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**Government of India
Ministry of Railways**

**QMS-24:2009
(Revision 0)**

**Schedule of Infrastructure, manufacturing & testing facilities
and quality control requirements**

for

Side Frame Key

(Specn.No. WD-21-Casub-22NLB.93)

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

March'2009

(Price Rs. 300/-)

1.0 SCOPE

1.1 This schedule covers the technical requirement for manufacture and supply of side frame key to be fitted in cast steel bogies.

2.0 REQUIREMENTS

The vendors seeking approval shall have the required facilities as mentioned below:

2.1 General infrastructure and manufacturing facilities.

2.2 Manufacturer should have adequate covered space for storing raw material, arranging inspection, finished goods awaiting despatch.

2.3 Machinery and Plant

Following machinery and plant of suitable capacity should be available.

2.3.1 Suitable metal shearing arrangement must be available in-house.

2.3.2 Drop forge hammer with closed die of atleast 1t capacity.

2.3.3 200t capacity press for trimming operation.

2.3.4 Suitable capacity Press for piercing operation.

2.3.5 Annealing furnace of 1t capacity either electric or oil fired must be available for normalising operation. The furnace shall be equipped with temp. indicator and recorder.

3.0 TESTING FACILITIES

3.1 Ensure that one No. Hardness testing machine capable of measuring the hardness upto 500 BHN is available.

3.2 Suitable gauges for checking dimensional accuracy of the component.

3.3 Vernier Calliper .

4.0 QUALITY CONTROL REQUIREMENT

4.1 The firm should have acquired ISO 9000 series certification and the product for which an approval is sought should be broadly covered in the scope of the certification for manufacture and supply.

4.2 Quality manual of the firm for ISO 9000 should clearly indicate at any stage the control over manufacturing and testing of the said railway product.

4.3 Quality assurance plan for the product detailing various aspects like

(a) Organisation chart

- (b) Flow Process chart
 - (c) Stage inspection details
 - (d) Various parameters to be maintained to ensure control
 - (e) Policy of disposal of rejected casting should be implemented and record is maintained for documentary evidence.
- 4.4 Diploma holder with 5 years experience in the relevant field must be head of the inspection/final control section.
- 4.5 Ensure that a quality manual of the firm indicating the extent of control over production and testing is available.
- 4.6 Ensure that a system of documentation in respect of rejection at customer end, warranty replacement is available.
- 4.7 System should exist for documentation of the following:
- (a) Incoming raw material with TC reference of supplier as well as internal test/audit checking from outside agency.
 - (b) Stage inspection and test result
 - (c) Calibration records