SCOPE OF WORKS FOR THE INSTALLATION OF PN16 HDPE PIPES WITHIN TRANSNET ENGINEERING, RICHARDS BAY

REFERENCE NO.: SOUTH DUNES WAGONS

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Document Authorities

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1. EXECUTIVE OVERVIEW

Replace current brackets installed with stainless steel brackets, replacement of rusted galvanized air pipes at line 1 to 4 with PN16 HDPE Pipes, the piping should replicate current setup, replace all. Air units water traps and air regulators at all air supply points as per what is currently installed.

2. EMPLOYER'S OBJECTIVE

Replace current brackets installed with stainless steel brackets, replacement of rusted galvanized. Air pipes at line 1 to 4 with PN16 HDPE Pipes, the piping should replicate current setup, replace all air units water traps, and air regulators. The air pipes are badly rusted, and we are experiencing major losses on compressed air supplied thereby impacting on plant capability.

3. PART A: TECHNICAL REQUIREMENTS

Item no.	This scope of work document covers the minimum requirements
A	**Material**
	• PN16 HDPE piping and valves for the loop and downpipes • Stainless steel piping and fittings for the TU connection points. • Stainless steel brackets TU brackets for connection points and T & L brackets for the loop and downpipes. • U bolt mountings stainless steel • Air service units stainless steel/cast iron /aluminium. • Stainless steel Isolation ball valves and claw couplers • Scaffold – Mobile and Fixed
	• **Note:** All corroded steel pipe along with their fittings, joints, isolation valves and claw couplers must be removed and place in designated Transnet area. • Scaffolding is required to remove all corroded steel pipe along with their fittings, joints, isolation valves and claw couplers. Scaffolding will also be required when installing the HDPE PIPING FOR THE LOOP AND DOWNPIPES. • **Note:** Total area of the workshop = 6600m^2 • Remove and reinstall calibrated air gauges in compressor room 3 0ff.
B	**Stainless steel bracket**
	• Drill holes for mounting stainless steel brackets onto concrete wall. • The mounting of new stainless brackets should be within reach at a height of 1.5 to 1.6m to ensure ease of access when doing maintenance and coupling and uncoupling air hoses for production, with no need to use scaffold. • The stainless brackets should be mounted at equal spacing on all sides of the wall & columns) • Bolt or mount stainless brackets.
C	**Installation of PN16 HDPE**
	• Install PN16 HDPE pipe starting from the compressor room to the end of the workshop. • All piping inside the compressor room to be stainless steel with a bypass for individual airdriers. • Install pipe including all the necessary fittings, joints, and valves. • The total PN16 HDPE pipe length is 549.13. • Stainless steel piping and fittings to be used from the bottom hdpe elbow into the water trap and the dual airoutlets with valves on either side with claw couplers at both the outlets. • One shut off valve to be installed per down pipe as close as possible to the elbow or tpiece on top. • There are 26 drops down PN16 HDPE pipes which are 8.15m. • **Drop down PN16 HDPE pipes are 8.15m**

	• **These including fittings, joints, isolation valves and claw couplers.** • **HDPE piping for the loop is 50mm and HDPE for the downpipes 20mm** • **Stainless steel piping vales and fittings 20mm** • Pipes next to the offices will have the same height. • Pipes on top of roller doors will all Have the same height. • Pipes in between the workshop will have the same height. • Pipes on the far-right side of the wall, will be drop down. They will have a height of 1.5 to 1.6m from the ground**.** • Install air gauge in compressor room.
D	**Additions**
	For safety preposes • ***Add an additional 20m PN16 HDPE pipe.*** • ***Add 10 L joint.*** • ***10 T joints***
E	**Commissioning & Testing**
	A performance test to the satisfaction of the stakeholders shall be conducted by the contractor.
	The contractor shall undertake to repair all faults due to shoddy workmanship and/or faulty materials during a period of twelve calendar months, calculated from the date that the project is accepted by Transnet Engineering.
	Any defects that become apparent during the guarantee period shall be rectified to the satisfaction of Transnet Engineering at the cost of the supplier.
F	**DOCUMENTATION ON DAY OF COMMISSIONING**
	4 sets off hard copies with a disc containing documentation in PDF Format for each of:
	Operating Manual.
	Maintenance Manual.
	Mechanical Drawings.
	As built Drawings.

4. HEALTH AND SAFETY REQUIREMENTS

4.1 All equipment and installation whether detailed in this specification or not shall. comply with the requirements of the Occupational Health and Safety Act 85 of 1993 as amended and all other applicable legislation including specific set of regulations and local authority bylaws where applicable.

4.2 The contractor shall hold monthly safety meetings with staff and records of minutes. shall be kept on file on site.

4.3 The contractor shall be available for monthly meetings with Transnet Management. A schedule for these meetings may be agreed upon.

5. SHE SPECIFICATION

- Prior to commencement of contract, the contractor shall be issued with a SHE specification in order to compile a SHE files in line with TE requirements.

- Prior to establishing on site, it is an explicit requirement of this contract that all of the Contractor's personnel directly involved with this contract, including those of sub-contractors, attend a Safety induction course. Transnet will provide the course free of charge and attendance is compulsory for all personnel under the control of the Contractor who, during the duration of the contract, will be present on site whether on a full time or adhoc basis.

- The contractor must allow for all additional charges because of these requirements as no claims for extras will be accepted in connection with the foregoing.

6. AS PART OF THE LEGISLATIVE AND TE SHE REQUIREMENTS.

- The successful contractor is required to conduct a Risk assessment to ascertain all potential risks associated with this project. The completed risk assessment is to potential risks associated with this project. The completed risk assessment is to be formally submitted to the Risk department via the project manager at least two weeks prior to the commencement of the actual project.
- A safety file and associated documents will be required from a successful tenderer, and such will be communicated by the Risk department.