

ISO 9001:2015	Document No: TDG 0024	Version No: 2.0	Date Effective: 00.00.2024
Document Title: Item Specific Guidelines & Schedule of Technical Requirements for Vendor Approval for manufacture and supply of Spring Setting Device (SSD) for use with Overriding Curved Switches and Thick Web Curved Switches.			



RESEARCH DESIGNS & STANDARDS ORGANISATION
MANAK NAGAR, LUCKNOW – 226011

Document No.: TDG 0024

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1.0 Amendment History:

S. No.	Amendment Date	Version	Reasons for Amendment
1.	28.11.2002	1.0	First issue under new documentation system
2.	01.10.2020	2.0	List of plant & machineries and list of testing & measuring instruments added (Uploaded for one month by QA Civil Dte. and not issued)

2.0 Purpose:

This Item Specific Guidelines covers all technical requirements for manufacture and supply of Spring Setting Device for use with Overriding Curved Switches and Thick Web Curved Switches for Fresh Vendor Registration/ Quality Audit of Vendors. These guidelines replace the provisions of earlier guidelines issued vide Document No. QA-G-7.1-0024 & 25 Rev '1'.

3.0 Scope of Application:

This shall be applicable for Fresh vendor registration, Quality Audit, up-gradation of Vendors and maintaining their approved list of vendors. In case of any variation between the procedure /provision given in the work instructions and that in this 'Item-Specific Guidelines', the later shall prevail. The competent authority wherever referred to in this document shall mean Executive Director Track-II / Principal Executive Director, Infra-1.

4.0 Procedure / Details: Procedure/ details are annexed.

5.0 Referred Document:

S. No.	Document Name	Document No.
1.	Indian Railway Standard Specification for Spring Setting Device for use with Overriding Curved Switches and Thick Web Curved Switches	IRS: T-54 (latest revision)

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6.0 Referred Documents of External Origin:

IRS: T-10 (latest revision), TDG 0018, 0019 & 0020 (Latest version) and TDG 0038 (Latest version)

7.0 Associated Records:

Nil

8.0 Responsibility and Authority:

Activity	Responsible	Approver	Supporting	Consulted	Informed
Creation, maintenance of this document	ED/Track Design-II / Director /Track Design-III	PED/Infra-I	DD/AIE/ ADE	M&C Dte.	All vendors / concerned Through website
Compliance of directives contained in this document	DD/AIE/ADE	Director/Track Design-III	----	----	----
Requirement of deviation from this directive	ED/Track Design-II / Director/Track Design-III	PED/Infra-1	DD/AIE/ ADE	M&C Dte.	----

9.0 Abbreviations

PED/ Infra-1	Principal Executive Director / Infrastructure-I
ED/Track Design-II	Executive Director/ Track Design-II
RDSO	Research Designs & Standards Organization
DD	Deputy Director
AIE	Assistant Inspecting Engineer
ADE	Assistant Design Engineer
M&C Dte.	Metallurgical & Chemical Directorate

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A. ITEM SPECIFIC GUIDELINES FOR FRESH VENDOR REGISTRATION / QUALITY AUDIT/ UPGRADATION OF VENDORS FOR MANUFACTURING AND SUPPLY OF SPRING SETTING DEVICE (SSD) FOR USE WITH OVER RIDING CURVED SWITCHES AND THICK WEB CURVED SWITCHES

In addition to the “ISO Apex Documents of RDSO (Latest version)” the following shall also be applicable for fresh Vendor Registration / Quality Audit / Upgradation of Vendors for manufacturing and supply of Spring Setting Device (SSD) for use with Over Riding Curved Switches and Thick Web Curved Switches.

- (i) The list shall be common for Spring Setting Device with variants of Spring Setting Device for use with Overriding Curved Switches (Drawing no. **RDSO/T- 6945** for 6400 mm, 10125 mm and 11200 mm Over riding Curved Switches for 52kg/ 60 Kg rail section of 115 mm throw for PSC Sleeper layouts) and Spring Setting Device for use with Thick Web Curved Switches (Drawing no. **RDSO/T- 6216** for 6400 mm, 10125 mm and 11200 mm Thick Web Curved Switches for 60 Kg rail section of 160 mm throw for PSC Sleeper layouts).
- (ii) For the purpose of approval of vendor in “List of vendors for development orders”, the vendor shall be required to manufacture one sample set of Spring Setting Device & lay as per drawing of 6400 mm / 10125 mm/11200 mm Over riding Curved Switch BG 60kg/52 Kg rail sections and one sample set of Spring Setting Device & lay as per drawing of 6400mm/ 10125 mm/ 11200 mm Thick Web Curved Switches, as the case may be. For this purpose, one set layout on PSC sleepers for switch assembly along with electrical motor operated Point Machine (143mm stroke/220mm stroke) capable for checking/inspection of SSD with Over riding Curved Switches of 115mm throw at ATS and Thick Web Curved Switches of 160mm throw at ATS, as the case may be required for checking/ inspection of Spring Setting Device as per site conditions.
- (iii) The switch shall be operated by Point Machine two to three times (minimum) and then track parameters shall be checked as specified in the design parameters. The clearance at open side of tongue rail at Junction of Head (JOH) should be more than 60 mm (60+2mm & 60-3mm). The Spring Setting Device shall also be subjected to Dimensional check for its conformity to the respective drawing.
- (iv) Fatigue test of Spring Setting Device shall also be done at the time of fresh Vendor Registration of the vendor for both Over riding Curved Switch and Thick Web Curved Switches or as the case may be. For this purpose, necessary test equipment & layout shall be arranged by the firm at his works. The spring setting device should function satisfactorily for minimum 1.5 lakh cycles. It shall be the responsibility of the vendor to arrange overriding switch / thick web switch assembly for laying of SSD for checking/ inspection purposes.
- (v) The sample set shall be approved by RDSO for each drawing of Spring Setting Device i.e. RDSO/T- 6945 and RDSO/T- 6216 before starting of regular production.
- (vi) For the purpose of Quality Audit, the vendor shall be required to lay one set of Spring Setting Device at 6400 mm / 10125 mm/11200 mm Over riding Curved Switches BG 60Kg / 52Kg rail section and one set of Spring Setting Device at 6400mm/ 10125 mm/ 11200 mm Thick Web Curved Switches BG 60 Kg rail section, as the case may be. Inspection of SSD shall be carried out and the switch parameters shall be checked which should be within permissible limits of tolerances.
- (vii) Up-gradation of Vendors from Developmental Vendors to Approved Vendors shall be done for Spring Setting Device as per provisions of “ISO Apex Document of RDSO (Latest Version) and status of the Vendor shall be on UVAM Portal. Vendor should have supplied minimum **75 Sets** Spring Setting Device combining all variants of Overriding Curved Switches and Thick Web Curved Switches (as the case may be) for being eligible for up-gradation. In addition, desired consistent quality in the finished product should have been achieved, measured in terms of rejection rate which should be less than 5% before consideration for up gradation. The rejection rate shall be measured with respect to the last **75 Sets** Spring Setting Device (SSD) of that particular drawing manufactured and supplied by the vendor.

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B. MINIMUM FACILITIES & MACHINERIES REQUIRED FOR MANUFACTURING OF SPRING SETTING DEVICE FOR USE WITH OVER RIDING CURVED SWITCHES AND THICK WEB CURVED SWITCHES

(Schedule of Technical Requirements)

The Vendor must possess all minimum facilities and machinery to manufacture Overriding Curved Switches / Thick Web Curved Switches as given Document No. TDG 0018, 0019 & 0020 Rev.'0' / (Latest version) / Document No. TDG 0038 Rev. '0' / (Latest version) and shall be in the Vendor list of Overriding Curved Switches / Thick Web Curved Switches in vendor directory on IREPS portal.

C. PROFORMA FOR CAPABILITY / CAPACITY ASSESSMENT FOR APPROVAL OF FIRM FOR FRESH VENDOR REGISTRATION / QUALITY AUDIT OF SPRING SETTING DEVICE

(To be prepared by the firm in duplicate – Attach extra sheets wherever necessary)

SECTION - I GENERAL INFORMATION (FOR RECORD PURPOSE ONLY)

1. Name of the firm:
2. Postal Address of –
 - 2.1 Head Office:
 - 2.2 Works:
3. Telephone No. (with STD Code)/ Mobile No. cum WhatsApp number –
 - 3.1 Head office:
 - 3.2 Works:
4. Fax & E-mail Address of –
 - 4.1 Head Office:
 - 4.2 Works:
5. GST Identification Number of Firm:
6. Description of Works
 - 6.1 Total Land area (in sq. meters)
 - 6.2 Total Covered area (in sq. meters)
 - 6.3 Different sub-units
 - 6.4 A fully dimensioned plan of the works showing covered area and different shops shall be enclosed:
 - 6.5 Special features, if any

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7. Number of personnel employed (category-wise)
 - 7.1 Managerial
 - 7.2 Supervisory (Enclose list of Managers/Technical Supervisors)
 - 7.3 Skilled/Artisans
 - 7.4 Unskilled
8. Hours of working
9. Weekly off days
10. State whether the firm is already in the list of Vendors in vendor directory on IREPS portal for supply of Overriding Curved Switches / Thick Web Curved Switches. If so, please give details of last approval:
 - 10.1 Letter date and issued by -
 - 10.2 Date of expiry of validity of approval/Next Quality Audit due -
11. If this application is an application for Quality Audit, have inclusion of any additional items in the approved list also been requested?

SECTION-II TECHNICAL INFORMATION

1. Production Capacity
 - 1.1 Per month
 - 1.2 Per year
2. Type of Stores / Items which the firm is capable of manufacturing.
3. Details of Stores / Items / Parts / Components for which Fresh Vendor Registration / Quality Audit is sought (please indicate complete description and drawing nos.)
4. Total Power availability (In kVA/kW)
 - 4.1 From State Electricity Board or other regular source (Enclose a copy of current Electricity Bill)
 - 4.2 From own stand-by Power Generating sets (also give make, capacity & other details of each generating set).
5. Crane facility

	No. of Cranes	Make	Capacity
5.1 EOT Crane			
5.2 Mobile Crane			
5.3 Jib Crane			
6. Manufacturing facilities
 - 6.1 Inspection bay facilities (Inspection table with lighting arrangement handling facilities etc.) General working conditions i.e. proper lighting, ventilation and cleanliness.

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6.2 A fully dimensioned plan of the works showing locations of various equipment and facilities for manufacture of Spring Setting Device, flow line indicating locations of various operations during manufacture in proper sequence and storage facilities for finished products may please be enclosed.

7. Machines (For manufacturing of Spring Setting Device and related components)

PAST PERFORMANCE

1. List of important customers of the firm
(As relevant to the works for which requisition is sought)
2. Details of important orders executed in past, in reference to the supplies made.
 - 2.1 To other important firms/companies/undertakings etc.
 - 2.2 Directly to the Railways
3. Important Orders in hand:

SECTION-III QUALITY ASSURANCE PROGRAMME

1. Does the factory have any established Quality Assurance Programme as per ISO: 9001 series? If yes, please enclose a copy of the write-up in sequential order.
2. Details of Quality Assurance Organization. Name of key personnel, their qualification, designation and positions in overall management structure (Explain with organizational chart, if necessary).
3. Quality Control testing facilities laboratory equipment available to be listed along with the make, year of procurement and commissioning.
4. Calibration of Laboratory Test Equipment / Gauges, as indicated in Para 3 above (Enclose copy of Calibration Certificates):
 - 4.1 How the calibration is done:
 - 4.2 Frequency of calibration of each instrument:
5. Source of procurement of raw materials / bought out items and steps taken to ensure their quality.
6. Brief details of manufacturing process as relevant to the items for which registration is sought.
7. Details of inspection / checks done on material during various stages of the above manufacturing process (Enclose copy of QAP of Spring Setting Device).

Has the acceptable value for the parameters inspected during above stage checks been laid down? If yes, the action taken against values of the parameters inspected does not meet the desired laid-down value.

8. System for documentation of the results of the above stage check.

Maintenance of Records: Records in respect of manufacture of Spring Setting Device should be maintained in proper registers.

9. Whether facilities for carrying out the following tests are available, also indicate the capacity of each equipment maker's name and calibration details etc.

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- 9.1 Chemical Analysis (Spectrometric/Instrumental Analysis)
- 9.2 Hardness test
- 9.3 Tensile Test
- 9.4 Charpy Impact Test
- 9.5 Microscopic test – Using microscope of magnification up to 500X with digital recording & printing facilities.
- 9.6 Any other test
10. Whether sample set of Spring Setting Device of any one design are ready for inspection during Quality Audit (Report to be submitted by Inspecting Officials)?
11. Whether the firm is possessing officially issued prints of relevant Drawings and Specifications?

SECTION-IV DECLARATION:

1. 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.
2. Any change in the Plant & Machinery, change of place of office and of works site shall be brought to the notice of RDSO for clearance and approval.
3. We also declare that our concern has not been black listed by Railway, Railway Board/RDSO for business with the Railways.
4. We hereby undertake that all our equipment for manufacturing and testing as listed above shall be maintained in good working order at all times.
5. We hereby declare that the contents and instructions of ISO Apex Documents of RDSO have been read by us and our firm shall agree to abide by all the stipulations laid therein.
6. We hereby undertake to maintain the record of the procurement of raw material for production of Spring Setting Device, supply of Spring Setting Device & disposal of scrap of Spring Setting Device in the proper format.

Place:
Date:

Signature

Name in full of Signing Authority
Status in the Firm,

Stamp of the firm

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