

 Eskom	Scope of Work	Generation
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Title: **Kriel Power Station Supply and Delivery of Lime and Water Treatment Plant Spares for a Period of 3 Years on an as and when required basis**

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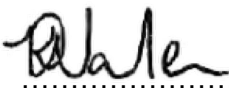


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1. INTRODUCTION

Kriel Power Station utilises lime for hardness removal from its North and South cooling water systems and the Water Treatment Plant (WTP) for the production of potable, filtered and demineralised water. The scope of work (SOW) for this contract entails the Supply and Delivery of Lime and WTP Spares on an As and When required basis for a period of three (3) years.

2. SUPPORTING CLAUSES

2.1 SCOPE

This document covers the technical requirements in the form of a scope of work/technical specifications for supply and delivery of the various lime and WTP spares.

2.1.1 PURPOSE

The purpose of this document is to provide the technical requirements for the supply and delivery of the various lime and WTP spares.

This document is intended to be the input to the NEC Part 3: Scope of Work.

2.1.2 APPLICABILITY

This document is applicable to Kriel Power Station cooling and WTP maintenance as well as engineering sections.

2.2 NORMATIVE/INFORMATIVE REFERENCES

2.2.1 NORMATIVE

- [1] ISO 9000: Quality Management Systems.
- [2] Occupational Health and Safety Act (Osh Act; Act 85 of 93)
- [3] Applicable P&ID's

Drawing Number	Description

2.2.2 INFORMATIVE

Not applicable.

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2.3 DEFINITIONS

Table 1: Definitions

Definitions	Description

2.3.1 DISCLOSURE CLASSIFICATION

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

2.4 ABBREVIATIONS

Abbreviations	Description
OHSA	Occupational Health and Safety Act
P&ID's	Piping and Instrumentation Diagrams
QC	Quality Control
QCP	Quality control program/plan/procedure
QM	Quality Management
SHE	Safety, Health & Environmental
SHEQ	Occupational Safety, Health, Environmental, and Quality
SOW	Scope of Work
WTP	Water Treatment Plant

2.5 ROLES AND RESPONSIBILITIES

Roles and responsibilities are as follows:

- The System Engineer is responsible for drafting the SOW and circulating it to all the relevant stakeholders for review.
- Engineering and Maintenance execution are responsible for reviewing the SOW to ensure that the consolidated scope will address plant challenges.
- The System Engineer together with Quality Control Officer are responsible for the Quality Control of works during supply and delivery.
- The Contractor is responsible for executing the SOW as per task order.

3. THE WORKS

The *works* is the Supply and delivery of various lime and water plant spares to Kriel Power Station on an as and when required basis.

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3.1 BACKGROUND

3.2 DESCRIPTION OF THE WORKS

The *works* entails the supply and delivery of various lime and WTP spares to Kriel Power Station on an as and when required basis. The *works* scope is to ensure high availability of the cooling and WTPs.

3.2.1 SCOPE

The *Contractor* is to supply and deliver the following items:

Supply and delivery of various lime and WTP spares on and as an when required basis for a period of three (3) years:

- The specifications for the spares are shown in section 3.2.2
- The Contractor must provide the required spares (s) inclusive of all data books within 21 days of a valid task order.
- The spares and associated technical information will be assessed at Kriel Power Station prior to the delivery being accepted.
- The warranties and guarantees for the spares must be provided.

3.2.2 SPARES TECHNICAL SPECIFICATION

The specifications for the spares are as follows:

ACTIVITY TYPE	STOCK NUMBER	STOCK DESCRIPTION
Supply and Deliver to Kriel power station	639250	GEARBOX: TYPE: HELICAL IN-LINE; RATIO: 25.23; SPEED: I/P 1420; O/P 58 RPM; POWER: 4.5 KW; ROTATION DIRECTION: BI DIRECTIONAL; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	639753	GEARBOX: TYPE: HELICAL IN-LINE; RATIO: 17.82; SPEED: 81 RPM; POWER: 1.1 KW; APPLICATION: LIMESTONE; ROTATION DIRECTION: BI DIRECTIONAL; MOUNTED: FLANGE; ISO VG220 LUBE TYPE; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	565471	STIRRER: TYPE: DILUTION TANK; STIRRING POSITIONS: 1068; POWER SOURCE: 1.1 KW; PLASTIC; PVC; HEAD OF 86RMP; 3 STIRRERS ON ONE SHAFT PER TANK; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	0692971	WHEEL: TYPE: CLARIFIER; HUB SIZE: 80 MM; OUTSIDE DIAMETER: 290 MM; WIDTH: 125 MM; MATERIAL: MILD STEEL RIM AND POLYURETHANE RUBBER FILLING OF 30MM; SHAFT SIZE: 60MM WITH A BARE DIAMETER OF THE WHEEL TO BE TIGHT FIT; WATER TREATMENT PLANT, EN 38 (SOFT), EN8 (HARD), KEY-WAY M18 HOLE; 18.5 X 5MM;

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		RIM GROOVES ARE CUT ON THE OUTER SURFACE OF STEEL FOR BETTER GRIPPING FOR THE URATHENE, BRIGNE-DRIVE; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	592897	FEEDER: TYPE: LIME; COMPLETE WITH 0.55KW 380VOLT GEARED MOTOR; BASE PLATE CHAIN DRIVE AND GUARDS; UNIT FITTED WITH BOARD BEARINGS; STUFFING BOXES AND ADJUSTABLE STAINLESS STEEL TIPS; COATING CHROMED ON BORE AND END PLATES; IMPELLER SPEED 5.58 RPM; SERIAL NO: RVF-0200-H-ST-FC-RPSP; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	638669	VALVE, GATE: VALVE SIZE: 150 MM; TYPE: KNIFE; DESIGN PRESSURE: PN16; DESIGN TEMPERATURE: AMBIENT; CONNECTION: WAFER; FACE TO FACE LENGTH: 65 MM; BODY MATERIAL: DI; TRIM: RUBBER LINED; OPERATED: ACTUATOR; APPLICATION: SLUDGE WATER; STANDARD PATTERN; PNEUMATIC PRESSURE: 4BAR; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	641282	PUMP, CENTRIFUGAL: NPSH: 5 M; CAPACITY: 60 M3/HR; TOTAL HEAD: 32 M; SIZE: 150 X 150 MM; SPEED: 1450 RPM; STAGE: 1; DRIVER: ELECTRIC MOTOR 15 KW; TYPE: SLUDGE; MOUNT: HORIZONTAL; IMPELLER DIA: 305 MM; IMPELLER MATERIAL: BRONZE; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	572228	PUMP, CENTRIFUGAL: NPSH: 4 M; CAPACITY: 74 LPS; TOTAL HEAD: 20 M; SIZE: 150 X 150 MM; SPEED: 1460 RPM; STAGE: 1; DRIVER: ELECTRIC MOTOR 22KW 50HZ; TYPE: SUBMERSIBLE; MOUNT: FLANGE; IMPELLER DIA: 300MM; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	66557	ACTUATOR, PNEUMATIC: PRESSURE RATING: 4 BAR; DOUBLE ACTION; DN02-40-80MM; COMPLETE WITH 80MM TTV BUTTERFLY VALVE; AIR TORQUE; TTV80; MODEL NO: AT10DA - F05-14; REFERENCE NO: NF E29-409; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	656161	VALVE, CHECK: TYPE: DOUBLE DOOR WAFER; VALVE SIZE: 150 MM; DESIGN RATING: PN16; TEMPERATURE RATING: AMBIENT; CONNECTION: WAFER; BODY MATERIAL: CAST IRON; FACE TO FACE LENGTH: 76 MM; OPERATED: FLOW; APPLICATION: NRV SLUDGE; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).

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Supply and Deliver to Kriel power station	601851	NOZZLE: TYPE: FILTER; SIZE: 0.2 MM; CONNECTION SIZE: 15 MM; CONNECTION: SCREW; MATERIAL: PROPYLENE; APPLICATION: DEMIN BASE; K1 FILTER; 15 HOLES; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	603206	NOZZLE: TYPE: PLASTIC CAP; SIZE: 3/4 IN; CONNECTION SIZE: 3/4 IN; CONNECTION: SCREW; MATERIAL: PROPYLENE; APPLICATION: DEMIN WATER VESSEL TOP; BLUE POLY; SLOT SIZE 24 X 0.25 MM; TOTAL LENGHT 50 MM; THREADED SECTION IS 25MM FITTED WITH A NUT FOR FASTENING IN A BED PLATE IF REQUIRED; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	598843	STRAINER, PIPING: TYPE: BASKET; DIMENSIONS: LG 1.5 M; PRESSURE RATING: 5 BAR; MATERIAL: SS GR 316; CONNECTION: FLANGE; MICRON: 250 U; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	658995	PUMP: TYPE: METERING; SIZE: 1/2 X 3/8 IN; CAPACITY: 19.2 LPH; SPEED: 200 STR/MIN; RATING: 4 BAR; DRIVER: SOLENOID; POTENTIAL: 100-230 VAC; FURNISHED ITEMS: FKM: FLOURINE RUBBER; APPLICATION: CHEMICAL DOSING COAGULANT; DEGASSING LIQUID ENDS; PART NO: GAMMA/X0424; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).
Supply and Deliver to Kriel power station	30491	BEARING, BALL: TYPE: CONRAD; STYLE: SHIELD; INSIDE DIAMETER: 45 MM; OUTSIDE DIAMETER: 100 MM; WIDTH: 25 MM; ROW: SINGLE; NOTE: ITEM MUST BE ORIGINAL PACKED; PART NO: 6309Z, SUPPLIER: UNKNOWN; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).

3.2.3 DOCUMENTATION SUBMISSION AND RECORDING

Data books (Manufacturers QCPs, Material data certificate, Technical specifications, Maintenance Manuals etc.) must be supplied with each and every spare that is supplied.

The warranties and guarantees for all spares must be submitted with each order.

3.3 STANDARDS, SPECIFICATIONS AND PROCEDURES

All material and equipment shall be new and of the standard and quality specified.

The design and manufacture of equipment and the complete installation shall be carried out and tested in accordance with the latest issue or amendments of the following Standards and Regulations, as applicable:

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Table 2: Relevant Standards and Codes

Document Number	Title
Eskom Standards	
240-30008949	Safety, Health and Environmental Specifications for Contractors
240-55944466	Supplier Contract Quality Requirement's Specification
QM 58	Supplier Contract Quality Requirements
General Standards	
ISO 9001	Quality Management Systems.
OSH Act 85 of 1993	Occupational Health and Safety Act and Regulations Act 85 of 1993.

4. AUTHORISATION

This document has been seen and accepted by:

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5. REVISIONS

Date	Rev.	Compiler	Remarks
October 2021	0.1	Justin Varden	1 st Draft
November 2021	1.0	Justin Varden	Authorised Document

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