



**Government of India
Ministry of Railways**

**QMS-31:2009
(Revision 0)**

**Schedule of Infrastructure Requirements for Manufacturing & Testing
facilities and Quality Control requirements**

for

Auxiliary Reservoir

**Inspection & Liaison Directorate
Research Designs & Standards Organisation
Manak Nagar Lucknow – 226011**

March'2009

Rs. 300/-

1. SCOPE

The schedule covers the technical requirements for manufacture and supply of Auxiliary Reservoir.

2.0 GENERAL INFRASTRUCTURE & MANUFACTURING FACILITEIS

Manufacturer should have adequate covered accommodation for storing raw material, finished items awaiting dispatch and arranging inspection. Manufacturer should have system to ensure that product conform to the requirements of Section -II of IS: 2825.

2.1 MACHINERY & PLANT

Following machinery and plant of suitable capacity should be available.

- (a) One Shearing machine of capacity to shear upto 10mm plates should be available. - Vital
- (b) One 500 T Hydraulic press should be there - Vital
- (c) One power press of upto 150 T Capacity should be available - Vital
- (d) One profile cutting machine of suitable capacity should be there - Essential
- (e) One rolling machine of suitable capacity should be available - Essential
- (f) One garage compressor of upto 3HP for testing etc. Should be there within premises. - Essential
- (g) Spray painting facility should be ensured - Essential
- (h) At least portable grinder should be available - Essential

3.0 QUALITY CONTROL REQUIREMENTS

- 3.1** The firm should have acquired ISO: 9000 series certification for the product for which an approval is sought should be broadly covered in the scope of the certification for manufacture and supply.
- 3.2** Quality manual of the firm for ISO:9000 should clearly indicate at any stage the control over manufacturing and testing of the railway product.
- 3.3** There exists system of easy traceability of the product from shearing stage to finished product stage.
- 3.4** Quality assurance Plan for the product detailing various aspects like:
 - (a) Organisational Chart
 - (b) Flow Process Chart
 - (c) Stage Inspection details
 - (d) Various parameters to be maintained to ensure control.
 - (e) Policy of disposal of rejected material should be implemented and record is maintained for documentary evidence.

- 3.5 A diploma holder must be head of the inspection/final control section with 5 years experience in the relevant field.
- 3.6 There should exist a quality manual of the firm indicating the extent of control over production and testing.
- 3.7 There exists a system of documentation in respect of rejection at customer warranty replacement.
- 3.8 System should exist for documentation of the following:
 - 3.8.1 Incoming raw material with T.C. reference of supplier as well as internal test/ audit checking from outside agency.
 - 3.8.2 Ensure that the details regarding stage inspection and test result are available.
 - 3.8.3 Ensure that a system exists for calibration of testing & measuring equipment and record is maintained.

4.0 TESTING FACILITIES

- 4.1 Testing facility for hydraulic testing at a pressure of 16 kg/cm² testing. - Vital
- 4.2 Vernier callipers for measuring different dimensions and suitable gauges for dimensional accuracy. - Vital
- 4.3 Facilities for testing fusion welding seams should exist. - Essential