Eskom	Scope	Engineering

Title: **Provision of High Pressure Parts welding of the turbine and boiler auxiliary plants and flow accelerated corrosion replacements during outages at Kriel Power Station for a period of four (4) years.**

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Area of Applicability:	**Engineering**
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1. INTRODUCTION

The supply of labour in the form of trained and qualified welder. The scope of work include but not limited to the Boiler internal and external components, High Pressure pipework, Hot Reheat pipework, Cold Reheat pipework and all applicable piping in the Turbine and Outside plants for a period of 4 years at Kriel Power Station.

2. SUPPORTING CLAUSES

2.1 SCOPE

The scope of the document defines the scope of work for the High Pressure Parts and flow accelerated corrosion replacement components operation and Installation of suspended platforms and the hiring, operation and dismantling of mobile lifts at Kriel Power Station will be evaluated.

2.1.1 Works Information

The scope of work includes the supply of labour for hot work on the High Pressure Parts on auxiliary plants and both Turbine and Boiler areas. Most of the scope (not all works) will be executed inside the Boilers, but the contractor may also be required to work in other auxiliary plant areas on ‘as in when required’ basis by Eskom.

The primary instruction to the service providers includes but not limited to:

Execute the given scope of work for the High Pressure Parts and flow accelerated corrosion replacement components at Kriel Power station the scope of work for possible FAC replacements will be issued during a specific outage. The scoped components are sampled on the immediate tables below for giving an idea of all the FAC replacement components during an outage and the scope may be smaller depending on the given outage. The scope caters for 12 outages with an average of 100 days per outage for the period of three years in all units on an “AS AND WHEN” required basis .Outages can be postponed, brought forward or deferred but the contractor will be informed on time to make arrangements either way.

Service Providers will mainly be required to perform the required tasks during outages but may be required to perform tasks specified by the contract manager in preparation of outages (before outages) or some tasks might be required to be performed after outages. The contract manager will give notice on when such tasks are needed.

The contractor will be responsible for the provision of its own tools to all employees. Tools to be supplied should be, as a minimum generally required basic tools needed to execute the scope.

	Reference information		Design and Operating information				
			Material	Design			
	Item as marked up on drawing	Detailed component description		Design Pressure Max	Design Temperature Max	OD	Installed Wall Thickness
			(Grade)	(MPa)	(°C)	mm	mm
Economiser							
Economizer inlet bend RHS	(FIN 010) D10/FW-8001 (05)	bend	15NiCuMoNb5	20,86	243	329	17
Economizer inlet bend LHS	(FIN 010) 'D10/FW-8008 (04)	bend	15NiCuMoNb5	20,86	243	329	17
Economizer inlet header Stubs. (LHS)	Fin 012A (1)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs. (LHS)	Fin 012A (2)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs. (LHS)	Fin 012A (3)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs. (LHS)	Fin 012A (4)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs. (LHS)	Fin 012A (5)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs. (LHS)	Fin 012A (6)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs.(RHS)	Fin 012A (227)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs.(RHS)	Fin 012A (228)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs.(RHS)	Fin 012A (229)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs.(RHS)	Fin 012A (230)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs.(RHS)	Fin 012A (231)	Stubs	15Mo3	20,86	243	44,5	5
Economizer inlet header Stubs.(RHS)	Fin 012A (232)	Stubs	15Mo3	20,86	243	44,5	5
Economiser inlet header T-Piece	007/FW-001 (01)	Feed line before(upstream) the weld at the T-piece inlet	15NiCuMoNb5	20,86	243	329	20
Economiser inlet header T-Piece outlet side RHS	009/FW-009 (02)	Feed line after(down stream of) the weld	15NiCuMoNb5	20,86	243	376	20
Economiser inlet header T-Piece Outlet side LHS	009/FW-006 (03)	Feed line after(downstream of) the weld at the T-piece outlet 009/FW-006 400mm away from the weld	15NiCuMoNb5	20,86	243	376	20
Hot Reheat Spraywater System							
HR Spraywater lines	RHSFP01	Bend	15Mo3	14,9	190	88,9	8
HR Spraywater lines	RHSFP02	Bend	15Mo3	14,9	190	88,9	8
HR Spraywater lines	RHSFP03	Bend	15Mo3	14,9	190	88,9	8
HR Spraywater lines	RHSFP04	Bend	15Mo3	14,9	190	88,9	8
HR Spraywater lines	RHSFP05	Bend	15Mo3	14,9	190	88,9	8
HR Spraywater lines	RHEFPA01	Bend	15Mo3	14,9	190	88,9	5,6
HR Spraywater lines	RHEFPA02	Bend	15Mo3	14,9	190	88,9	5,6
HR Spraywater lines	RHEFPA03	Bend	15Mo3	14,9	190	88,9	5,6
HR Spraywater lines	RHEFPA04	Bend	15Mo3	14,9	190	88,9	5,6
HR Spraywater lines	RHEFPA05	Bend	15Mo3	14,9	190	88,9	5,6
HR Spraywater lines	RHEFPA06	Bend	15Mo3	14,9	190	88,9	5,6
HR Spraywater lines	RHEFPA07	Bend	15Mo3	14,9	190	88,9	5,6
Super Heater 2 Inlet Spraywater							
Super Heater 2 Inlet Spraywater	SHC01	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC02	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC03	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC04	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC05	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC06	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC07	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC08	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC09	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC10	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC11	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC12	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
Super Heater 2 Inlet Spraywater	SHC13	Bend	15NiCuMoNb5	39,5	178	93,7	3,5
S/H 2 Spray Water - Control Stations	CV1-A1	Straight (DS of Control v/v)	15Mo3	20,9	414	70	8
LEG 1	A1-B1	Straight (D/S of isol V/V)	15Mo3	20,9	414	70	8
LEG 1	B1-C1	straight	15Mo3	20,9	414	70	8
LEG 1	B1	bend	15Mo3	20,9	414	70	8
LEG 1	C1	bend	15Mo3	20,9	414	70	6
LEG 2	CV2-A2	Straight (DS of Control v/v)	15Mo3	20,9	414	70	8
LEG 2	A2-B2	Straight (D/S of isol V/V)	15Mo3	20,9	414	70	8
LEG 2	B2-C2	straight	15Mo3	20,9	414	70	8
LEG 2	B2	bend	15Mo3	20,9	414	70	6
LEG 2	C2	bend	15Mo3	20,9	414	70	6
LEG 3	CV3-A3	Straight (DS of Control v/v)	15Mo3	20,9	414	70	8
LEG 3	A3-B3	Straight (D/S of isol V/V)	15Mo3	20,9	414	70	8
LEG 3	B3-C3	straight	15Mo3	20,9	414	70	8
LEG 3	B3	bend	15Mo3	20,9	414	70	6
LEG 3	C3	bend	15Mo3	20,9	414	70	6

Left Hand Sootblowers							
Left Hand Sootblowers	LH1	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH2	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH3	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH4	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH5	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH6	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 1	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 2	T-piece	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 3	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 4	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 5	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 6	T-piece	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 7	Bend	15Mo3	4,5	284	51	7,1
Left Hand Sootblowers	LH RowA 8	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 9	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 10	T-piece	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 11	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 12	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 13	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 14	T-piece	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 15	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 16	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 17	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 18	T-piece	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 19	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 20	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 21	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowA 22	Bend	15Mo3	4,5	284	51	3,6
Left Hand Sootblowers	LH RowB 1	Bend	15Mo3	4,5	284	51	3,6

Condensate System (Sample Scope)										
	Sealing water pump discharge (2415)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	80	88,9	5,4	78,1	23
	Sealing water pump discharge (2415)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	80	88,9	5,4	78,1	23
	Sealing water pump discharge (2415)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	80	88,9	5,4	78,1	23
	Sealing water pump discharge (2415)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	80	88,9	5,4	78,1	23
	Sealing water pump discharge (2415)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	80	88,9	5,4	78,1	23
	Sealing water pump discharge (2415)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	80	88,9	5,4	78,1	23
	Sealing water pump discharge (2415)	NRV	ASTM A234 WPB Carbon ST	4	80	80	88,9	5,4	78,1	23
	Sealing water pump discharge (2415)	Piping	BS 3602 27 Seamless	4	80	80	88,9	5,4	78,1	
				10						
	Low Pressure Turbine Spraywater (2411)									
	Low Pressure Turbine Spraywater (2411)									
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM WPB Carb St	4	80	250	273	9,27	254,5	
	Low Pressure Turbine Spraywater (2411)	Equal Tee	A234 WPB Carbon ST	4	80	250	273	9,27	254,5	
	Low Pressure Turbine Spraywater (2411)	Conc. Reducer 250/150	A234 WPB Carbon ST	4	80	250/150	273	9.2/7.1		
	Low Pressure Turbine Spraywater (2411)	Equal Tee	A234 WPB Carbon ST	4	80	150		7,1		
	Low Pressure Turbine Spraywater (2411)	Conc. Reducer 150/80	A234 WPB Carbon ST	4	80	150/80		7.1/5.4		
	Low Pressure Turbine Spraywater (2411)	Conc. Reducer 250/200	ASTM A234 WPB Carbon ST	4	80	200	219	8,1	202,8	57
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	200	219	8,18	202,6	
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	200	219	8,18	202,6	
	Low Pressure Turbine Spraywater (2411)	Equal Tee	ASTM A234 WPB Carbon ST	4	80	200	219	12,5	194	57
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	200	219	8,18	202,6	57
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	200	219	8,18	202,6	57
	Low Pressure Turbine Spraywater (2411)	Valve	ASTM A234 WPB Carbon ST	4	80	200	219	10	199	57
	Low Pressure Turbine Spraywater (2411)	Valve	ASTM A234 WPB Carbon ST	4	80	200	219	10	199	57
	Low Pressure Turbine Spraywater (2411)	Valve	ASTM A234 WPB Carbon ST	4	80	200	219	10	199	57
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	200	219	8,18	202,6	57
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	200	219	8,18	202,6	57
	Low Pressure Turbine Spraywater (2411)	Valve	ASTM A234 WPB Carbon ST	4	80	200	219	10	199	57
	Low Pressure Turbine Spraywater (2411)	Valve	ASTM A234 WPB Carbon ST	4	80	200	219	10	199	57
	Low Pressure Turbine Spraywater (2411)	Valve	ASTM A234 WPB Carbon ST	4	80	200	219	10	199	57
	Low Pressure Turbine Spraywater (2411)	Equal Tee	ASTM A234 WPB Carbon ST	4	80	200	219	12,5	194	57
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	200	219	8,18	202,6	57
	Low Pressure Turbine Spraywater (2411)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	200	219	8,18	202,6	57
	Low Pressure Turbine Spraywater (2411)	Piping	API 5L Grade B	4	80	200	219	10	199	
	Condenser Recirc to condenser (2412)	90o LR Elbow	ASTM A234 WPB Carbon ST	4	80	150	168,3	7,1	154,1	44
	Condenser Recirc to condenser (2412)	Conc. Reducer 150/100	ASTM A234 WPB Carbon ST	4	80	150	168,3	5	158,3	44
	Condenser Recirc to condenser (2412)	Valve	ASTM A234 WPB Carbon ST	4	80	100	110	5	100	44
	Condenser Recirc to condenser (2412)	Valve	ASTM A234 WPB Carbon ST	4	80	100	110	5	100	44
	Condenser Recirc to condenser (2412)	Valve	ASTM A234 WPB Carbon ST	4	80	100	110	5	100	44

Boiler Feed Pump System (Sample Scope)										
	Booster to main pump loop pipes									
	EFP A booster to main pump loop pipe (3114	Bellow	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP A booster to main pump loop pipe (3114	Bellow	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP A booster to main pump loop pipe (3114	90o LR Elbow	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP A booster to main pump loop pipe (3114	Equal Tee	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP A booster to main pump loop pipe (3114	90o LR Elbow	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP B booster to main pump loop pipe (3116	Bellow	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP B booster to main pump loop pipe (3116	Bellow	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP B booster to main pump loop pipe (3116	90o LR Elbow	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP B booster to main pump loop pipe (3116	Equal Tee	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	EFP B booster to main pump loop pipe (3116	90o LR Elbow	WPB Carbon Steel / BS 1640	2	176	250	273	8	257	71
	BFP booster to main pump loop pipe (3112)	Bellow	WPB Carbon Steel / BS 1640							
	BFP booster to main pump loop pipe (3112)	Bellow	WPB Carbon Steel / BS 1640							
	BFP booster to main pump loop pipe (3112)	Concentric Reducer	WPB Carbon Steel / BS 1640	2	176	350	355,6	8	339,6	93
	BFP booster to main pump loop pipe (3112)	90o LR Elbow	WPB Carbon Steel / BS 1640	2	176	350	355,6	8	339,6	93
	BFP booster to main pump loop pipe (3112)	Equal Tee	WPB Carbon Steel / BS 1640	2	176	350	355,6	8	339,6	93
	BFP booster to main pump loop pipe (3112)	90o LR Elbow	WPB Carbon Steel / BS 1640	2	176	350	355,6	8	339,6	93
7	EFP A outlet expander	Expander	15NiCuMoNb5	39,7	176	250	292	50	250	76,431
7	EFP B outlet expander	Expander	15NiCuMoNb5	39,7	176	250	292	50	250	76,431
7	SFP B outlet expander	Expander	15NiCuMoNb5	39,7	176	250	292	90	250	76,431
	EFP's discharge lines									
	EFP A (3242)	NRV	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP A (3242)	90o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP A (3242)	CV	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP A (3242)	45o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP A (3242)	90o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP A (3242)	90o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP A (3242)	Flow Nozzle	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP A (3242)	Valve	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP A (3242)	90o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	NRV	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	90o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	CV	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	45o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	90o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	90o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	45o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	45o LR Elbow	15NiCuMoNb5	39,7	176	250	292	21	250	76,431
	EFP B (3242)	Flow Nozzle	15NiCuMoNb5	39,7	176	250	292	21	250	76,431

Deaerator Storage Tanks										
	Condensate/Feedwater side Ln1612&2316	bend	EFW SS10/201	1,13	176	800	812,8	10	792,8	213
	Condensate/Feedwater side Ln1612&2316	bend	EFW SS10/201	1,13	176	800	812,8	10	792,8	213
	Condensate/Feedwater side Ln1612&2316	bend	EFW SS10/201	1,13	176	800	812,8	10	792,8	213
	Condensate/Feedwater side Ln1612&2316	bend	EFW SS10/201	1,13	176	800	812,8	10	792,8	213
	Feed Suction Lines 3111,3113&3115	IV(CV211)	GS-C	1,38	176	400			0	0
	Feed Suction Lines 3111,3113&3115	bend	EFW SS10/201 BS3601	1,38	176	400	406,4	10	386,4	106
	Feed Suction Lines 3111,3113&3115	bend	EFW SS10/201 BS3601	1,38	176	400	406,4	10	386,4	106
	Feed Suction Lines 3111,3113&3115	bend	EFW SS10/201 BS3601	1,38	176	400	406,4	10	386,4	106
	Feed Suction Lines 3111,3113&3115	bend	EFW SS10/201 BS3601	1,38	176	400	406,4	10	386,4	106
	Feed Suction Lines 3111,3113&3115	IV(CV214A)	GS-C	1,38	176	300			0	0
	Feed Suction Lines 3111,3113&3115	bend	ERW SS10/201 BS3601	1,38	176	300	323,9	8	307,9	85
	Feed Suction Lines 3111,3113&3115	bend	ERW SS10/201 BS3601	1,38	176	300	323,9	8	307,9	85
	Feed Suction Lines 3111,3113&3115	IV(CV214B)	GS-C	1,38	176	300			0	0
	Feed Suction Lines 3111,3113&3115	bend	ERW SS10/201 BS3601	1,38	176	300	323,9	8	307,9	85
	Feed Suction Lines 3111,3113&3115	bend	ERW SS10/201 BS3601	1,38	176	300	323,9	8	307,9	85
	DA shells									
18	A vessel	shell	BS1501-161Gr 400	0,8	176	4440	4500	34	4432	1178
18	B vessel	shell	BS1501-161Gr 400	0,8	176	4440	4500	34	4432	1178
High Pressure Heaters (Sample Scope)										
10	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	IV(HDV 349)	C22	3,3	207	150			0	0
	HP Heater 6A Normal drains Ln2811	CV(HDV 7319)	GS-C25N	3,3	207	150			0	0
10	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44
	HP Heater 6A Normal drains Ln2811	bend	ASTM A234Gr.WPB	3,3	207	150	168,3	7,1	154,1	44

2.1.2 Purpose

The purpose of this document is to define the scope of work on the welding of the High Pressure parts on the Turbine and the Boiler Plants including the Flow Accelerated Corrosion Replacements.

2.1.3 Applicability

This document is applicable to Kriel Power Station.

2.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

[1] 240-48929482: Tender Technical Evaluation Procedure

[2] 240-106628253: Standard for Welding Requirements on Eskom Plant

[3] Pressure Equipment Regulations (PER)

[4] BS 1113: Design and manufacture of water-tube steam generating plant (Including Superheaters, Reheaters and steel tube economiser)

[5] EN 12952 (All Parts) Water-Tube boilers and auxiliary installations

[6] EN 13480 (All parts) Piping

[7] AWS Structural Welding Codes

[8] AWS B2.1/B2.1M: Specification for Welding Procedure and Performance Qualification

[9] EN 10052 – Vocabulary of heat treatment terms for ferrous products

[10] EN 1011: Welding-Recommendations for welding procedures for metallic materials – General Rules

2.2.2 Informative

[11] 240-83540088 Requirements for NDT on Eskom Plant Standard

[12] 240-83539994 Eskom NDT Personnel Approval (NPA) for Quality Related Special Processes on Eskom Plant Standard

[13] QM 58 Supplier Contract Quality Requirements Specification

2.3 DEFINITIONS

N/A

2.3.1 Classification

Controlled Disclosure: Controlled Disclosure to external parties (either enforced by law, or discretionary).

2.4 ABBREVIATIONS

Abbreviation	Description
FAC	Flow Accelerated Corrosion
NDT	Non Destructive Testing
HP	High Pressure Piping

2.5 ROLES AND RESPONSIBILITIES

As per 240-48929482: Tender Technical Evaluation Procedure

2.6 PROCESS FOR MONITORING

N/A

2.7 RELATED/SUPPORTING DOCUMENTS

N/A

3. AUTHORISATION

This document has been seen and accepted by:

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4. REVISIONS

Date	Rev.	Compiler	Remarks
September 2022	1	Feyane Tivane	Document created.

5. DEVELOPMENT TEAM

The following people were involved in the development of this document:

- Feyane Tivane
- Gontse Mathibedi
- Ishfaaq Ramathula

6. ACKNOWLEDGEMENTS

N/A