



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन

Government of India - Ministry of Railways
RESEARCH DESIGNS & STANDARDS ORGANISATION

DOCUMENT NO. TDG 0022, Rev. '1'

ITEM SPECIFIC GUIDELINES
FOR IRS DESIGN SWITCH EXPANSION JOINT

Price: Rs. 480/-

गुणवत्ता आश्वासन सिविल निदेशालय
अनुसंधान अभिकल्प और मानक संगठन
मानक नगर, लखनऊ -226011

QUALITY ASSURANCE CIVIL DIRECTORATE
RESEARCH DESIGNS & STANDARDS ORGANISATION
MANAK NAGAR, LUCKNOW – 226011

**ITEM SPECIFIC GUIDELINES FOR ASSESSMENT / REASSESSMENT
OF FIRMS MANUFACTURING SWITCH EXPANSION JOINTS**

In addition to the “General Guidelines for Vendor Approval”, the following shall also be applicable for assessment/ re-assessment of firms for manufacturing Switch Expansion Joints:

- i) For the purpose of assessment of Switch Expansion Joints, the firm shall be required to manufacture proto-type comprising of two Tongue Rails, two Stock Rails and all components as per part list of the respective drawing , forming one complete set of SEJ of any design i.e. SEJ of 52 kg or 60 kg rail section.
- ii) For the purpose of re-assessment of Switch Expansion Joints, one sample set of any Design will be required to be offered for inspection.
- iii) The gauges shall be approved / revalidated at the time of inspection of Infrastructural facilities during assessment/re-assessment of the firm.

MINIMUM FACILITIES & MACHINES REQUIRED FOR MANUFACTURE OF SWITCH EXPANSION JOINTS.

S. No.	Description	Minimum facilities / machinery considered essential.	
		Min Capacity	Min Qty.
1	Covered area		700 sqmt.
2	Gantry crane	2T	1 No.
3	Circular/band saw	900 mm dia.	1 No.
4	Hydraulic horizontal bending/straightening machine	350-500T	1 No.
5	Radial drill	32 mm dia	1 No.
6	Shapers	600mm stroke	2 Nos.
7	Planing machine	3 metre stroke	1 No.
8	Universal testing machine	40 t Min.	1 No.
9	Compressor with riveting arrangement	—	One complete set including furnace & riveting gun etc.
10	Hardness Tester (i) Poldi / Rockwell	—	1 No. each
11	Assembly & Inspection Bay	—	A separate area to be dedicated with proper leveled flooring.
12	Chemical lab.	For chemical analysis of M.S. Medium & low alloy steel	1 unit installed in house.
13	Non-destructive testing facility	1. USFD 2. DP test 3. Magna flux	1 No. 1 No. 1 No.
14	Dedicated area with all above machineries installed in proper flow line		700 sq.mt.

**PROFORMA FOR CAPABILITY/CAPACITY ASSESSMENT OF FIRMS FOR
MANUFACTURE OF SWITCH EXPANSION JOINTS**
(To be filled in duplicate)

Section-1 GENERAL INFORMATION

1. Name of the firm

2. Postal address of
 - 2.1 Head office
 - 2.2 Works

- 3 Telephone No. (with STD code)
 - 3.1 Head office
 - 3.2 Works
4. E-mail address, Telex & Fax of
 - 4.1 Head office
 - 4.2 Works
5. Description of works
 - 5.1 Total land area (in sq. meters)
 - 5.2 Total covered area (in sq. meters)
 - 5.3 Different sub-unit.
 - 5.4 A fully dimensioned plan of the works showing covered Area and different shops shall be enclosed.
 - 5.5 Special features, if any

6. Number of personnel employed
(category wise)
 - 6.1 Managerial
 - 6.2 Supervisory
(Enclose list of Managers/ Technical Supervisors)
 - 6.3 Skilled/Artisans
 - 6.4 Unskilled
- 7 Hours of working
- 8 Weekly off day
- 9 State whether the firm is already in approved list with RDSO for supply of SEJ. If so, please give details of last approval
 - 9.1 Letter date and issued by
 - 9.2 Date of expiry of validity of approval
10. Details of important orders executed in past, in reference to the supplies made.
 - 10.1 To other important firms / companies / undertaking.
 - 10.2 Directly to the railways.

SECTION-II: TECHNICAL INFORMATION

- 1 Production capacity
 - (i) per month
 - (ii) per year
- 2 Type of stores/items/which the firm is capable of manufacturing.
- 3 Crane facilities No. of Cranes Make of Crane Capacity
 - 3.1 EOT Crane/Chain-pully block
 - 3.2 Mobile Crane.

3.3 Jib crane

4 Total power Availability (in KVA/KW)

- a) From the state electricity Board or other regular source.
(enclose a copy of electricity bill)
- b) From own stand-by generating sets
(Also give make, capacity, and other details of each generating set)

5. Machines
(for manufacturing of Switch Expansion joints and related components)

Name of Machine	No of Machines	Make of Machine	Size & Capacity of Machine
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5.1 Cold Saw Machine / Circular Saw

5.2 Radial Drill

5.3 Hydraulic Bending Machine
(Horizontal 350T & 500T)

5.4 Milling machine

5.5 Shapers

5.6 Pillar Drills

5.7 Grinding Machine

5.8 Oil fired furnaces for rivets

5.9 Electric Welding sets

5.10 Gas Welding / Gas cutting facilities (including pre-heating arrangement)

5.11 Planning machine

- a) Stroke length
- b) Table length

5.12 Portable Drill Machine

5.13 Jim crow

5.14 Compressor

5.15 Pneumatic riveting Gun

6 Testing Equipment / facilities

Name of Equipment	Nos. of equipment	Make of Equipment	Size & capacity of Equipment
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6.1 Ultrasonic test of rails

6.2 Magna flux

6.3 Tensile testing machine

6.4 Hardness testing machine(Brinell or Rockwell & Poldi)

6.5 Lab. For finding out the chemical composition of any sample

6.6 Other NDT facilities (DP test etc.)

7. Handling facilities

It should be mentioned whether there is proper facilities for handling for finished SEJs

8. A fully dimensioned plan of the works showing locations of various equipment and facilities for manufacture of SEJ's, flow line indicating locations of various operations during manufacture in proper sequence and storage facilities for finished products and dispatch may please be enclosed.

B QUALITY ASSURANCE

1. Does the factory has any established Quality Assurance Programme as per ISO: 9000 series. If yes, please enclose a copy of the ISO certificate.

2. Details of Quality Assurance Organization. Name of key personnel, their Qualification, designations and positions in overall management Structure (enclose organizational chart for quality control)

3. Testing facilities and laboratory equipment available to be listed along with the make, year of procurement and commissioning.

4. Calibration of laboratory test equipment/gauge, indicated in para 3 above. (enclose copy of calibration certificates)

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5. Frequency of calibration(Yearly)
6. Source of procurement of raw materials/bought out components and steps taken to ensure their quality
7. Brief details of manufacturing process as relevant to the items for which Registration is sought.
8. Details of inspection/checks done on material during various stages of the above manufacturing process (enclose a copy of QAP)
9. Has the acceptable value for the parameters inspected during above stage checks been laid down? If yes, the action taken if value of the parameters inspected does not meet the desired laid down value.
10. System for documentation of the results of the above stage checks.
11. Whether one sample set of SEJ is ready for inspection during reassessment (Report to be submitted by inspecting officials)
12. Whether the firm is possessing officially issued prints of relevant drawings and specifications.

SECTION-III

DECLARATION

- i) We do hereby declare that the above particulars are correct and no discrepancy shall be found during actual investigation before and during execution of order on our firm.
- ii) Any change in the plant and machinery and change of place of office and of works site shall be brought to the notice of RDSO for clearance and approval.
- iii) We also declare that our concern has not been black listed by Railway, Railway Board / RDSO for business with the Railways.
- iv) We hereby undertake that all our equipments for manufacturing and testing as listed above shall be maintained in good working order at all times.

Place

Signature of manufacturer

Date

Official Seal