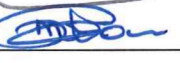
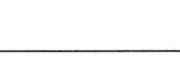


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PLANT AREA: Matla Power Station			
TITLE: <i>Demin Train Valve Replacement</i>			
REF: MEA-05651	Reference Rev No:1	MULTIDISCIPLINARY: No	Plant Level: All
COMPILED BY	Name: <i>Tebogo Moloi</i> Systems Engineer	Signature: 	Date: 2021/08/19
APPROVED	Name: <i>Thando Mbulawa</i> Line Manager	Signature: 	Date: 27/10/2021
APPROVED	Name: <i>Lele Masote</i> Group Manager	Signature: 	Date: 28/10/2021
REVIEWED	Name: <i>Misheck Magama</i> Quality Department	Signature: 	Date: 2021/10/28
REVIEWED	Name: <i>Shareen Ramaboea</i> Environmental Department	Signature: 	Date: 28.10.2021
ACCEPTED	Name: Outage Manager/Maintenance manager	Signature:	Date:
ACCEPTED	Name: A/A	Signature:	Date:

NB: Do not tamper with the template.

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GENERAL

- Data books, reviews, reports and diagrams/drawings shall be submitted to Engineering after the completion of the work Engineering to forward the data books to Quality Department (Document Control)
- All QCP's to be submitted to Engineering and Quality for approval prior to outage/project or maintenance work commencement

	SCOPE OF WORK DESCRIPTION / ACTIVITY	PROCEDURE, SPECIFICATION, ENG. REQUIREMENTS / DOCUMENTATION	HOLD POINTS, WITNESS, REPORTS	RESPONSIBLE PARTY
1 1	Safety	• All work is to be done in accordance with Matla plant procedures and safety regulations (GGR 0992) • Matla power station induction must be done before any work commences • Permit to work must be in place before any work commences • Worker's register must be completed and daily risk assessment conducted before any work commences	Eskom to witness	Contractor
1 2	Environmental Management	• All activities listed in the National Environmental Act 107 of 1998, EIA Regulations as amended, must have environmental AUTHORISATION before commencement of work • The contractor shall comply with all applicable legal and other requirements • The polluter pays principle will be applied • The contractor manager shall ensure compliance with Eskom Matla Environmental procedures to ensure the prevention of pollution (refer OMOP 4090 and 4402) • The last payment will be processed based on the status of the last housekeeping check sheet (Annexure C OMOP 4402) of designated area • EMS file based on ISO14001 will be required	Eskom to witness	Contractor

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1 3	Quality Management	- The contractor/executioner of work will be responsible for drawing up all QCP documentation and this must be approved by engineering and authorised by the Quality Department before commencing with the work - Contractors/executioner to adhere to QM 58 and OMOP4497 requirements - Number of NCR issued can affect your next tendering process - The QCP shall be signed progressively by the Engineer/Supervisor, Eskom QC Inspector, Contractor QC Inspector and/or AIA - No procuring of outage items without the approval of scopes by quality - All outage scopes creep and scopes addition should be approved by quality - No contractor should be in the possession of scopes for execution without the scopes approved by quality - The contractor is subjected to quality auditing at any point in time during execution of scope	Hold point	Contractor
1 4	Inputs from other departments			
1 5	Commissioning reference			

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	SCOPE OF WORK DESCRIPTION / ACTIVITY	PROCEDURE, SPECIFICATION, ENG. REQUIREMENTS / DOCUMENTATION	HOLD POINTS, WITNESS, REPORTS	RESPONSIBLE PARTY
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2	SCOPE OF WORK DESCRIPTION / ACTIVITY	PROCEDURE, SPECIFICATION, ENG. REQUIREMENTS / DOCUMENTATION	HOLD POINTS, WITNESS, REPORTS	RESPONSIB LE PARTY
2.1	Arrange demin train outage			
2.2	Remove all the old valves from train 1, 2 and 3 Note: The Demin tanks inlet and outlet valves needs to be "Line Stopped" for the valves to be replaced The following pipes to be stopped • 3x250NB inlet line to the demin tanks • 1x500NB outlet line from the demin tanks • 1x600NB outlet line from the demin tanks			
2.3	Supply and install air operated on-off diaphragm valves with a manual override function	Valve specs • Size-25NB • Flanged-BS 4504 16/3 or equivalent standard	Hold	Contractor

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NB	- All valves to manufactured by Saunders for standardization purposes on the plant - supply material certificate to the system engineer - Contractor to verify flange specs and valve face to face length with system engineer on site before supplying the valves so that they match with the existing pipework - Working fluids is air, water, acid caustics and mixtures, diaphragms should be suitable for all fluids - Air pressure is 100 Kpa	- Pressure rating-1600Kpa - Working fluid pressure -600kpa - Actuator operating pressure- 3 - 4 5 bar - Hard rubber lined- butyl rubber - Quantity(fail close)-8		
		- Size-50NB - Flanged-BS 4504 16/3 or equivalent standard - Pressure rating-1600Kpa - Working fluid pressure -600kpa - Actuator operating pressure- 3 - 4 5 bar - Hard rubber lined- butyl rubber - Quantity(fail close)-21 - Quantity(fail open)-21 - Size-65NB - Flanged-BS 4504 16/3 or equivalent standard - Pressure rating-1600Kpa - Working fluid pressure -600kpa		
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		• Actuator operating pressure- 3 – 4 5 bar • Hard rubber lined- butyl rubber • Quantity(fail close)-8 • Size-80NB • Flanged-BS 4504 16/3 or equivalent standard • Pressure rating-1600Kpa • Working fluid pressure -600kpa • Actuator operating pressure- 3 – 4 5 bar • Hard rubber lined- butyl rubber • Quantity(fail close)-18 • Quantity(fail open)-21 • Size-100NB • Flanged-BS 4504 16/3 or equivalent standard • Pressure rating-1600Kpa • Working fluid pressure -600kpa • Actuator operating pressure- 3 – 4.5 bar • Hard rubber lined- butyl rubber • Quantity(fail close)-18 • Quantity(fail open)-27		
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		- Size-150NB - Flanged-BS 4504 16/3 s or equivalent standard - Pressure rating-1600Kpa - Working fluid pressure -600kpa - Actuator operating pressure- 3 – 4.5 bar - Hard rubber lined- butyl rubber		
2.4	Supply and install air operated on-off butterfly valves NB - The contractor to remove the currently installed actuator and replace the old valves with new, however using the old actuators Note: this is only applicable to all butterfly valves. - supply material certificate to the system engineer - Contractor to verify flange specs and valve face to face length with system engineer on site before supplying the valves so that they match with the existing pipework	Valve specs - Size-150NB - Form/ style-Wafer - Flanged- BS 4504 16/3 or equivalent standard - Pressure rating-1600Kpa - Working fluid pressure -600kpa - Actuator operating pressure- 3 – 4 5 bar - Rubber lined-hypalon / nitrile - Quantity(fail close)- 9 - Size-200NB - Form/ style-Wafer	Hold	Contractor
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	- Working fluids is air, water, acid caustics and mixtures, diaphragms should be suitable for all fluids - Air pressure is 100 Kpa	- Flanged- BS 4504 16/3 or equivalent standard - Pressure rating-1600Kpa - Working fluid pressure -600kpa - Actuator operating pressure- 3 – 4 5 bar - Rubber lined-hypalon / nitrile - Quantity(fail close)- 42		
		- Size-250NB - Form/ style-Wafer - Flanged- BS 4504 16/3 or equivalent standard - Pressure rating-1600Kpa - Working fluid pressure -600kpa - Actuator operating pressure- 3 – 4 5 bar - Rubber lined-hypalon / nitrile - Quantity(fail close)-15		

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2 5	Supply and install manually operated butterfly valves for demin tanks	• Size-250NB • Form/ style-Wafer • Pressure rating-1600Kpa • Working fluid pressure -600kpa • Rubber lined-hypalon / nitrile • Quantity(fail close)-3 • Size-500NB • Form/ style-Wafer • Pressure rating-1600Kpa • Working fluid pressure -600kpa • Rubber lined-hypalon / nitrile • Quantity(fail close)-1 • Size-600NB • Form/ style-Wafer • Pressure rating-1600Kpa • Working fluid pressure -600kpa • Rubber lined-hypalon / nitrile • Quantity(fail close)-1		
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2 5	Supply fasteners • Bolts • Nuts • Washers gaskets	Gasket specs: Brand-clinkerite or burgmann Thickness-3mm Pressure rating-16bar Coating-corrosion and acid resistant Fastener specs: Size to be according to flange specs	Hold	Contractor
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BILL OF MATERIAL

	Full description Material/Spares/Equipment	Specifications of Material/Spares/Equipment	Stock No	Part Number	Required Quantity
1	Diaphragm Valves	Saunders, 25NB Fail-Close			8
2	Diaphragm Valves	Saunders, 50NB Fail-Close			21
3	Diaphragm Valves	Saunders, 50NB Fail-Open			21
4	Diaphragm Valves	Saunders, 65NB Fail-Close			8
5	Diaphragm Valves	Saunders, 80NB Fail-Open			21
6	Diaphragm Valves	Saunders, 80NB Fail-Close			18
7	Diaphragm Valves	Saunders, 100NB Fail-Close			18
8	Diaphragm Valves	Saunders, 100NB Fail-Open			27
9	Diaphragm Valves	Saunders, 150NB Fail-Close			9
10	Butterfly Valves	150NB, Fail-Close			9
11	Butterfly Valves	200NB, Fail-Close			42
12	Butterfly Valves	250NB, Fail-Close			15
13	Butterfly Valves	250NB, Manual			3
14	Butterfly Valves	500NB, Manual			1
15	Butterfly Valves	600NB, Manual			1

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SCOPE COMPILATION REFERENCES				
SOURCE & Ref No.	Yes	No	N/A	Comments
Previous outage service reports				
Return to service data packages				
Maintenance Strategy with Rev number				
SAP defects (attach list as appendix)	x			
GHRMS (STEP) reports (Generation Heat Rate Management System)				
Online Condition Monitoring				
Pre-outage performance test results				
Post outage performance test results				
GPSS/ Plant Performance data on UCLF incurred				
OMS / IIRMS recommendations (Audits Reports)				
Risk controls (IRM system)				
Previous audits and reviews (e.g. ERAP)				
Engineering Change Requests (Projects)				
LOPP strategy reports				

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URS				
Philosophy (Outage)				
Condition Monitoring Report				
VA/PHD Viewer trends				
Corrective Actions				
CARAB reports				
Statutory Requirements				
Grid code requirements				
Waivers and Exemptions				
Calibration requirements				
Previous Outage SOW variations				
Post Mortems Actions from previous outages				
Pre-Outage plant walks				
Risk based inspection (RBI) report				
Simulation, TOIs, OON, SI				

COMMENTS

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