Eskom	Scope of Work	Engineering

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1. INTRODUCTION

Kriel Power Station is situated approximately 10 kilometres from the town of Kriel in Mpumalanga and access to the station is by road.

The purpose of this scope is to briefly outline the supply, and delivery of the estimated quantities High Pressure Hydraulic spares to Eskom Holdings SOC Limited.

General supply requirements to Kriel Power Station in-line to its application, specification, and location on which the spares will be required. This will ensure quality and sustainable maintenance basis for all plant work required to provide optimal plant performance at the lowest cost possibly. The original equipment manufacturers are required to provide specifications of the hydraulic spares to be supplied on as when required basis during "Outages and Maintenance*"* and must be supplied or delivered with the required documents for traceability, material certification and data books/sheets attached.

1.1 TECHNICAL REQUIREMENTS APPLICABLE TO THE SUPPLIER/MANUFACTURER (COMPLETELY ASSEMBLED VALVES AND PUMPS)

The following documents and data are mandatory deliverables for every order:

a) A GA drawing of each component or individual valve/pump spare part will be supplied when an order is placed.
b) This will form part of the data book. (Data books will be supplied in hard copy and electronic copy format).
c) Supply of torque values for all fasteners.
d) Stem, plug/disc, dimensions, and stem thread details indicated on the GA drawing.
e) For power driven valves the actuator mounting attachment shall be compliant to BS EN ISO 5210 or ISO 5211 (Specified on the GA drawing and valve datasheet).
f) Clearance specification between moving and stationary components. (Specified on the valve datasheet).
g) Packing type and number of packing rings specified on the GA drawing.
h) Gland packing and Gaskets specifications (Materials of constructions and dimensions). This includes packing, seals and gasket data sheets.
i) Face to face dimensions and total weight of the component (valves, pumps and soft spares).

1.2 USE OF *SUPPLIER*'S DESIGN

The *Purchase*r is allowed to use the designs, drawings, and documents for the purpose of verifying goods supplied and the fulfilment of PQP/ CQP/QCP.

1.3 FACTORY ACCEPTANCE TESTING (FAT)

Material certification shall be in accordance with the latest version of EN 10204: “Types of Inspection Documents” for both EN and ASME materials. EN 982: “Safety requirements for hydraulic circuit components.

Impact testing of the pressure boundary components is a standard requirement for all valves supplied in accordance with this specification.

1.4 OPERATING MANUALS AND MAINTENANCE SCHEDULES

The data book of new valves will include maintenance procedures and proposed quality control procedures for future maintenance efforts. Maintenance manuals to be submitted upon delivery of the good.

1.5 SUPPLY REQUIREMENTS

a) All pumps, valves and fittings spares shall be designed and manufactured in accordance with an internationally accepted design standard.
b) The data book of new hard spares (pumps, fittings, pipes and valves) will include maintenance procedures and proposed quality control procedures for future maintenance efforts.
c) Data of consumables such as seals, and gaskets shall be supplied in the form of datasheets.
d) When ordering spares, valve and pumps spare parts shall be supplied with relevant material certificates (metallic part).
e) Valves and pumps shall be supplied with protective covers on the end connections.
f) Valve and pump packaging shall be as such that inadvertent mechanical damage to components is not possible.

1.6 CONDITIONS ON DELIVERY

1.6.1 Valve and Pump name plate markings

As a minimum, all valves and pumps shall have a tag plate, permanently affixed, that indicates the following information:

a) Name of Manufacturer.
b) Country of origin.
c) Year of manufacture.
d) Manufacturer Reference (Figure Number).
e) Design Pressure (MPa) as specified by the end user.
f) Design Temperature (°C) as specified by end user.
g) Design Standard (Code of construction).
h) Maximum pressure rating.

1.6.2 Valve and Pump body markings

For valve body marking, the minimum requirements of the following standards shall be followed:

a) BS EN19: Industrial valves – Marking of Metallic Valves

b) MSS-SP-25: Standard Marking system for valves, fittings, flanges and unions

c) ISO 4409/ASMEY32.1: Hydraulic pump marking requirements.

1.7 SCOPE

Supply and Delivery of HP Power Pack and Servo Motors Hydraulic Equipment Spares to Kriel Power Station, on an as and when required basis.

Below table shows the Bill of Materials of the required spares.

***Note**:*

Dimensional data supplied in the table are approximate and the supplier must be contacted for certified dimensions.

SUPPLY AND DELIVERY OF HP POWER PACK AND SERVO MOTORS HYDRAULIC EQUIPMENT SPARES AS AND WHEN REQUIRED BASIS AT KRIEL POWER STATION FOR THE PERIOD OF FIVE YEARS.

Item	Material Number	Description	Unit Of Measure	Quantity
1	690386	REPAIR: VALVE: HYDRAULIC 2 WAY SOLENOID; NG 10 MM	EA	72
2	690387	REPAIR: ALVE: HYDRAULIC 2 WAY SOLENOID; NG 6 MM	EA	48
3	62777	VALVE, SOLENOID: PIPE SIZE: 12 MM; STYLE: 3 WAY; DESIGN RATING: 0-15 BAR; CONNECTION: THD; BODY MATERIAL: BRASS; MEDIUM: LIQUID; ORIFICE SIZE: 5 MM; SUNDRYS REG; WATERTIGHT ENCLOSURE	EA	48
4	56837	HOSE ASSEMBLY, NON-METALLIC: HOSE SIZE: 1/2 IN; LENGTH: 950 MM; CONNECTION 1: COUPLING FBSP; CONNECTION 2: COUPLING FBSP; CORE MATERIAL: RUBBER; REINFORCEMENT MATERIAL: STL BRAIDED; MAXIMUM OPERATING PRESSURE: 4000 PSI; REFERENCE NO: 900-6; HIGH PRESSURE; 10MM ID; COMPLETE WITH 2006 FITTINGS BOTH ENDS; FOR SULZER HIGH PRESSURE BYPASS HYDRAULIC SYSTEM	EA	72
5	695816	VALVE: TYPE: NG10 24 V DC; VALVE SIZE: 10; DESIGN RATING: 315 BARS; TEMPERATURE RATING: -20 TO 50 DEG; CONNECTION: MANIFOLD MOUNT; OPERATED: HYDRAULIC FLUID; BODY MATERIAL: CARBON STEEL; SPECIFICATION: REXROTH; OEM P/N: R901278761; REFERENCE NO: 41025066	EA	144
6	119979	ROD: TYPE: PISTON; APPLICATION: SERVO MOTOR ASM63; DRAWING NO: 85-30 REV 1	EA	48
7	22850	ROD: TYPE: PISTON; DIMENSIONS: DIA 20 X LG 250 MM; MATERIAL: STL; MODEL NO: 85-30-18MTR ASM63	EA	24
8	771738	COUPLING: CURVED JAW;38 MM; CARBON STEEL	EA	48
9	771739	SOLENOID: SPOOL VALVE;24 V; HYDRAULIC	EA	100
10	62759	VALVE, SOLENOID: STYLE: 3 WAY; POTENTIAL: 220 VAC CONNECTION: BOLTED; BODY MATERIAL: STL; OPERATED: NO/NC; MEDIUM: LIQUID; ORIFICE SIZE: 6 MM; 50HZ; GENERAL PURPOSE ENCLOSURE; BOILER	EA	100
11	695806	PUMP: TYPE: AXIAL PISTON PUMP; SIZE: 18; CAPACITY: 280 BAR; SPEED: 1450 RPM; RATING: 280 BAR; SPECIFICATION: REXROTH; CASING MATERIAL: CI; APPLICATION: OPEN CIRCUIT; OEM P/N: R910949268; REFERENCE NO: 41025065;	EA	24
12	41519	PUMP: TYPE: HYDRAULIC POWER PACK; DRAWING NO: 2965/01/02 REV 1; REFERENCE NO: 1P3072CPDFB; FOR LEAK OFF	EA	36

13	36801	ACCUMULATOR: TYPE: BALL; REFERENCE NO: HC41412X; MILL; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	EA	42
14	177766	CYLINDER ASSEMBLY, ACTUATING LINEAR: TYPE: HYDRAULIC; BORE DIAMETER: 200 MM; STROKE: 750 MM; REFERENCE NO: LZ FV 200/750 D.P.P. RS-PEZ, UNK; PISTON DIA 200MM; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	EA	42
15	56855	HOSE ASSEMBLY, NON-METALLIC: HOSE SIZE: 1/4 IN; LENGTH: 1.8 M; CONNECTION 1: COUPLING BSP 90 DEG; CONNECTION 2: COUPLING BSP STRAIGHT; CONNECTION 2 SIZE: 1/4 IN; CORE MATERIAL: RUBBER; TYPE: HYDRAULIC; SPECIFICATION: SAE100R2; SIZE 8MM ID	EA	148
16	66918	VALVE, CHECK: VALVE SIZE: 20 MM; CONNECTION: BOLTED; BODY MATERIAL: STL; OPERATED: PILOT; STYLE: 2 WAY; TRIM: STAINLESS STEEL; SOFTGOODS: O-RING RUBBER; SUPPL P/N: CPDG-06-E-30-2080; DRAWING NO: 2965/01/02 REV 1; LEAK-OFF; FOR FEED PUMP LEAK-OFF HYDRAULIC POWER PACK	EA	60
17	22844	BUSH: TYPE: GUIDE; DRAWING NO: 85-30 REV 1; REFERENCE NO: 5; SERVO MOTOR ASM63	EA	24
18	54222	PUMP: TYPE: PISTON AXIAL; DRAWING NO: BS3/A03-114 REV 1; MODEL NO: HYKVE; FOR SULZER OIL SUPPLY UNIT TYPE OV32	EA	12
19	73465	REGULATOR, PRESSURE: TYPE: CONTROL VALVE; CONNECTION: THD; BODY MATERIAL: STL; REFERENCE NO: 86/22/19; LIM; VALVE SIZE: 35MM; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	EA	24
20	761842	VALVE, PILOT: VALVE STYLE: NG16 MOUNTING; VALVE SIZE: 1 IN; MATERIAL: DUCTILE IRON; OEM P/N: CPDG-06-2-50	EA	72

1.7.1 Applicability

This document is applicable to Kriel Power station.

1.8 NORMATIVE/INFORMATIVE REFERENCES

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

1.8.1 Normative

240-128557196 Procurement Standard of High Pressure and High Temperature Valves in Coal Fired Stations.

1.8.2 Informative

CCI/PCB Training, Operating and Maintenance Manual for HP Bypass Valves at Kriel Power Station.

CCI/PCB hydraulic system drawing layout, drawing number 1-103.156.196.

Drawing & Component List hp bypass Kriel circuits power pack, drawing number 5041-422.

1.9 DEFINITIONS

Definition	Description
Pipework	Pipes and fittings are used for the conveyance of steam, water, gases or other fluids.
Valve	A device for shutting off or controlling the flow of a fluid through a pipe or duct.

2. AUTHORISATION

This document has been seen and accepted by:

Name	Designation	Signature
[redacted]	Engineer, Kriel Boiler Engineering	
[redacted]	Supervisor, Kriel Turbine Maintenance	

3. REVISIONS

Date	Rev.	Compiler	Remarks
September 2025	0.1	[redacted]	Draft
October 2025	1	[redacted]	SOW finalised.
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4. DEVELOPMENT TEAM

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

- [redacted]

5. ACKNOWLEDGEMENTS

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