Government of India
Ministry of Railways

QMS-19:2009

(Revision 0)

Schedule of Technial Requirements for
Infrastructural, Manufacturing & Testing facilities and Quality Control requirements
For

Locking Plates for Cylindrical Roller Bearing Axle Boxes(Specn.No. AB/RB-25-85 & AB/RB-32-89) & CTRB for freight stock(Specn.No. AB/RB-39-97)

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

March'2009 (Price Rs 400/-)

1.0 **SCOPE**

1.1 The schedule of Technical requirements covers the norms for manufacture of Locking plates to RDSO drawings as given below:

Drawing No.

- WD 86002/S-1 for 16.3t Cylindrical Roller Bearing
- WD 86002/S-2 for 20.3t Cylindrical Roller Bearing
- WD 86002/S-3 for 22.9t Cylindrical Roller Bearing axle boxes for BOY & BOBS Mk.II.
- WD 86002/S-4 for 22.9 t Cylindrical Roller Bearing for BWT/A Wagons.
- WD 87019/S-1 for CTRB.

2.0 REQUIREMENTS

The vendors seeking approval shall comply with all below mentioned requirements.

GENERAL AND MANUFACTURING FACILITIES.

2.1 Covered area with adequate space for machine shop, debarring, phosphating, storage of raw material and finished product should be available.

2.2 The firm should have the required machining facilities to carry out various operations on the product such as blanking, piercing three center holes, piercing four oblong holes at a time, partial shearing and bending (lancing). The operations done at each stage should be specified and type of machine used with accuracy may also be given in the process flow chart.

2.3 There should be a system of checking the product after each stage of machining by suitable fixtures and gauge.

2.4 The firm should have facilities of phosphating and oiling. The process of passivation used should be well-estblished.

2.5 There should be facilities of checking the locking plates before phosphating for flatness.

2.6 There should be facilities of stamping on the product, the drawing number, month & year of manufacturing and identification of manufacturer.

2.7 There should be facilities of packing various lots of product in wooden boxes or any other shock proof material after wrapping in poly bags.

3.0 TEST EQUIPMENTS

3.1 To maintain quality of the locking plates the firm should have the following instruments/equipments for testing:

a. Surface plate.
b. Vernier height gauge range 0-250 mm.
c. Two sets PCD plug gauges as per product drawing.
d. Two nos. fixtures as per locking plate drawings to check the complete configuration.
e. Radius gauge.
f. Two nos. outside and inside micrometers range 0-50mm.
g. Thickness gauge.

4.0 TECHNICAL EXPERTISE AND QUALITY CONTROL REQUIREMENTS

4.1 It should be ensured that incharge of Quality Control and Process control is having engineering background. He should have full knowledge of the product and should be involved in day to day activities of Process control, stage inspection and compliance of Q.A.P.

4.2 There should be a system of record keeping of source of raw material procured with test certificates, stage inspection details and checks on final product.

4.3 There should be a system of cross-verification of raw material test certificates by getting it tested periodically and records should be maintained.

4.4 A system should exist for periodic calibration and record keeping of Die reconditioning/checking, plug gauges, PCD fixtures and measuring instruments.

4.5 The firm should have Quality Assurance plan indicating the following aspects among other things.

A. Organisation chart.
B. Inspection parameters.
C. Stage inspection details.
D. Process flow chart.

4.6 The Q.A.P. shall be available as per the requirements detailed in vendor approval guide lines and application form IL-03:2000.

4.7 The firm should have copies of all relevant specifications IS standard and drawings in house.