

## 1. SCHEDULE OF PRICES:

	Item	UOM	Qty	Price per item	Price
<b>1.</b>	<b>Design, supply and install the following items:</b>	<b>set</b>	<b>1</b>	<b>R</b>	<b>R</b>
	<b>Controlled Heating</b>				
1.1	Primary Industrial Gas Burners including Ancillary4 Piping	each	4	<b>R</b>	<b>R</b>
1.2	Insulation Material for Heating Chamber	sqm	36	<b>R</b>	<b>R</b>
1.3	Labour for Installation & Calibration	sum	1	<b>R</b>	<b>R</b>
<b>2.</b>	<b>Exhaust and Ventilation</b>				
2.1	Exhaust Ducting (steel)	meters	50	<b>R</b>	<b>R</b>
2.2	Exhaust Fans	no.	4	<b>R</b>	<b>R</b>
2.3	Gas Detector and Alarm System	no.	6	<b>R</b>	<b>R</b>
2.4	Ventilation Louvers	no.	4	<b>R</b>	<b>R</b>
2.5	Labour	sum	1	<b>R</b>	<b>R</b>
<b>3.</b>	<b>Water Circulation and Tank Spray</b>				
3.1	Water Circulation Tank	No.	1	<b>R</b>	<b>R</b>
3.2	Spray Jets	No.	12	<b>R</b>	<b>R</b>
3.3	Pump for Water Circulation	no.	1	<b>R</b>	<b>R</b>
3.4	Filtration System for Tank	no.	1	<b>R</b>	<b>R</b>
3.5	Labour for Installation of Spray and Circulation System	sum	1	<b>R</b>	<b>R</b>
<b>4.</b>	<b>Afterburner System</b>				
4.1	Afterburner Gas Burner (LPG, 50-150 kW)	unit	1	<b>R</b>	<b>R</b>
4.2	Refractory-Lined Combustion Chamber (700-800°C)	no.	1	<b>R</b>	<b>R</b>
4.3	Temperature Sensors (Type K Thermocouples	no.	2	<b>R</b>	<b>R</b>
4.4	Combustion Air Fan (High-temperature, SS)	no.	1	<b>R</b>	<b>R</b>
4.5	Exhaust Ducting (SS, 150-300mm, insulated)	meter	20	<b>R</b>	<b>R</b>
4.6	Labour	sum	1	<b>R</b>	<b>R</b>
<b>5.</b>	<b>Safety Compliance</b>				
5.1	Emergency Shut-Off	No	2	<b>R</b>	<b>R</b>
5.2	Fire Suppression System (Dry Chemical)	No	1	<b>R</b>	<b>R</b>
5.3	LPG Leak Detectors	No	3	<b>R</b>	<b>R</b>
5.4	Compliance Documentation and Permits	Sum	1	<b>R</b>	<b>R</b>
5.5	HAZOP Study by Pr.Eng	Sum	1	<b>R</b>	<b>R</b>
5.6	Professional Engineer Sign-Off	sum	1	<b>R</b>	<b>R</b>
<b>6</b>	<b>Airflow Dampers Control</b>				
6.1	Air Preparation Unit	No.	2	<b>R</b>	<b>R</b>

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6.2	Pneumatic Valve Manifold Assembly - 4 Position - 5/2 Way single solenoid - I 2G/D to EU Explosion Protection Directive	No.	2	R	R
6.3	EX Plug with 5m signal cable	No.	8	R	R
6.4	80mm Rod Cylinder 400mm Stroke	No.	4	R	R
6.5	Trunnion Flange	No.	4	R	R
6.6	Swivel Flange	No.	4	R	R
6.7	Rod Clevis	No.	4	R	R
6.8	Atex Zone 1 16mm Pneumatic Piping		50	R	R
6.9	Push In L Fittings	No.	32	R	R
6.10	Testing, calibration, commissioning	set	1	R	R
6.11	Training	no	10	R	R
<b>Sub-Total 1 (Excl. VAT)</b>					<b>R</b>

### Electrical bake oven

	Item	UOM	Qty	Price per item	Price
7.1	Design, Supply, delivery and installation of the following:	set	1	R	R
7.2	32A, 4 Pole Fuse Link Isolator	no	1	R	R
7.3	Isolator Panel - 3CR12 Stainless Steel – Powder Coated	no	1	R	R
7.4	HMI - 7inch, 7"W Easy Touch Panel, Ethernet model	no	1	R	R
7.5	Programmable Logic Controller (PLC), Ethernet, Logic controller. 16 inputs/outputs. 7 relay outputs. 100-240 VAC Including PLC I/O, interface components	no	1	R	R
7.6	Digital Input Card – 32 Channel, Discrete input module, 32 inputs (HE10) 24 VDC	no	1	R	R
7.7	Digital Output Card – 32 Channel, Discrete output module 32 outputs transistor NPN	no	1	R	R
7.8	Analogue Input Card – 8 Channel, 8 analog inputs (screw) 24Vdc	no	2	R	R
7.9	Analogue Output Card – 4 Channel, Analog output module, 4 outputs (screw) 24 VDC	no	3	R	R
7.10	5 port Unmanaged Network Switch, Contact 5 Port Ethernet Switch	no	1	R	R
7.11	Surge Protection for Analogue Inputs	no	12	R	R

	Item	UOM	Qty	Price per item	Price
7.12	24VDC Power Supply Unit	no	1	R	R
7.13	Motor Starter Circuit Breaker (Motor circuit breaker, 3P, 1-1.6 A, thermal magnetic, screw clamp terminals)	no	3	R	R
7.14	Contactor, 3P(3 NO), AC-3/AC-3e, 0 to 440V, 6A, 230VAC 50/60Hz coil	no	3	R	R
7.15	Control Panel - 3CR12 Stainless Steel – Powder Coated	no	1	R	R
7.16	Selector Switch, metal. black. Æ22. 3 positions. stay put. 2 NO	no	3	R	R
7.17	Terminals	no	100	R	R
7.18	Thyristor Switching Module, 36kvar	no	2	R	R
7.19	Contactor 160A, 80KW	no	1	R	R
7.20	Main MCCB 250A, Fuse Switch Disconnecter, 4 Pole	no	1	R	R
7.21	Red Sounder Beacon, Surface Mount Electronic Sounder, 9 → 28 V dc, 102dB at 1 m, IP65, DC, 32-Tone	no	1	R	R
7.22	Current Transformer, 250/5 RING CT 32mm	no	3	R	R
7.23	Power Meter, 110 - 400 VAC, Panel mount multi-function meter	no	1	R	R
	<b>Field Equipment</b>	no			
7.24	Temperature Probe 400 °C (Sensor, 6mm Dia, 250mm Long, 4 Wire, G1/2, +650°C Max)	no	3	R	R
7.25	Motor (Circulation fan, 0,55kW, 4 Pole, 400V)	no	1	R	R
7.26	Centrifugal Pump (water circulation - 0,75kW)	no	2	R	R
7.27	Solenoid Valve, 3/4inch, 24VDC, 2 port(s) , NC, 24 V dc	no	2	R	R
7.28	Level Sensor - 300mm depth (Guided Radar Level Radar, 0-10 V, 4-20 mA Output, Vertical,PBT Body)	no	1	R	R
7.29	Isolator 16A, 3Pole (3P Pole Panel Mount Isolator Switch - 16A Maximum Current, 5.5kW Power Rating, IP65)	no	3	R	R
7.30	Heater Elements, 1m, 3kW Tubular heater 8X2300 380V 3000W C/W CRIMP ON BUSH M-SHAPE	no	18	R	R
7.31	150mm Wide cable tray with covers - Light duty galvanized	no	1	R	R
7.32	Nickel-plated brass glands and shrouds		40	R	R

	Item	UOM	Qty	Price per item	Price
	<b>List of cables to be replaced</b>				
8.1	high-temperature stainless steel braided cable (for PT00 sensor)	m	5	R	R
8.2	high-temperature stainless steel braided cable (for PT00 sensor)	m	5	R	R
8.3	high-temperature stainless steel braided cable (for PT00 sensor)	m	5	R	R
8.4	4 core Nitrile trailing cable (for a motor)	m	5	R	R
8.5	4 core Nitrile trailing cable (for a pump 1)	m	5	R	R
8.6	4 core Nitrile trailing cable (for a pump 2)	m	5	R	R
8.7	4 pair dekaron individual and overall screen (Gas burner 1 control )	m	5	R	R
8.8	4 pair dekaron individual and overall screen (Gas burner 2 control )	m	5	R	R
8.9	2 pair dekaron individual and overall screen (Water tank limit switch)	m	5	R	R
8.10	2 pair dekaron individual and overall screen (Cooling water solenoid)	m	5	R	R
8.11	2 pair dekaron individual and overall screen (Inlet water solenoid)	m	5	R	R
8.12	4 core Nitrile trailing cable (Gas burner 1 power)	m	5	R	R
8.13	4 core Nitrile trailing cable (Gas burner 2 power )	m	5	R	R
8.14	4 core PVC, SWA, PVC (Main power cable)	m	7	R	R
8.15	Testing, calibration, commissioning	set	1	R	R
8.16	Training	no	10	R	R
<b>Sub-Total 2 (Excl. VAT)</b>					<b>R</b>

<b>Sub-total 1 + Sub-total 2</b>	<b>R Vat (excl.)</b>
<b>Vat (15%)</b>	<b>R</b>

<b>Grand-Total</b>	<b>R Vat (Incl.)</b>
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Name: Zolani Mngqithi

Designation: Engineering Technician

Signature and date:  30.10.2024


Name: Soojith Ramnund

Designation: Engineering Manager

Signature and date: \_\_\_\_\_

Name: Mhlonipheni Nxumalo

Designation: Executive Manager

Signature and date:  15/11/2024