Eskom	Strategy	Generation/Kriel PS

Title: **Technical Evaluation Strategy (TES) For Supply and Delivery of Electrostatic Precipitator (ESP) Plant Mechanical Spares "as and when required" for a period of five years at Kriel Power Station**

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Compiled by	Reviewed By	Functional Responsibility	Authorized by
Muruge			pp
Rinae Muruge	**Mthoko Dlamini**	**Thapelo Masokoane**	**Rofhiwa Nelwamondo**
System Engineer	**Chief Engineer (Gx Engineering Specialist)**	**Boiler Engineering Manager**	**Engineering Manager**
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1. Introduction

The current Atmospheric Emission License (AEL 17/4/AEL/MP312/11/9) for Kriel Power Station requires that the station should comply with a limit of 100 mg/Nm^3 on a daily basis. It is a requirement for the licence holder to ensure that these conditions are always adhered to through a continuous focus on the operating, reliability, availability, optimization, and maintenance of the plant.

An electrostatic precipitator (ESP) is a particle control device that uses electrostatic forces to move the particles out of the flowing gas stream and onto collector electrodes. They are the most widely used Particulate Emission Abatement Technology worldwide. For this to happen effectively, maintenance work must be done at both all moving and damaged non-rotatable components found inside and outside ESP casing.

2. Supporting Clauses

2.1 Scope

This document discusses the different technical aspects that will be evaluated and scored by the Technical Evaluation Team (TET) for Electrostatic Precipitator (ESP) mechanical spares supply scope of work. The team members who will be involved in the evaluation are listed and appointed in this document along with their responsibilities. This document also describes the acceptable and unacceptable risks and qualifications and/or conditions that will be applicable to the Scope of Work. Once the Technical Evaluation Strategy is authorised, no changes will be made to the evaluation criteria without the appropriate authorisation.

2.1.1 Purpose

The purpose of this tender technical evaluation strategy is to define the Mandatory Evaluation Criteria, Qualitative Evaluation Criteria and TET member responsibilities for tender technical evaluation. The technical evaluation strategy serves as basis for the tender technical evaluation process.

2.1.2 Applicability

This document shall apply to Kriel Power station.

2.1.3 Effective date

This document will be effective on the date the document is authorised.

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] 240-168966153 Generation Tender Technical Evaluation Procedure

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

[3] 240-105658000 Supplier Quality Management Specification.

[4] ISO 14001 Environmental Standard.

[5] OHSAS 18001 Health & Safety Management Standard.

[6] ISO 31000 Risk Management Standard.

[7] 32-391Eskom Integrated Risk Management Standard.

2.2.2 Informative

[8] ISO 9001 Quality Management Systems

[9] 474-59: Internal Audit Procedure

[10] 32 -1034: Eskom Procument Policy and Supply chain policy

[11] 240-168966152: Generation Tender Technical Evaluation Procedure.

[12] 240 - 53499108 Process Control Manual for Perform Power Plant Boiler Engineering

[13] 240 - 10176464 Technical Evaluation Guideline.

2.3 Definitions

Electrostatic Precipitator	A device that removes suspended dust particles from a gas or exhaust gas by applying a high DC - Voltage electrostatic charge and collecting the particles on charged plates.

2.4 Abbreviations

Abbreviation	Explanation
AEL	Atmospheric Emission Licence
CE	Collecting Electrode
DC	Direct Current
DE	Discharge Electrode
ECN	Engineering Change Notification
EDMS	Engineering Document Management System
ECM	Engineering Change Management
ESP	Electrostatic Precipitator
UCLF	Unplanned Capability Loss Factor
TET	Technical Evaluation Team
WPGR	Welder Performance Qualification Record
WPS	Welding Procedure Specification

2.5 Roles and Responsibilities

- Boiler Engineering: Responsible for compiling the strategy and ensure that the respective areas are and adhered to this procedure.
- Technical Evaluation Team (TET) Member: The delegated engineers/technical specialist are responsible for review and evaluate technical aspects of the tender documentation Tender TET.

2.6 Process for Monitoring

Inspection of the supplied components and signed off delivery notes.

2.7 Related/Supporting Documents

[14] 240-53716726: Tender Technical Evaluation Scoring Form

3. TENDER TECHNICAL EVALUATION STRATEGY

3.1 TECHNICAL EVALUATION THRESHOLD

Mandatory Technical Evaluation Criteria (gatekeepers) are 'must meet' criteria. These criteria shall not be weighted or point scored but shall be assessed on a Yes/No basis as to whether or not the criteria are met unless set otherwise. An assessment of 'No' against any criterion shall technically disqualify the tenderer and shall not be further evaluated against Qualitative Criteria.

Qualitative Technical Evaluation Criteria are weighted evaluation criteria used to identify the highest technically ranked tenderer after determining that all the Mandatory Evaluation Criteria have been met.

The Qualitative Evaluation Criteria are weighted to reflect the relevant importance of each criterion. The minimum weighted final score (threshold) required for a tender to be considered from a technical perspective is 70%.

3.2 TET MEMBERS

Table 1: TET Members

TET Number	TET Member Name	Designation
1	Rinae Muruge	Engineer, Kriel Boiler Plant Engineering
2	John Mkhonto	Senior Engineer, Kriel Boiler Plant Engineering
3	Mthoko Dlamini	Chief Engineer – Gx Engineering Specialist
4	Bhekinkosi Mkhabela	Senior Supervisor Mechanical Maintenance

3.3 CRITERIA

3.3.1 Mandatory Technical Evaluation Criteria

Table 2: Mandatory Technical Evaluation Criteria

	Mandatory Technical Criteria Description	Reference to Technical Specification / Tender Returnable	Motivation for use of Criteria
1	The Principal Contractor must have an ISO 3834 accreditation (Quality management system for welding) provided or issued by a SANAS/SABS accredited entity/body. ISO 3834 provides criteria to be considered for the selection of the appropriate level of quality requirements for fusion welding of metallic materials.	Valid Certification	To ensure correct and proper usage of Welder Performance Qualification Record (WPQR) and Welding Procedure Specification (WPS).

3.3.2 Qualitative Technical Evaluation Criteria for Part 1

Table 3: Qualitative Technical Evaluation Criteria Scoring Definition

Score	(%)	Definition
5	100	**COMPLIANT** • Meet technical requirement(s) AND; • No foreseen technical risk(s) in meeting technical requirements.
4	80	**COMPLIANT WITH ASSOCIATED QUALIFICATIONS** Meet technical requirement(s) with; • Acceptable technical risk(s) AND/OR; • Acceptable exceptions AND/OR; • Acceptable conditions.
2	40	**NON-COMPLIANT** • Does not meet technical requirement(s) AND/OR; • Unacceptable technical risk(s) AND/OR; • Unacceptable exceptions AND/OR; • Unacceptable conditions.
0	0	**TOTALLY DEFICIENT OR NON-RESPONSIVE**
Note 1: The scoring table does not allow for scoring of 1 and 3. **Note 2:** Foreseen acceptable and unacceptable risk(s), exceptions and conditions shall be unambiguously defined in the relevant Tender Technical Evaluation Strategy.		

Table 4: Qualitative Technical Criteria

	Qualitative Technical Criteria Description	Reference to Technical Specification/Tender Returnable	Criteria Weighting (%)
	Material Supply Qualitative Criteria		
1.	**Company Experience and Capacity**		**35 %**
	Proof of previous successfully executed supply and delivery works of similar mechanical components as per the listed components on Appendix A within the last 5 years in any industry. • There is no signed off delivery notes and purchase order submitted or there is a delivery note and purchase order submitted but not signed and no verifiable contact details. **0pts**. • There is minimum of 10 off signed delivery notes and Purchase orders with date, address and verifiable contact details for the supply of mechanical components submitted.**2pts**.	Signed delivery note and purchase order number with the date, address and verifiable details for the contact person.	

	• There is minimum of 20 off signed delivery notes and Purchase orders with date, address and verifiable contact details for the supply of mechanical components submitted.**4pts**. • There is minimum of 25 or more off signed delivery notes & Purchase orders with date, address and verifiable contact details for the supply of mechanical components submitted.**5pts**		
2.	**Material Technical Specification**		**30 %**
	Material data sheets of the following items as listed on appendix A The criterion covers material technical specification as per scope of work. Service provider shall provide material data sheets as listed on appendix A • There is no Proof of correct material data sheets for supply of mechanical spares as listed appendix A or there is a maximum of 10 correct material data sheets submitted. **0 pts** • There is submission of more than 10 but not more than 18 correct material data sheets. **2 pts.**	Material Data sheet specifications as per scope of work.	

	• There is submission of more than 18 but not more than 36 correct material data sheets. **4 pts.** • There is submission of a minimum of 37 up to 45 correct material data sheets. **5pts**		
3.	**Method Statement: Fabrication of the Collecting Electrode (CE) Hammers, Discharge Electrode (DE) Hammers, CE pedestal unit, Torque insulators and Collecting Electrode (CE) Rapper bar.**		**35 %**
	Clearly define the method statement or process on how the CE hammers will be repaired. • Non-specific method statement or no submission**. 0 pts** • Method statement not clear/generic but shows the know-how**. 2 pts** • Detailed method statement that outlines the technical know-how but some critical activities regarding safety and quality are not mentioned**. 4 pts** • Detailed method statement that outlines technical know - how with all relevant critical activities regarding safety and quality are mentioned**. 5 pts**	Detailed method statement on how the CE hammers, DE hammers, CE pedestal unit, torque insulators and CE rapper bar will be fabricated. The method statement should comprise of all work execution and sequence for the repairing and what types of preparation, inspections, testing, witnessing etc. are carried out to ensure that the requirements of the specifications are met.	

			TOTAL = 100%

3.4 TET Member Responsibilities

Table 5: TET Member Responsibilities

Mandatory Criteria Number	TET 1	TET 2	TET 3	TET 4
1. Valid ISO 3834 Certificate	X	X	X	X
Qualitative Criteria Number	**TET 1**	**TET 2**	**TET 3**	**TET 4**
1. Company Experience and Capacity	X	X		
2. Material Technical Specification	X	X	X	X
3. Method Statement: Fabrication of the Collecting Electrode (CE) Hammers, Discharge Electrode (DE) Hammers, CE pedestal unit, Torque insulators and Collecting Electrode (CE) Rapper bar.	X	X	X	X

3.5 FORESEEN ACCEPTABLE / UNACCEPTABLE QUALIFICATIONS

Table 6: Acceptable Technical Risks

Risk	Description
1.	None

Table 7: Unacceptable Technical Risks

Risk	Description
1.	ISO 3834 certificate not submitted.

3.6 Exceptions / Conditions

Table 8: Acceptable Technical Exceptions / Conditions

Risk	Description
1.	None

Table 9: Unacceptable Technical Exceptions / Conditions

Risk	Description
1.	Submission of incomplete tender returnables.

4. Acceptance

This document has been seen and accepted by:

Name	Designation
Mthoko Dlamini	Chief Engineer (Gx Engineering Specialist)
Thapelo Masokoane	Boiler Engineering Manager
Rofhiwa Nelwamondo	Engineering Manager
Bhekinkosi Mkhabela	Senior Supervisor Mechanical Maintenance

5. Revisions

Date	Rev.	Compiler	Remarks
July 2025	01	R Muruge	New document
November 2025	02	R Muruge	Addition of material stock numbers and removal of duplicate items

6. Development Team

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

- Rinae Muruge
- Bhekinkosi Mkhabela
- Mthoko Dlamini

7. Acknowledgements

N/A

APPENDIX A: Material Supply List

ITEM NO	STOCK NUMBER	UNIT OF MEASURE	LONG DESCRIPTION	QUANTITY REQUIRED
1	53211	EA	HAMMER: TYPE: COLLECTOR; HEAD WEIGHT: 4; HEAD MATERIAL: STL; HANDLE: STL; COMPLETE WITH LEVER, FULLCRUM BOLT, HARDENED BUSHES, FOR BRANDT PRECIPITATORS; 270MM	15 600
2	53414	EA	INSULATOR: TYPE: TORQUE; DIMENSIONS: DIA 70 X LG 380 MM; MATERIAL: PORCELAIN; POTENTIAL: 660 V; WITHOUT UNIVERSALS, FOR PRECIPITATOR	2500
3	222892	EA	ANVIL: TYPE: DISCHARGE ELECTRODE; DRAWING NO: 28-45-54005 REV 1; PRECIPITATOR; ALL BOLT CONNECTIONS TO BE WELDED; FOR COMPLETE UNIT; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	10 000
4	226361	EA	HAMMER: TYPE: PRECIPITATOR; HEAD WEIGHT: 5.8 KG; HEAD MATERIAL: MS; HANDLE: STL; SUPPL P/N: 583-6-4-01; DRAWING NO: 28.45-54319 REV 1; NEW PRECIP'S; FOR DISCHARGE RAPPING SYSTEM; TYPE: ROTHEMUHLE, FOR DISCHARGE FRAMES, FOR UNIT 1,2,3 AND 6.	12 000
5	53416	EA	HOOD: SIZE: WD 280 X LG 265 X THK 4 MM; MATERIAL: PTFE; REFERENCE NO: H00D; TEFLON; FOR ELECTROSTATIC PRECIPITATORS; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	3000

6	719708	EA	COUPLING: TYPE: NEUPEX A; SIZE: 160 MM; MATERIAL: CAST IRON; CONNECTION 1 SIZE: 108 MM; CONNECTION 2 SIZE: 160 MM; PART1:	600
7	621330	EA	ROLLER, BEARING: OUTSIDE DIAMETER: 60 MM; LENGTH: 230 MM; MATERIAL: EN9; ALIGNMENT TYPE: AXIAL/LINEAR; INSIDE DIAMETER: 20 MM; TYPE: CE RAPPER SHAFT PEDESTAL; DRAWING NO: 045.57218 REV 0; MANUFACTURE ACCORDING TO ESKOM STANDARDS; MATERIAL CERTIFICATE REQUIRED FOR THE ROLLERS AND BUSHES; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	2000
8	90551	EA	WASHER: TYPE: ELECTROSTATIC PRECIPITATOR; THICKNESS: 5 MM; MATERIAL:TEFLON;SHIELD; 688X688X5MM SQUARE; TEMPERATURE RESISTANT TO 180 DEGREE CELSIUS; FOR PRECIPITATORS.	4000
9	53452	EA	SCREEN: TYPE: PRECIPITATOR INLET; DIMENSIONS: WD 698 MM X LG 2.295 M X THK 3 MM; MESH SIZE: 35 MM; MATERIAL: MS; DRAWING NO: ROTEK B920/75C REV 1; B920/75C REV 1; EDGE 30MM HIGH X 90 DEG; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	2000
10	53121	EA	PAD, BEARING: SUPPL P/N: KVB3/123/D; REFERENCE NO: KVB/123/D; SLIDING V; LOCATING; FOR BRANDT PRECIPITATORS V TYPE DISCHARGE BEARING; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	680
11	53442	EA	PAD, BEARING: DIMENSIONS: WD 50 X LG 100 X THK 20 MM; MATERIAL: STL; SUPPL P/N: KVB-123-D; KVB2-123-D; SLIDING V; FOR BRANDT PRECIPITATORS V; TYPE DISCHARGE BEARING; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	1600

12	667266	EA	COUPLING, SHAFT FLEXIBLE: TYPE: DRIVE UNIT; BORE DIAMETER: 160 MM; TORQUE: 560 NM; MATERIAL: STL; SPEED: 4250 RPM; REFERENCE NO: N-UEPEX/B160; CE SHAFT TO CE GEAR DRIVE COUPLING UNIT; AMBIENT TEMP: -30 TO 80 DEG C; FATIGUE TORQUE: 84NM; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	300
13	162244	KG	BAR, ROUND: NOMINAL DIAMETER: 60 MM; LENGTH: 6 M; MATERIAL: MS BRIGHT; PROCESS: MACHINED; GRADE: EN3A; WEIGHT: 22 KG/M; SPECIFICATION: BS 970 (070M20); DRAWING NO: 0.45/23544 REV 0; FABRICATE SLOTTED KEYWAYS ACCORDING TO ESKOM DRAWING NUMBER; SHAFT TO BE CUT AND TRIMMED ON SITE DURING INSTALLATION.	79 200
14	29942	EA	BEARING, BALL: TYPE: CONRAD; STYLE: DOUBLE SEAL; INSIDE DIAMETER: 40 MM; OUTSIDE DIAMETER: 90 MM; WIDTH: 23 MM; ROW: SINGLE; SUPPL P/N: 6308-2RS; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	1200
15	226357	EA	SPROCKET: TEETH: 32; OUTSIDE DIAMETER: 200 MM; BORE: 60 MM; PITCH: 20 MM; ROOT DIAMETER: 170 MM; MATERIAL: STL; SUPPL P/N: 583-6-0-07 3/4"; FOR THE NEW PRECIPITORS DRIVES, FOR UNIT 1, 2, 3 AND 6 OF THE DRIVE MOTOR.	240
16	161921	KG	ROPE: MATERIAL: COTTON FIBER BRAIDED; DIMENSIONS: DIA 20 MM X LG 30 M; STRUCTURE: 125 STRAND; NON-ASBESTOS, SOFT WHITE.	200
17	621331	EA	COLLAR: DIMENSIONS: ID 61 X OD 85 X THK 20 MM; MATERIAL: ST52; TYPE: LOCATING; APPLICATIOIN: COLLECTING ELECTRODE SHAFT ALLIGNMENT INSIDE PRECIPS.	800

18	85146	EA	BOLT, U: NOMINAL SIZE: 60 MM; DIAMETER: M10; INSIDE LENGTH: 110 MM; THREAD LENGTH: 45 MM; THREAD: 1.5 MM; MATERIAL: GMS; INSIDE WIDTH: 62 MM; WITH WASHER INSIDE LENGTH: 110MM; INSIDE WIDTH: 62MM; NOMINAL SIZE: 60MM	14 600
19	30582	EA	BEARING, ROLLER: TYPE: SELF ALIGNING; INSIDE DIAMETER: 65 MM; OUTSIDE DIAMETER: 120 MM; WIDTH: 31 MM; ROW: DOUBLE; SUPPL P/N: 22213 AKE 4C3; NOTE: THE REFERENCE NUMBER MUST BE CAST AND NOT ENGRAVED ON BEARING AND ORIGINAL PACKED	700
20	621329	EA	DOOR, HATCH: TYPE: PRECIP INSPECTION; MATERIAL: AL GR LM4 ALLOY; DIMENSIONS: DIA 570 X THK 17 MM; APPLICATION: PRECIPS; DRAWING NO: 0.45/57035 REV 0; ITEM TO BE MANUFACTURED AS PER ESKOM REQUIREMENT STANDARD; HANDLES INCLUDED; MATERIAL CERTIFICATE REQUIRED WITH EACH ITEM ON DELIVERY; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	260
21	124020	EA	COUPLING, SHAFT: TYPE: UNIVERSAL; BORE: 60 MM; OUTSIDE DIAMETER: 92 MM; LENGTH: 65 MM; MATERIAL: STL; SUPPL P/N: KTQ2-456D; KTQ2-123D; PRECIPITATOR TORQUE INSULATOR	1460
22	226358	EA	SPROCKET: TEETH: 32; OUTSIDE DIAMETER: 200 MM; BORE: 40 MM; PITCH: 20 MM; ROOT DIAMETER: 170 MM; MATERIAL: STL; SUPPL P/N: 583-6-0-06 3/4"; FOR THE NEW PRECIPITORS DRIVES, FOR UNIT 1, 2, 3 AND 6 OF THE DRIVE SHAFTS	1200
23	34581	EA	HOUSING, BEARING UNIT: TYPE: PILLOW; BORE: ID 67 MM; MATERIAL: CI; SUPPL P/N: SNL511-609; SUPPLIER NOTE: THE ITEM MUST BE COMPLETE WITH A GREASE NIPPLE INSTALLED AND SHAFT SEALS.; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	800

24	84578	KG	BOLT, ASSEMBLY: TYPE: GENERAL PURPOSE; NOMINAL DIAMETER: M12; LENGTH: 100 MM; HEAD: HEX; GRADE: 4.6; MATERIAL: MS; THREAD LENGTH: 35 MM; THREAD: 1.75 MM; NUT QUANTITY: 1; NUT MATERIAL: MS; NUT GRADE: 4.6; BOLT PROTECTIVE COATING: BLACK; SPECIFICATION: SABS 135	80 000
25	55254	EA	PIPE, METALLIC: NOMINAL PIPE SIZE DESIGNATION: NB 100 MM; MATERIAL: B ASTM A106; LENGTH: 6 M; WALL THICKNESS: 6.02 MM; CONSTRUCTION: SEAMLESS; MAXIMUM OPERATING PRESSURE: 2 MPA; SCHEDULE: 40; MAXIMUM OPERATING TEMP: 150 DEG C; GRADE: B; PIPE TO BE SUPPLIED WITH 3.1 CEDRTIFICATION AS EN 10204	4 500
26	56085	M	PIPE, METALLIC: NOMINAL PIPE SIZE DESIGNATION: 88.9 MM; MATERIAL: STL GR B ASTM A106; LENGTH: 6 M; WALL THICKNESS: 5.49 MM; CONSTRUCTION: SEAMLESS; END TYPE: PLAIN; SCHEDULE: 40; GRADE: B; SAME AS 55583	25 000
27	620414	EA	BUSH: TYPE: CONICAL RAPPER BAR; INSIDE DIAMETER: 17 MM; OUTSIDE DIAMETER: 80 MM; LENGTH: 28 MM; MATERIAL: MS; APPLICATION: PRECIPS; SPECIFICATION: SABS 3184 GR 300WA; DRAWING NO: 0.45/58907 REV 1; MATERIAL / TECHNICAL DATA SETS TO BE PROVIDED WITH THE ORDER SUPPLIERS TO USE DRAWING NUMBER OR THE LATEST VERSION	73 600
28	771840	EA	BEARING, SLEEVE: TYPE: CIRCULAR SPLIT; INSIDE DIAMETER: 40 MM; OUTSIDE DIAMETER: 80 MM; LENGTH: 116 MM; MATERIAL: A48 GREY CAST IRON; BEARING WITH FOUR HOLES: 4 X M8 X 1.25 MM – 6H. TRANSVERSE PCD X 60 MM.	6000
29	53415	EA	SUPPORT: TYPE: INSULATOR; DIMENSIONS: DIA 188 X LG 485 MM; MATERIAL: PORCELAIN; REFERENCE NO: MPM 02-2575	800
30	34045	EA	BUSH: TYPE: COUPLING; INSIDE DIAMETER: 40 MM; OUTSIDE DIAMETER: 62 MM; LENGTH: 93.5 MM; MATERIAL: STL; REFERENCE NO: E1/974	5 000

31	84553	KG	BOLT, ASSEMBLY: TYPE: GENERAL PURPOSE; NOMINAL DIAMETER: M8; LENGTH: 25 MM; HEAD: HEX; GRADE: 4.6; MATERIAL: MS; THREAD LENGTH: 25 MM; THREAD: 1.25 MM; NUT QUANTITY: 1; NUT MATERIAL: MS; NUT GRADE: 4.6; BOLT PROTECTIVE COATING: BLACK; DIN555; SPECIFICATION: SABS 135	250 000
32	17101	KG	BAR, ROUND: NOMINAL DIAMETER: 12 MM; LENGTH: 6 M; MATERIAL: MS BS 4360; PROCESS: HOT ROLLED; GRADE: EN43A; WEIGHT: 0.88 KG/M	5000
33	773439	EA	BEAM: TYPE: STRUCTURAL STEEL; LENGTH: 850 MM; MATERIAL: CARBON STEEL; WIDTH: 140 MM; STRUCTURAL STEEL GRADE S355JR.TAPERED FLANGE CHANNEL: WD X 60 MM X HT X 140 MM X WT X 16KG/M.	240
34	773335	EA	BAR, SQUARE: WIDTH: 45 MM; LENGTH: 160 MM; MATERIAL: MILD STEEL; GRADE: S355JR; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	8832
35	773326	EA	ELBOW: TYPE: FITTING; SIZE: 1 IN; CONNECTION: THREADED; MATERIAL: GALVANISED MILD STEEL; DEGREE: 90 DEG; RADIUS: SHORT.	768
36	77333	EA	ELBOW: TYPE: FITTING; SIZE: 1 IN; CONNECTION: THREADED; MATERIAL: GALVANISED MILD STEEL; DEGREE: 45 DEG	768
37	773131	EA	TEE, PIPE TO TUBE: MATERIAL: GALVANISED MILD STEEL; CONNECTION TYPE: THREADED; NOMINAL PIPE SIZE: 25 MM; NOMINAL THREAD SIZE: 1/4 IN; TUBE OUTSIDE DIAMETER: 33.4 MM; MAXIMUM OPERATING PRESSURE: 2 MPA.	768
38	772733	EA	NOZZLE: TYPE: FITTING; SIZE: 1/4 IN; CONNECTION SIZE: OD X 20.4 MM; CONNECTION: THREADED; MATERIAL: 316 STAINLESS STEEL; APPLICATION: ATOMISER	768

39	771896	EA	REDUCER: TYPE: CONCENTRIC; NOMINAL SIZE: 25 MM; CONNECTION: THREADED; MATERIAL: GALVANIZED MILD STEEL.	768
40	771794	EA	FLANGE: TYPE: WELD NECK; DIMENSIONS: ID 116 X OD 220 X THK 12 MM; MATERIAL: MILD STEEL; ID X 18 MM HOLES ON THE FLAT SECTION OF FLANGE, 175 MM PCD.	768
41	771742	EA	GATE, VALVE: TYPE: KNIFE; VALVE SIZE: 4 IN; MATERIAL: 316 STAINLESS STEEL; HANDWHEEL OPERATED VALVE, UNIVERSAL DRILLED AND TAPERED ACCORDING TO SABS 1123; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	768
42	771894	EA	REDUCER: TYPE: CONCENTRIC; NOMINAL SIZE: 125 MM; CONNECTION: BUTT WELD; MATERIAL: MILD STEEL; LG X 127 MM, SCHEDULE 40 – NOMINAL SIZE: OD X 125 MM REDUCED TO OD X 100 MM.; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	500
43	771793	EA	PIPE, METALLIC: NOMINAL PIPE SIZE DESIGNATION: 100 MM; MATERIAL: MILD STEEL; LENGTH: 6 M; WALL THICKNESS: 6.02 MM; SCHEDULE 40.	150
44	732128	EA	BAR: TYPE: FLAT; DIMENSIONS: WD 90 X LG 6035 X HT 80 X THK 10 MM; MATERIAL: CARBON STEEL; GRADE: 1215; RAPPER BAR CONSIST OF 8 ITEMS; 2 OFF 6M FLAT BAR BY 10 THK, 1 OFF DETAILED HEAD, 2 OFFSIDE STIFFENERS, 2 OFFSIDE BRACKETS.	1000
45	773013	EA	BAR, ROUND: NOMINAL DIAMETER: 40 MM; GRADE: EN10025; MATERIAL: MILD STEEL; LENGTH: 6 M; FLAT SPOT ARE EQUAL SPACED AT 300 M AND SPIRAL AT 22.5 DEGREES BETWEEN FLAT SPOTS	200