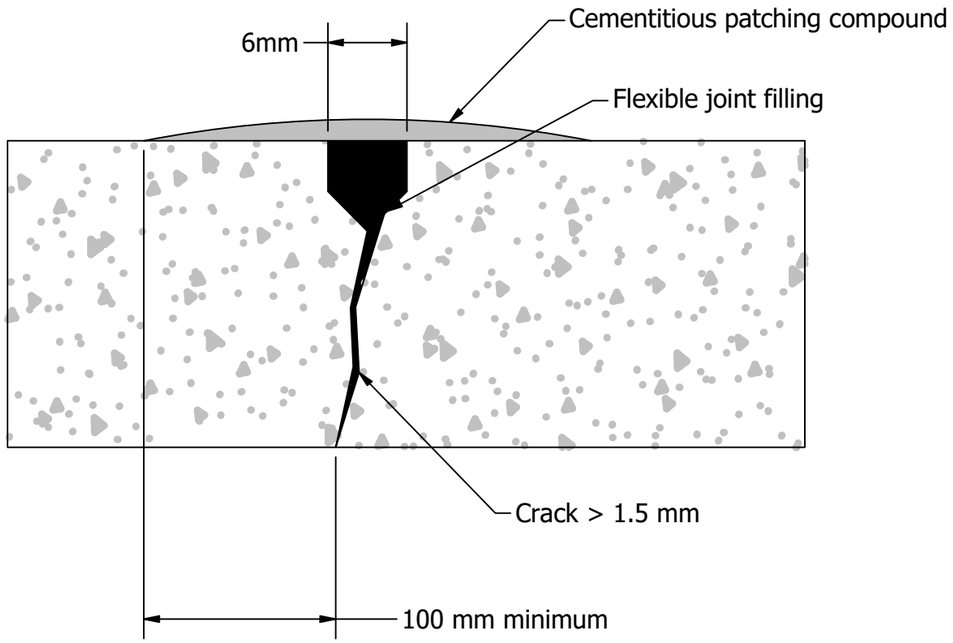
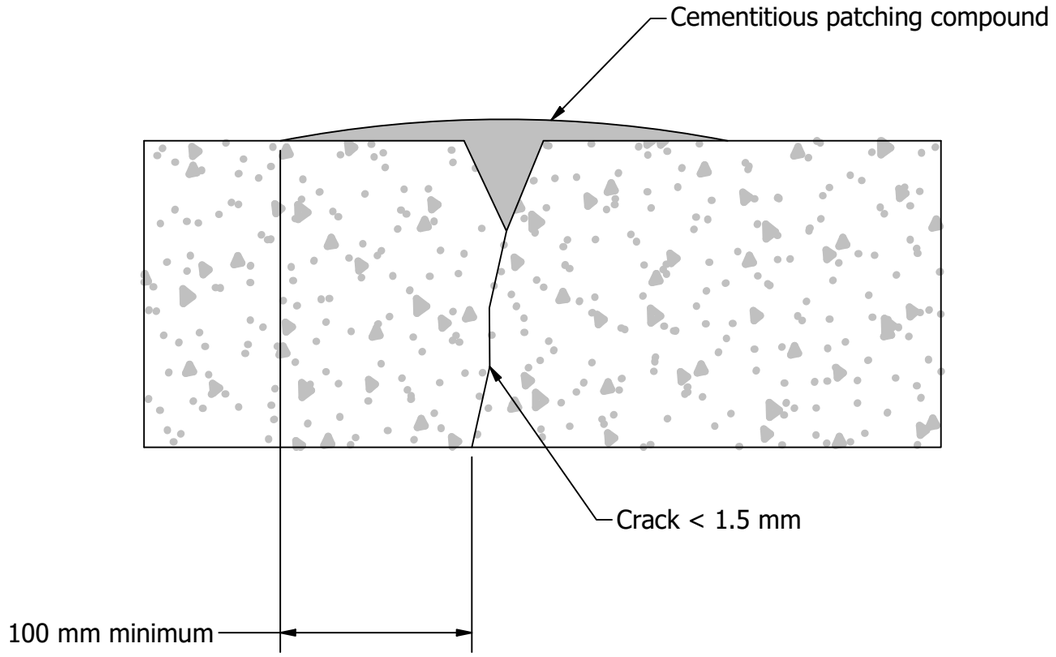
					CHECKED	JD	16/04/2025	SHEET	1 OF 1		
CLIENT	Sojitz	LEVEL 27 101 COLLINS ST MELBOURNE, VIC 3000 AUSTRALIA PHONE +61 3 9653 9647 INFO@MINCKA.COM.AU		DO NOT SCALE 3RD ANGLE PROJECTION ALL DIMENSION IN mm UNLESS SHOWN OTHERWISE	APPROVED	RC	16/04/2025	SCALE	1 : 8	Structural Defect Closure Gregory Coal Mine Repair Defect	REVISION 0
CONTACT	Jodie Belleville				MATERIAL	SEE PARTS		MASS (KG)	SEE PARTS		





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