

Document Identifier	14593	Rev	6
Effective Date	March 2023		
Review Date	March 2026		

PLANT AREA: Coal Plant						
TITLE: Replacement of incline	8B and 8F S	uspended Electromagnets				
REF: MEE-06538		Reference Rev No:1		MULTIDISCIPLINARY: No		Plant Level: 1
COMPILED BY		osinathi Ndima Engineer/End User	Signature:	(Duiu)	Date: 11/	01/2024
APPROVED Name: Nko		osinathi Maseko ager	Signature:	Alada	Date: 11/0	01/2024
APPROVED	PROVED Name: Lindokuhle Ngobese Group Manager		Signature:	- AM-	Date: 19	101/2024
REVIEWED	Name: Jabulani Mtsweni Quality Department		Signature:		Date: 16/0	1/2024
REVIEWED	Name: I	time try Tapai onal Health and Safety	Signature:	A. M.	Date: 17	10112024
REVIEWED	Name: \( \) Environm	handi Zurgu ental Department	Signature:		Date: (	1/01/2024
ACCEPTED		loria Marebane Maintenance manager	Signature:	- CHIIIKOO-I	Date: 19	9/01/2024
ACCEPTED	Name: N/A	4	Signature:	Ai.,	Date	

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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	Occupational Health and	Health and safety file should be approved by Safety risk management department prior	Eskom to witness.	Contractor
	Safety	to any work commences on site		
		<ul> <li>All work is to be done in accordance with OHS Act 85 of 1993, Matla plant procedures</li> </ul>		
		and Plant Safety Regulations. (240-150642762).		
		<ul> <li>Matla power station SHEQ induction must be done before access to site can be granted</li> </ul>		
		The contractor should ensure that all employees have acquired the required.		
		competency for the task they are performing.		
		<ul> <li>The contractor to ensure compliance to updated legal requirements and other</li> </ul>		
		requirements		

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1	.2 Eı	nvironmental Management.	•	All activities listed in the National Environmental Act 107 of 1998, EIA Regulations as	Eskom to witness.	Contractor
	.			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.		
1	.3 Q	Quality Management		The contractor/executioner of work will be responsible for drawing up all QCP	Hold point	Contractor
				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		

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		<ul> <li>All outage scopes creep and scopes addition should be approved by quality</li> <li>No contractor should be in the possession of scopes for execution without the scopes approved by quality</li> <li>The contractor is subjected to quality auditing at any point in time during execution of scope</li> </ul>
1.4	Inputs from other	
	departments	
1.5	Commissioning reference	

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# PATE POSEE STREET SOCIE OF WORK

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#### **DECOMMISION AND/OR PLANT ISOLATION**

	SCOPE OF WORK DESCRIPTION / ACTIVITY	PROCEDURE, SPECIFICATION, ENG. REQUIREMENTS / DOCUMENTATION	HOLD POINTS, WITNESS, REPORTS	RESPONSIBLE PARTY
1.1	<ul> <li>Ensure that all relevant circuits are de-energized and isolated.</li> <li>All circuit must be isolated accordingly where applicable</li> </ul>	All work shall be performed in accordance with the latest revision of PSR (36-681).	OPS – to ensure that all necessary earths are applied where necessary.	OPS
1.2	Where necessary ensure that supplies to cables are isolated and any other potential source.	All work shall be performed in accordance with the latest revision of PSR (36-681).	OPS – to ensure that all necessary isolations, fuses, links etc. are removed.	OPS
	Inspect all cables/lines inside the relevant position and all other components to ensure that none are damaged while work is being carried out.	All work shall be performed in accordance with the latest revision of PSR (36-681). RPs to ensure plant is safe prior to permit acceptance.	EMD – shall ensure plant is isolated accordingly with a permit to work in place.	EMD

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	SCOPE OF	WORK DESCRIPTION / ACTIVITY	PROCEDURE, SPECIFICATION, ENG. REQUIREMENTS / DOCUMENTATION	HOLD POINTS, WITNESS, REPORTS	RESPONSIBLE PARTY
1.1		cations for the design of electromagnets:		HOLD	CONTRACTOR
	<ul> <li>Contractor shall design the conveyor belt specifications</li> </ul>	suspended electromagnets based on the following s:			
	Belt Width	900mm			
	Belt Speed	2,2m/s			
	Belt Incline angle	15.14			
	Belt Capacity	494t/h			
	Material Conveyed:	Coal			
	Bulk density:	720 kg/m3 Low BD, 880 kg/m3High BD			
	Maximum lump size	15mm			

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	Maximum burden depth ~325n	nm		
	Type of tramp iron to be extracted Mine p	picks		
1.2	Electromagnet Design requirements.		HOLD	CONTRACTOR
	<ul> <li>a. Electromagnets faceplate shall be m constant hitting of mine picks,</li> </ul>	nade of robust material to withstand		
	b. The electromagnets cross sectional a mine picks at the belt speed of 2.2m/s.			
	c. The core design type shall be recta	angular for high burden depths and		
	<ul> <li>d. Consideration shall be made since increased, the magnetic flux density w of the magnetic fields to attract mine p</li> </ul>	ill decrease, and so does the strength		
	e. Because of frequent skewing of bel	ts, electromagnets shall at least be erating gap of 350mm at maximum		

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j.	The casing shall have cooling fins ingress in the area that may slower	to maximise heat dissipation due dust cooling of windings.			
i.	Coil shall be designed to prevent over	verheating and burn-outs or turns faults,			
h.		o over 1100 width because of belts conveyor belts that may overload the field interaction,			
g.	the amount of Force Index (Gauss/	s are designed and selected according to mm) that is required to remove the mine om burden of coal travelling at max belt			
f.	are mostly found during coaling w	ned to attract the type of tramp iron that hich has dimensions of 130X50mm and tractor shall collect samples from the			
	gauss and ambient temperature,				

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1.3	Suspended Electromagnets Required S	pecifications		HOLD	CONTRACTOR
	The contractor Supply the Electromagn	nets with the following specs:			
	To go over conveyor width	Up to 900 & less than 1200			
	Quantity required	2X			
	Magnet type	Dry type			
	Cleaning type	1XManual(8F)&1XSelf-cleaning(8B)			
	Installation type	Cross belt/incline			
	Transformer input power	~per design			
	Magnet Input power	~per design			
	Cooling method	Air			
	Weight	<=4.5			
	Ampere. Turns	~ per design			
	Nominal Operating Gap	325			
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	Gauss reading @ 325mm GAP (30°C) ~ per design			
1.4	Local Control Panel requirements	Comply to IEC 60204-1	HOLD	CONTRACTOR
	<ul> <li>a. The contractor shall design, supply, and install the local control panel with the following specs:</li> <li>Floor mounted.</li> <li>Mild steel</li> <li>IP65</li> <li>Rotary Handle for lock-out</li> <li>Mains isolator/circuit breaker</li> <li>All fully labelled.</li> <li>To suit Site Supply voltage=380V</li> <li>Orange colour</li> <li>DC Voltage and current outage readings</li> <li>b. The protection, Interlock and control already exist from the switchgear, the contractor shall only provide field/local mains isolation and magnet isolation.</li> <li>c. Provision shall be made for self-cleaning magnet belt motor in terms of its</li> </ul>			

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		drawings of electrical reticulation to the tractor for possible modifications to suit nergized etc indications.			
1.5	Transformer Rectifier Circuit requiremen	nts		HOLD	CONTRACTOR
	with the following specs: Floor mounted. Mild Steel IP65 Air/Oil cooled. Solid-State Bridge Rectifier Unit 380VAC input voltage to the transfo Preferably 220VDC output voltage	and install the transformer rectifier unit			
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	b. Comply with the requirements of IEC 60076-1, IEC 60076-2	and IEC 60076-		
	3.			
	c. A minimum set of taps for various voltage changes shall be	•		
	the transformer-rectifiers, to optimize the magnet's performa	nce,		
	d. A circuit diagram shall be permanently mounted on the enclosure and all			
items inside the enclosure shall be properly labelled to Eskom standard,		•		
	e. Nameplate with all specifications shall be mounted on the outside of the			
	enclosure.			
1.6	Electromagnet Casing requirements		HOLD	CONTRACTOR
	a. All casing components shall be machined for good conducti	vity of the flux,		
	b. The thickness of all casing components shall be specified b	y the supplier,		
	c. The casing surface area shall be longer than the existing to	allow the		
	treatment time of magnet to attract mine picks,			
	d. Unit 2 electromagnet magnet passes unit 1 magnet during r	nanual cleaning		
	and unit 4 electromagnet passes unit 3 electromagnet durin	g manual		
	cleaning; thus, the magnet design shall be such that in term	s of dimensions		
	unit 1 and 3 electromagnets shall not obstruct unit 2 and 4 of	uring cleaning		

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	therefore U2(8B) shall be of self-cle cleaning.	eaning type while U6(8F) shall be manual			
1.7	Electromagnet Coils requirements			HOLD	CONTRACTOR
	a. The coil conductors shall be insulated to class "H" of SABS IEC 60034-1 with class "F" temperature.				
	b. The current density in the coil shall be ampere-turns losses when the mag temperatures,				
	c. The magnetic field shall be of sufficient strength and shall be effective over the length of the magnet to provide the most efficient magnetic exposure time to the tramp iron.				
1.8	Electromagnet support frame requireme	ents		HOLD	CONTRACTOR
	a. The frame shall be constructed in such a way that it will be easily retrofitted to the existing structure.				
	b. The contractor shall not modify the existing supporting structure,				
	c. The frame shall be designed and constructed to comply with the requirements				
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	supply the Panel.	es cables, 4mm2 cable shall be used to bre cables shall be used to supply the			
of GGSS 0407 and shall be of robust channel construction to prevent distortion and vibration in service.  d. Robust suspension brackets shall be mounted directly on the supporting frame.  e. Dual holes on each suspension bracket shall be provided for rigging purposes and for using a safety chain.  f. The support frame shall have a minimum of four steel spacers shall be mounted directly under the magnetic separators to prevent the separators from coming into direct contact with the ground when they are stored.			HOLD	CONTRACTOR	

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4.40				1101.5	CONTRACTOR
1.10	Suspension Tackle Set requirements.			HOLD	CONTRACTOR
	4 X completely pre-assembled 1-Leg C adjustable grab hook which will allow fo requiring any turnbuckles.	hain Sling Assembly with chain-link- or full length adjustment of chain, without			
	b. This shall come completely pre-assembled with SWL rating washer/tag and certificates to match.				
	c. No cutting/joining on site is required.				
	d. All suitably (over)rated for the mass of the electromagnet.				
	e. Each Chain leg length shall be 1,5m, contractor shall come to site for measurements prior manufacture.				
	f. Rope suspension set suitably rated(over) for electromagnet is also accepted as an alternative.				
1.11	Transportation requirements			HOLD	CONTRACTOR
	a. Contractor shall deliver and offload preferably two Electromagnets at the time to Matla Power Station.				
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	b.	The contractor shall adhere to Eskom 240-56178825 for Transportation and Movement of Electrical Equipment Standard.		
	C.	The contractor shall ensure no harm or damage to the internal and external components of the magnet.		
	d.	The contractor is responsible for any damage and the employer shall request full replacement of components if deem necessary.		
	e.	The electrical tests (i.e. insulation resistance or winding resistance) will be conducted onsite and compare with FAT tests to ensure no damages during transportation.		
1.12	Electr	omagnet Installation / Erection requirements	HOLD	CONTRACTOR
	a.	As per 240-55864553 section 3.15 and contractor SOW based on the existing plant/structures.		
	b.	Contractor shall not modify the existing support structures, minor changes may be allowed, and it shall be communicated prior installation to Civil Engineering/employer for approval.		
	C.	If these changes are allowed by the employer, the contractor shall have or		

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	c. It is assumed the self-cleaning magnet motor will feed from the same supply as				
	b. The contractor shall provide cables for t	he self-cleaning magnet motor			
	circuit,				
	cables from the switchgear to the loca	I control panel and transformer rectifier			
	a. Contractor shall connect and termina	te the existing 4mm2 4 cores supply			
1.13	1.13 Discharge chute into discharge bin on Self-cleaning magnet.			HOLD	CONTRACTOR
	<ul> <li>h. The magnet when fully erected and beyond or below the conveyor belt.</li> </ul>	aligned shall not attract any irons/metals			
	<li>g. The magnet shall be at suspended in distance of 300-325mm.</li>	n accordance to the mean working			
	f. Ensure the magnet is aligned and pe	erpendicular to the belt.			
	_	he conveyor belt and support structures.			
	<ul> <li>d. Contractor is fully responsible erection/installation of Electromagne</li> </ul>				
	• .	nal registered (Pr Eng Civil - Structures) al measurements, testing, standards lowed.			

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1.14	Electromagnet testing requirements (SA)  a. Existing electrical cables shall be tested	,	As per 240-55864553 standard section 3.8 and 3.9,		CONTRACTOR
1.14	Electromagnet testing requirements (SA)	T/EAT)	As per 240-55864553	HOLD	CONTRACTOR
	j. The wiring terminations shall be labelle diagrams.	d, as per the approved designed circuit			
	i. The local control panel and Transforme earthed to the existing earthing point with	er rectifier casing shall be appropriately th correctly sized earth or copper bar.			
	h. All electrical wiring and installation shall comply to SANS 10142,				
	g. All cable connections and terminations s	shall be in line with SANS 876.			
	f. Grease shall be applied to all contact po	oints to ensure good conductivity,			
	nuts, and locknuts shall be appropriately	y sized,			
	e. All the connection points which have o	compression/ cone/plain washers, bolts,			
	the transformer rectifier output to the su	spended electromagnet terminal box,			
	d. Contractor shall connect and terminate	e the existing single-phase cables from			
	the magnet,				

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	the magnet as per			
		electromagnets and perform live testing of		
		which were placed out of service for Eskom side are de-isolated and energized,		
1.15	Electromagnet Recommissioning req	uirements	HOLD	CONTRACTOR
	J. Any other recommended tests.			
	<ul><li>i. Tests with employer's type of coal ar</li><li>j. Any other recommended tests.</li></ul>	id mine picks,		
	h. Functional tests of electrical compon			
	g. Mean working distance measuremen			
	f. Gauss Factor Tests,			
	e. Winding insulation tests,			
	d. Winding resistances tests,			
	c. Rectifier tests,			
	b. Transformer in accordance with SAN	S 780, IEC 60076.		

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	240-55864553 standard,		
	c. Rectifier output voltage shall be at least the same as the electromagnet input voltage,		
	d. Contractor shall measure the mean working distance before and after cleaning of the electromagnet to ensure the electromagnet has not moved out of position during manual cleaning,		
	e. Contractor shall evenly place employer type dry coal on the conveyor belt before the electromagnet and tramp iron(s) beneath the coal and run the belt to test the integrity or performance of the electromagnet,		
	f. Contractor shall evenly place employer type wet coal on the conveyor belt before the electromagnet and tramp iron(s) beneath the coal and run the belt to test the integrity or performance of the electromagnet,		
	g. Employer shall perform visual and quality inspection, and thermos scans on all components to ensure plant is fully serviceable.		
1.16	Documentation and Plant Configurations requirements	HOLD	CONTRACTOR
	Contractor shall use the exiting KKS/AKZ and cable tags to label the plant and components,		

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	b. Contractor shall provide As-Built upon control panel, magnet and transform manufacturing.	dated detailed drawings for the local per rectifier circuit for approval before			
1.17	Documentation and Handover requireme	ents		HOLD	CONTRACTOR
	a. Contractor shall ensure all QCPs are the client prior handover of the proje	-			
	b. The contractor documentation to sub datasheets and tests reports,	omitted shall include technical			
	c. Issuing of CoC for the local control p	panel installation,			
	d. Before the final handover, the contra	actor shall give Matla Power Station at			
	least 1 week for service performance	e, this is for the employer to ensure that			
	there are no mine picks rejected by	the mills.			
1.18	Maintenance strategy requirements			HOLD	CONTRACTOR
	a. Contractor shall handover the maint	enance manuals and other support			
	documentation for the electromagne	• •			
	-	conents/equipment's together with the			
		·			
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	technical data specifications, part notes to c. Together with the above, the contraction components, I.e., fuses, MCBs, dio	actor shall provide spares for			
1.19	Operating strategy requirements			HOLD	CONTRACTOR
	The electromagnets are already int switchgear and no further interlocking.	erlocked to the conveyor belt from the ing is required from the contractor,			
	b. The existing operational and seque electromagnets will not change,	ence philosophy of conveyor belts and			
	c. The existing remote/local control օր will remain the same,	perational philosophy of Electromagnets			
	d. The existing electromagnet manual cleaning and demagnetization control circuit operational philosophy will remain the same,				
	e. Contractor shall only provide opera	tional instructions for local control panel,			
	f. Contractor shall provide operationa technicians/artisans.	Il training to the Operators and electrical			
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1.20	Opera	tion requirements	HOLD	CONTRACTOR
	a.	The Electromagnet shall attract tramp irons,		
	b.	The Electromagnet shall attract even burden tramp irons,		
	c.	The Electromagnet cooling fins shall be sufficient enough to cool the magnet,		
	d.	The Electromagnet shall not attract tramp irons beyond the belt width and below the belt,		
	e.	The Electromagnet shall not move away from its belt position after cleaning,		
	f.	The manual cleaning Electromagnet shall only be de-energized when it is moved against the existing terminal switch at the end of the crawl beams,		
	g.	The Electromagnet shall remain on its mean working distance position to the belt 300-325mm,		
	h.	The Electromagnet shall have light indicators for ON/OFF/TRIP and Volts/Amps readings on the local control panel,		
	i.	If the Electromagnet trip, it shall trip the conveyor belt,		
	j.	The Electromagnet Rectifiers shall not overheat and shall dissipate heat onto the heatsink or oil if the rectifier circuit is oil cooled,		

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k. The Electromagnet Rectifier Voltag fluctuate.	e Output shall be smooth and not			
Waste Storage And Transportation				Contractor
	or storing mine picks during magnet used and transportation and deposit of nain the same.			
System Safety requirements			HOLD	CONTRACTOR
The Contractor ensures safety awa employers with adequate PPE.	reness at all times and supplies			
b. All equipment shall be inspected by acceptance.	/ Matla Safety department for			
Occupational Health and Safety Acstaff complies with the Matla Site h	on behalf of the Employer in terms of the et no 85 of 1993. All of the Contractor's ealth and safety requirements titled equirements in carrying out its obligations			
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	to the Employer in terms of this contract; in providing the Works; in using		
	plant, Materials and Equipment; and while at the Site for any reason, the		
	Contractor complies, procures and ensures the compliance by its employees, agents, Subcontractors and mandatories.		
d.	The Contractor ensures that all statutory appointments and appointments		
	required by any Eskom Regulations are made and that all appointees fully		
	understand their responsibilities and competent to execute their duties.		
e.	The Employer, or any person appointed by the Employer, may, at any stage		
	during the currency of this contract May:		
•	Conduct health and safety audits regarding all aspects of compliance with		
	the SHEQ Requirements, at any off-site place of work, or the site establishment of the Contractor; Refuse any employee, Subcontractor or		
	agent of the Contractor access to the premises if such person has been		
	found to commit an unsafe act or any unsafe working practice or is found		
	not to be qualified or authorised in terms of the SHEQ Requirements:		
•	Issue the Contractor with a stop order should the Employer become aware		
	of any unsafe working procedure or condition or any non-compliance with		
£	any provision of the SHEQ Requirements.		
1.	The Contractor appoints a person, qualified in accordance with the SHEQ		
	Requirements, as the liaison with the Eskom Safety Officer for all matters		

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e.	The last payment will be processe housekeeping check sheet (Annexure C	ed based on the status of the last C: OMOP 4402) of designated area.			
d.		sure compliance with Eskom Matla he prevention of pollution (refer: OMOP			
c.	The polluter pays principle will be applied	ed.			
b.	The contractor shall comply with all app	licable legal and other requirements.			
а.		Environmental Act 107 of 1998, EIA environmental AUTHORISATION before			
En	vironment requirements			HOLD	CONTRACTOR
	h. Permit to work must be in place bef	be done before any work commences. ore any work commences. d, and daily risk assessment conducted			

#### **Controlled Disclosure**

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f.	EMS file based on ISO14001 will be red	quired.			
Qı	uality Management Requirements			HOLD	CONTRACTOR
Th	ne Contractor conforms to the following Q	uality Management requirements:			
a.	The quality requirements are as per IS0 58.	O 9001 and Eskom Quality Standard QM			
b.	b. The requirements of the Eskom Weld Rulebook (240 – 43156827) shall be adhered to.				
C.	c. Documents submitted for review and acceptance by the Project Manager after the Contract Date and prior to the commencement of work are referred to in QM 58 section 3.5.2.				
d.	d. The Contractor submits a fully detailed Quality Control Plan for acceptance within four weeks of the Contract Date.				
e.	e. No work is allowed on Site unless the Employer accepts the Quality Control Plan.				
f.	requesting access, erection checks	er's quality documentation forms for etc. These request forms are to be e week prior to the requested activity, or			
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ar	ne Contractor procures all Plant and Mate and commissioning the works. The Contractor:	erials required for constructing, installing			
Pi	rocurement requirements			HOLD	CONTRACTOR
h. i. j. k.	The Contractor is responsible for defining imposed on his Subcontractors and suppassed on criticality of Plant and Material Manager for acceptance.  The Contractor submits a schedule of usupdated monthly.  The Contractor shall provide the QCP/I prior to the commencement of any works.	ng the level of QA/QC or inspection to be opliers of material. This level should be I and be submitted to the Project orders to be placed that is  TP for review and acceptance by Eskom			
g.		ngs, test certificates, CoC etc. for each ed and signed off by the Supervisor at			
	as agreed to by the Project Manager.				

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Material and coordinates with the	rance of all major shipments of Plant and Employer the arrival, off-loading and promptly unloads its shipments and t.			
shipment not less than 5(five) days his option, off-loads or decides for o	being unable to promptly unload any prior to arrival. The Project Manager, at others to off-load such shipments for the Costs incurred in respect of off-loading			
notifies the Project Manager v	Materials are inspected. The Contractor who instructs designated Employer's and Materials at the factory, or the ransported to the Site			
Construction requirements		240-55864553 standards		CONTRACTOR
The Contractor manufactures, fabricates at accordance with the Employer's 240-558 listed in section 3.3.		and specifications as listed in section 3.3.		
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House Keeping requirements.	HOLD	CONTRACTOR
a. The Contractor shall ensure that the Site is cleaned daily.		
b. All Equipment is packed neatly without interference to access.		
c. All excess scaffolding material is removed from Site after the scaffolding is erected.		
d. Scrap bins are made available by the Contractor to store any scrap and debris at the Site and the Contractor is responsible for their removal to the designated scrap area on a daily basis.		

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#### **RE-COMMISSION**

	SCOPE OF WORK DESCRIPTION / ACTIVITY	PROCEDURE, SPECIFICATION, ENG. REQUIREMENTS / DOCUMENTATION	HOLD POINTS, WITNESS, REPORTS	RESPONSIBLE PARTY
1.1	Re-commission all circuits which were placed out of service for maintenance purposes.	All workers shall need to have signed out and the responsible permit holder shall satisfy himself that there are no people still working on the line prior to energization as per PSR (36-681).	OPS & EMD to witness	OPS
1.2	Equipment used for earthing and isolation.	PTM shall ensure that all relevant equipment used for earthing and isolating is removed as per PSR (36-681) requirements and accounted for prior to energization of the line.	OPS and EMD to ensure all permits are cleared and the plant is in service.	OPS & EMD

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Principal Committee Commit



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#### BILL OF MATERIAL

Replace/	Full description of	Specifications of Material/Spares/Equipment	Stock No	Part Number	Required
Refurbish	Material/Spares/Equipment				Quantity
Replace	place Electromagnet 1X manual and 1X self-cleaning. 220VDC,40A max			X2	
Replace	Transformer Rectifier	380VAC to preferably 220VDC			X2
Replace	Suspension Tackle Set				X2
Replace	Cable glands/shroud/Lugs etc				Contractor to confirm
Provide	Local Control Panel	380V AC			X2

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

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

#### COMMENTS

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	ATTACHMENTS: DRAWINGS, SKETCHES, DIAGRAMS, INSTRUCTIONS, etc
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2	
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