

MA'ADEN ALUMINUM

Mine and Refinery

Spent Liquor Tank Change_001

Document No: 001
Revision: 0.0
Date of Issue: [dd MMM yyyy]

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**STANDARD WORK INSTRUCTIONS**

Area: department

001
Revision #: 0.0
Date Published: dd MMMM yyyy
Date Revised: 09 January 2018

Sub-Area: area

Spent Liquor Tank Change_001Author: John Doe
Reviewer: Tom Smith
Approver: Jane Smith / Supervisor**REVISION HISTORY**

Rev.	Date	Change Summary	Author	Reviewer	Approver
[X]	dd/mm/yyyy	[Put summary of changes made in the document]	[Put name here]	[Put name here]	[Put name here]

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1. PEOPLE AND EQUIPMENT




REVIEW ALL SAFETY ASPECTS BEFORE STARTING WORK

Table 1: PEOPLE AND EQUIPMENT

No.	Requirements	Details
1	Pre Start Checks	Ensure CRO is aware of spent liquor tank change. Check the condition of pipe work and spent liquor tanks. Ensure all tags & locks are removed from isolation points. Check no outstanding work orders are open on equipment to come into service.
2	2 way radio	Radio communication with control room must be maintained
3	Personnel.	CRO - Control Room Operator FO - 2100 Area Field Operator x 2. FO2 - 2200 Area Field Operator x 2. FO3 - 4200 Area Field Operator x2 MC - Maintenance Crew
4	Specific PPE for task 	Standard Area PPE
5	Equipment / Tools	Valve operating Wheelie tool, Hammer
	Barricade	Area to be barricaded when swinging blinding stations and draining lines down
	Isolation & Tagging	Isolation Tagging Permit adhered to

2. PRE-START HAZARD REVIEW

Table 2: PRE-START HAZARD REVIEW


Type	Details	Controls by
	Pump change	Ensure equipment brought online is stable prior to removing equipment from service
	Liquor spray Blinding Stations	Ensure lines are drained down prior to swinging Blinding Stations.
	Cross area service lines	CRO to ensure communication between different area's when bringing connecting

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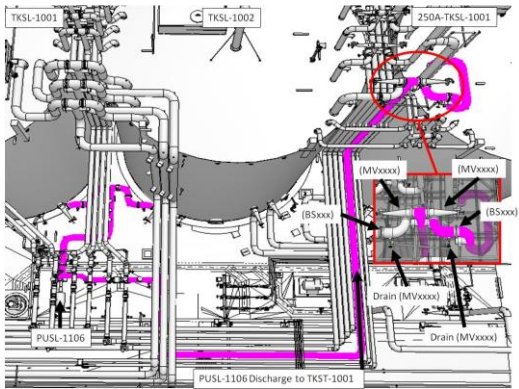
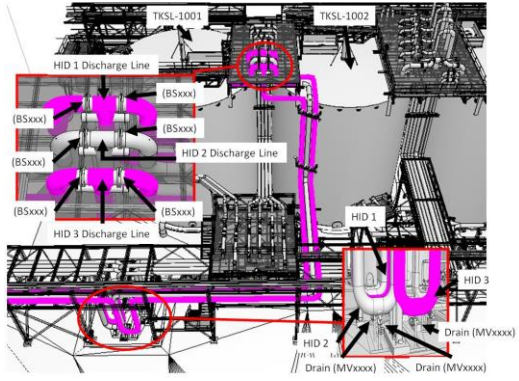
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		equipment online.
	Sump area	Ensure draining of Spent Liquor Tank does not flood the sump area

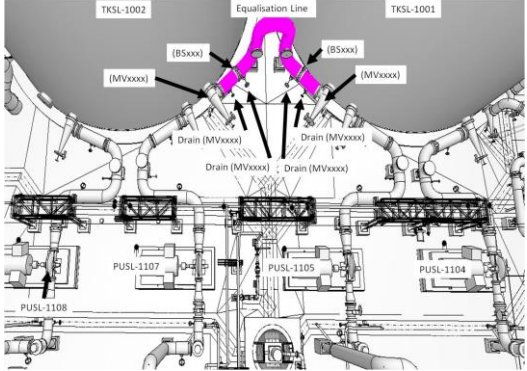
3. TASK DETAILS: Procedure Name

Step No.	By	Tasks	Figure
1.		To use 210 overview screen to monitor and input data of equipment in 2100 facility.	 <p>Figure 1: Pump1</p>
2.		<ul style="list-style-type: none"> Unit 1 Train 1 or Unit 1 Train 2 Evaporator to be off line to commence this task. INFORM field operator of intended Spent Liquor Tank change. MONITOR! levels, flows and pump amps for the duration of this task. 	 <p>Figure 2: Pump2</p>

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Step No.	By	Tasks	Figure
3.		<ul style="list-style-type: none"> ENSURE, Spent Liquor Bypass Pump PUSL-1106 is online and pulling from Spent Liquor Tanks TKSL-1001/TKSL-1002 discharging to Test Tank TKST-1001. NOTE This is required to equalise the spent liquor tanks in readiness for isolating the tank equalising line. 	 <p>Figure 3: Pump4</p>
4.		<ul style="list-style-type: none"> FOLLOW isolation and tagging procedure and INSTALL (BSxxx) Closed, on spent liquor HID 3 line into Spent Liquor Tank TKSL-1001. Remove Personal Tag and lock as per isolation list. NOTE: (BSxxx) to remain OPEN! into Spent Liquor Tank TKSL-1002. 	<p>NO IMAGE AVAILABLE</p>

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