

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS



TI/STR/007
(Revision-2)

Schedule of Technical requirements
for

Approval of Vendors for Supply of

- (i) Gear-less Hand Operated Pulling and Lifting Machines (Tirfor)
- (ii) Ratchet Lever Hoist (Pull-Lift)

Specification No:

- (i) TI/SPC/OHE/TOOLPL/0990 with Latest Amendment &
- (ii) TI/SPC/OHE/TOOLPL/1990 with Latest Amendment

ISSUED BY

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	Prepared By	Checked By	Approved by
Signature			
Designation			

1.0 SCOPE

This schedule of Technical requirements (STR) is to assess manufacturing capability of the vendor for new Registration/Approval to manufacture and Supply of (i) Gear-less Hand Operated Pulling and Lifting Machines (Tirfor) and (ii) Ratchet Lever Hoist (Pull-Lift).

The "make in India" policy of Government of India shall be applicable.

2.0 GENERAL INFRASTRUCTURE & MANUFACTURING FACILITIES

2.1 Manufacturer should have adequate covered accommodation for Storing raw material, finished items awaiting for dispatch and arranging inspection. The manufacturer should have system to ensure that the product conforms to the requirements of relevant specification.

2.2 MACHINERY AND PLANT

Following machinery and plant of suitable capacity should be essentially available.

- (a) One shearing machine of adequate capacity for shearing the plates.
- (b) One Hydraulic power/ball press of adequate capacity.
- (c) Two Lathe machines of adequate capacity.
- (d) One heavy duty drill machine of suitable capacity.
- (e) One compressor of upto 3HP capacity.
- (f) Spray painting facility for painting.
- (g) Bench grinder.
- (h) Portable Grinder.
- (i) One hand drill.
- (j) One welding machine.
- (k) One power hacksaw.
- (l) Other tools & Tackles.

One profile cutting machine should be preferably available at the works.

3.0 QUALITY CONTROL REQUIREMENTS

3.1.1 The firm should have acquired **ISO:9001:2015** certification for the product for which an approval is sought and the product should be broadly covered in the **scope** of the certification for manufacture and supply.

3.1.2 Quality manual of the firm for **ISO:9001:2015** should clearly indicate at any stage the control over manufacturing and testing of the said product.

3.1.3 The firm should have its own quality assurance plan to ensure quality of product which should cover the following aspects.

- (a) Inward raw material inspection.
- (b) Flow process chart.
- (c) Stage inspection details.

- (d) Finished product testing.
 - (e) Policy of disposal of rejected material and maintenance of record for documentary evidence.
- 3.4 **A minimum diploma holder or equivalent** with 5 years experience in the relevant field must be the head of the inspection and quality control section.
- 3.5 ~~There should be a quality manual of the firm indicating the extents of Control Over production and testing.~~
- 3.6 There should be a system of documentation in respect of rejection at customer end, warranty replacement.
- 3.7 System should exist for documentation of the following:
- 3.7.1 Incoming raw material with Test Certificate reference of supplier as well as internal test/audit checking from outside agency.
 - 3.7.2 Details regarding stage inspection and test results.
 - 3.7.3 Records of calibration of testing & measuring equipment's.
 - 3.7.4 Records of finished goods inspection by manufacturer as well as by outside agency.

4.0 TESTING FACILITIES

- 4.1 One Dead Load/Vertical testing unit with load cell/hydraulic dynamometer Dully calibrated of adequate capacity.
- 4.2 One hydraulic motorized horizontal test rig of adequate capacity.
- 4.3 One Rock-Well hardness tester.
- 4.4 Facilities for liquid dye penetration test on components.
- 4.5 Adequate measuring instruments and gauges for measurement of dimensions.
- 4.6 Weighing scale.
- 4.7 Chain pulley blocks of adequate capacity.

5.0 DRAWING OFFICE FACILITIES

- 5.1 The drawing office should be equipped preferably with **CAD** Software.