



REPAIRS TO CONCRETE FOUNDATION FOR THE BALANCING MACHINE

**ROTATING MACHINES DEPOT, 152 EEL ROAD,
UMBILO.**

REFERENCE No: OPS_RM_DBN_SOW_142

Date of release: September 2024

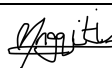
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1. DOCUMENT AUTHORITIES

Department	RM
Department Affected	RM, FIM
Effective date	September 2024
Compiled by	Stanley Mchunu
Designation	Project Manager
Signature & Date	 04.09.2024
Reviewed by	Zolani Mngqithi
Designation	Engineering Technician
Signature & Date	 04.09.2024
Approved by	Mhlonipheni Nxumalo
Designation	Executive Manager
Signature & Date	 10/09/2024

2. TECHNICAL REQUIREMENTS

The main deliverables would be as per the scope of works, in summary, to be carried out is as follows and to be read in conjunction with part C3 of the scope of works:

Item	Description
2.1	Site preparation
	- The total square meter of the existing foundation is 1.2m², which has to be replaced with 4m² new concrete foundation for the 5-ton balancing machine. - Clear site by moving all heavy steel equipment. Once that is done, break down the existing concrete foundation and remove all access material away from site.
2.2	Earth excavation and backfilling
	- Use a bobcat or shovels to excavate soil or other materials to the required depth of 800mm. All access materials must be disposed of site and will not be reused as G5 material will be used for back filling.
2.3	G5 backfill material
	- Use G5 material with stabilised cement and crusher to backfill 200mm with compacted to 98% AASHTO leaving 600mm for the foundation slab as per drawing layout. Testing requires a SANS approved certificate) as the site will be used for heavy machine operation.
2.4	Levelling and grading
	- The ground needs to be surveyed, levelled, and evenly compacted.
2.5	Footing and foundation
	- Dig trenches for footing foundation - Foundation must be 3400 x 1100 x 600 to be able to accommodate the footprint of the machine and to also incorporate the bolting down requirements (refer to attached drawings) with 420mm deep - Casting concrete in to footing foundation - Reinforce concrete of 35Mpa is required for the foundation. Reinforcement must be designed and approved by Civil Engineer. - A cube test must be done for the required concrete strength
2.6	Slab preparation
	- Cast 600mm 35MPa reinforce concrete foundation (4m²) as per drawing - Use Heavy-duty mesh wire (50x50x3.15 mm, SPECIMESH 2400x1200 REF 244) serves as reinforcement for the slab. It must be noted that the Civil Engineer shall confirm if this will work. - Required concrete of 35Mpa must be bought to site using a ready mixer and must be poured into the foundation - The concrete to include 12 reserved vertebral forams for tail tap bolts, top of the vertebral forams 200 x 200mm, bottom of the vertebral forams 250 x 250mm. - The foundation to have stone bolts and adjusting block - Use a concrete vibrator to compact and ensure no voids and prevent honeycombing
2.7	Curing
	- Concrete must be cured for a minimum of 28 days. Spread a layer of river sand onto the concrete and mist it with water for the first 14 days to allow it to cure.
2.8	Finishing
	- Allow the concrete to set and cure.

3. HEALTH AND SAFETY REQUIREMENTS

- 3.1 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.
- 3.2 The contractor shall hold monthly safety meetings with staff and records of minutes. shall be kept on file on site.
- 3.3 The contractor shall be available for monthly meetings with Transnet Management. A schedule for these meetings may be agreed upon.

4. SHE SPECIFICATION

- 4.1 Prior to commencement of contract, the contractor shall be issued with a SHE specification to compile a SHE files in line with TE requirements.
- 4.2 Prior to establishing on site, it is an explicit requirement of this contract that all the Contractor's personnel directly involved with this contract, including those of sub-contractors, attend a **Safety induction course**.
- 4.3 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.
- 4.4 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.

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

- 5.1 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.
- 5.2 A safety file and associated documents will be required from a successful tenderer, and such will be communicated by the Risk department.