



INFRASTRUCTURE ENGINEERING

PROCUREMENT SPECIFICATION

Provision for the Supply of ½ inch Tackles (Pulley)

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1. Scope

- 1.1 This specification outlines the requirements of a ½ inch block and Tackles pulley.
- 1.2 The ½ inch block and Tackles pulley shall be delivered to the depot as will be stipulated on the contract for this procurement event.
- 1.3 Tenderers are requested to read this specification and related documents as highlighted in the specification.
- 1.4 Tenderers are to submit the complete specification for products on offer at the tendering stage.

2. Environmental Conditions

- 2.1 The ½ inch block and Tackles pulley shall be used in all weather conditions having altitudes varying from sea level to 1850m above sea level, relative humidity 0% to 90% and atmospheric conditions which vary from heavily saline to dry and dusty.
- 2.2 Ambient air temperatures ranging from -5° C to 50° C.

3. Qualifications

- 3.1 The design of the lever hoists is to be that of the manufacturer, but must be of robust construction in order to meet sustained heavy duty demands, yet they must be light and easy for safe use.
- 3.2 The ½ inch block and Tackles pulley will be acceptable in standard factory production finish and colour. Details to be furnished.

4. Performance

- 4.1 The actual design of the ½ inch block and Tackles pulley shall have the capacities as stated in annexure A of this specification.
- 4.2 The ½ inch block and Tackles pulley are to be easily and economically maintained/repared with standard workshop tools and equipment when necessary.

5. Technical Requirements

5.1 General Description

- 5.1.1 Transnet Freight Rail requires heavy duty, portable tool with polyester double braided rope operated by a lever to give a mechanical advantage for lifting, lowering or suspending load under railway service condition.
- 5.1.2 The equipment shall conform to the requirements as laid down in this specification, SANS 1636:2007 and/or any relevant SANS standards.
- 5.2.1 The ½ inch block and Tackles pulley shall have a working load limit higher than the specified safe working load of 3 Tons.
- 5.2.2 The ½ inch block and Tackles pulley safe working load shall be specified and clearly marked on the unit.

5.2.3 The fitted length of the poly rope shall be such that it will allow the full required range of lift to be achieved without imposing a load on the chain stop.

5.3 Operation

5.3.1 The load shall be moved by the operation of the lever and the direction shall be determined by means of a ratchet arrangement.

5.3.2 The ratchet shall be such that full engagement is maintained even when the friction components are wearing.

5.4 Hooks

5.4.1 Hooks shall be forged from quality steel and be free from internal and surface defects.

5.4.2 The rotating parts of the swivel shank hooks shall be capable of being lubricated both on installation and during service.

5.4.3 Both the top and bottom hooks shall be so designed to allow rotation and be fitted with safety latch to prevent accidental disconnection of either the load or the anchor.

5.4.4 All hooks shall be such when tested to 4 X working load limit, the deformation of the hook shall be such that the release of the load is not possible.

5.4.5 The manufacturer shall supply a means of information to determine if the hook throat opening is in excess of the manufacturer's recommended specifications.

5.4.6 All hooks shall have a minimum factor of safety of 4, the working load limit, safe working load and manufacturer's trade mark or name shall be forged into the hook.

5.5 Load rope

5.5.1 The tackles shall have load rope guides to guide the load rope onto the load wheel and twisting of the rope during operation must be prevented.

5.5.3 The load rope wheel shall be such that the rope pockets are compatible with the load rope and that smooth operation is ensured at all times.

6. Safety

6.1.1 The lever hoist shall have an automatic brake that is capable of arresting and holding the load under all working conditions.

6.1.2 The lever hoist shall provide a smooth and controlled lowering of the load without impairing the efficient working of the lever hoist.

6.1.3 The brake system shall be assisted by the use of pawls. Double pawls operating mechanism is required.

7. Quality Control

- 7.1 All equipment as required by various clauses of this specification must be manufactured in an environment that complies with the latest SANS ISO 9001 to ISO 9004 or similar quality control standards. Details must be furnished.

8. Legal and Operational

- 8.1 The chain lever hoist is to comply with the requirements of this specification, SANS 1636:2007, related SANS standards, Safety and Environmental standards in force at the time of tendering.
- 8.2 The information as requested by the various clauses in this specification is to be supplied in Form of technical data, pamphlets and/or drawings. If this is not complied with, offers may be Overlooked.
- 8.3 All equipment is to be guaranteed for a minimum period of 24 months against faulty material and poor workmanship - fair wear and tear excluded. Full details of guarantee are to be submitted.