

INFRASTRUCTURE ENGINEERING

ELECTRICAL DEPARTMENT SPECIFICATION

Specification For A Hydraulic Kink Remover

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Transnet Freight Rail - Infrastructure

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1. Scope

This specification stipulates Transnet Freight Rail's requirements for the supply and delivery of a portable hydraulic kink remover.

2. Context

The contact wire on the Over-Head Track Equipment normally experiences deformations also known as "kinks". This is usually caused during installation when unwinding the wire. Thus in order to ensure a smooth interaction between the pantograph and contact wire, it is necessary to ensure that the contact wire is straight.

3. General Requirements

- 3.1 This specification outlines the requirements of a hydraulic kink remover fittings of the overhead track equipment.
- 3.2 The hydraulic kink remover shall be ergonomically designed for maximum operator, productivity and safety.
- 3.3 The machine must be well protected against rust
- 3.4 The grip on the handles must have a non-slip surface
- 3.5 The body of the tool and its components must be robust

4. Operating Conditions

Equipment to be supplied against this specification shall be suitable for satisfactory operation under the following conditions

4.1 Atmospheric condition

- 4.1.1. Altitude : 0 – 1800m above sea level
- 4.1.2. Ambient Temperature : -10 ° C to 50° C
- 4.1.3. Relative Humidity : As high as 90 percent
- 4.1.4. Ambient Storage Temperature : -10° C to 50° C

5. Technical Requirements

- 5.1. The hydraulic kink remover shall be used on 107 mm² contact wire
- 5.2. The hydraulic kink remover shall be used on the 161 mm² contact wire
- 5.3. The hydraulic kink remover shall be operated at 700 bar
- 5.4. The device shall operate at a flow rate 2.5 l/min of hydraulic oil
- 5.5. The device should weigh at most 5 kg
- 5.6. The output force on the system shall be 40kN

6. Quality Control

- 7.1 All units must be manufactured in an environment that complies to the latest ISO 9000 to ISO 9004 or similar quality control standards. Details must be furnished.
- 7.2 Units will be subject to a technical evaluation and the final decision will, amongst others, be based on these findings.

7. Legal and Operational

- 8.1 All equipment to comply with the requirements of the latest versions/issues SABS and other specification(s)
- 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 to, offers may be overlooked.
- 8.3 Hydraulic Kink remover not already in service with Transnet Freight Rail must be made available for testing/evaluation during the adjudication of the tender. Technical improvements on existing machines/equipment are to be substantiated by physical examples.
- 8.4 The hydraulic compression tools is to be guaranteed for a minimum period of 12 months against faulty material and workmanship - fair wear and tear of consumables excluded. Full details of guarantee are to be submitted.
- 8.5 Hydraulic compression tools spares/parts/consumables for this type of equipment shall be available locally. Full details of suppliers are to be submitted.