

Reasoned Document for the comments/Suggestion received on Draft Item Specific Guidelines & Schedule of Technical Requirements for manufacture of ~~Fabricated~~ Over-Riding Curved Switches and ~~Fabricated Crossings~~ after 30 days uploading

SN	Provisions of Document uploaded on RDSO's website for comments of stakeholders	Comments of stakeholders	RDSO's remark & change in specification												
1.	Document No. : TDG 0018 (Version 1:0)	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.												
2.	Document Title: Item Specific Guidelines & Schedule of Technical Requirements for manufacture of Fabricated Over-Riding Curved Switches and Fabricated Crossings	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.												
3.	1.0 Amendment History: <table border="1"> <thead> <tr> <th>S. No.</th><th>Amendment Date</th><th>Version</th><th>Reason for Amendment</th></tr> </thead> <tbody> <tr> <td>1.</td><td>01.12.2001</td><td>0.0</td><td>First Issue under new documentation system.</td></tr> <tr> <td>2.</td><td>00.00.2024</td><td>1.0</td><td> <ol style="list-style-type: none"> In Para-3 (i.e. Scope of Application) 'Initial capability assessment' is changed to 'Fresh vendor registration', a word 'approved list of vendor' is modified from 'approved list' and the line 'The competent authority wherever referred to in this document shall mean Executive Director, Quality Assurance Civil Dte', is deleted. Table-8 (i.e. Responsibility and Authority) and Table-9 (i.e. Abbreviations) are revised. 1 :20 & 1:16 is added in addition 1:12 & 1:8½ Fabricated Over-Riding Curve Switch in the heading, ITEM SPECIFIC GUIDELINES FOR ASSESSMENT / QUALITY AUDIT OF FIRMS MANUFACTURING and Para -1 , Para-2, Para-5 under thereof. Planning Machine requirement to be replaced with CNC Plano Milling Machine (i.e. 'Optional' in phased manner). An electronic dimensional measurement with auto recording facility (Optional) is added in this document at Minimum Facilities & Machineries required. Surface Roughness Tester has been added. New Para added in Item Specific Guidelines for minimum quantity for up gradation of the firm from developmental vendor to Approved vendor. New Para added in Section –III: Declaration. </td></tr> </tbody> </table>	S. No.	Amendment Date	Version	Reason for Amendment	1.	01.12.2001	0.0	First Issue under new documentation system.	2.	00.00.2024	1.0	<ol style="list-style-type: none"> In Para-3 (i.e. Scope of Application) 'Initial capability assessment' is changed to 'Fresh vendor registration', a word 'approved list of vendor' is modified from 'approved list' and the line 'The competent authority wherever referred to in this document shall mean Executive Director, Quality Assurance Civil Dte', is deleted. Table-8 (i.e. Responsibility and Authority) and Table-9 (i.e. Abbreviations) are revised. 1 :20 & 1:16 is added in addition 1:12 & 1:8½ Fabricated Over-Riding Curve Switch in the heading, ITEM SPECIFIC GUIDELINES FOR ASSESSMENT / QUALITY AUDIT OF FIRMS MANUFACTURING and Para -1 , Para-2, Para-5 under thereof. Planning Machine requirement to be replaced with CNC Plano Milling Machine (i.e. 'Optional' in phased manner). An electronic dimensional measurement with auto recording facility (Optional) is added in this document at Minimum Facilities & Machineries required. Surface Roughness Tester has been added. New Para added in Item Specific Guidelines for minimum quantity for up gradation of the firm from developmental vendor to Approved vendor. New Para added in Section –III: Declaration. 	<p>Comment/ Suggestions during 30 days of uploading</p> <p>1.0 Amendment History Sr. No. 2 Clause No. 4:</p> <p>Comment by M/s Prime Ispat Limited:</p> <p>As per amendment history Sr. No. 2 Clause No. 4 Planning Machine requirement to be replaced with CNC Plano Milling Machine is not Accepted :-</p> <ol style="list-style-type: none"> Not acceptable as the function of CNC Plano Milling Machine is different. Plano Milling Machine is required for formation of relief planning in the Over Riding Curved Switches. During Machining of Slope that is "1 in 14 and 1 in 2.765" at undercut is not practically suitable with CNC Plano Milling Machine. During machining of overall length of undercut i.e "7 mm" is not practically suitable with CNC Plano Milling Machine. 	<p>The comment by M/s Prime Ispat Limited, Raipur is not acceptable as it is possible to machine the rail using CNC plano milling machine if suitable tool will be developed for machining by firm.</p>
S. No.	Amendment Date	Version	Reason for Amendment												
1.	01.12.2001	0.0	First Issue under new documentation system.												
2.	00.00.2024	1.0	<ol style="list-style-type: none"> In Para-3 (i.e. Scope of Application) 'Initial capability assessment' is changed to 'Fresh vendor registration', a word 'approved list of vendor' is modified from 'approved list' and the line 'The competent authority wherever referred to in this document shall mean Executive Director, Quality Assurance Civil Dte', is deleted. Table-8 (i.e. Responsibility and Authority) and Table-9 (i.e. Abbreviations) are revised. 1 :20 & 1:16 is added in addition 1:12 & 1:8½ Fabricated Over-Riding Curve Switch in the heading, ITEM SPECIFIC GUIDELINES FOR ASSESSMENT / QUALITY AUDIT OF FIRMS MANUFACTURING and Para -1 , Para-2, Para-5 under thereof. Planning Machine requirement to be replaced with CNC Plano Milling Machine (i.e. 'Optional' in phased manner). An electronic dimensional measurement with auto recording facility (Optional) is added in this document at Minimum Facilities & Machineries required. Surface Roughness Tester has been added. New Para added in Item Specific Guidelines for minimum quantity for up gradation of the firm from developmental vendor to Approved vendor. New Para added in Section –III: Declaration. 												

4.	2.0 Purpose: This guideline covers all technical requirements for manufacture and supply of Fabricated Over-riding Curved Switch and Fabricated Crossings used for Initial capability assessment / Fresh vendor registration / Quality Audit of Vendor. These guidelines replaces the provisions of earlier guidelines issued on the subject TDG 0018, 0019 & 0020 Rev. ‘0’.	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.																								
5.	3.0 Scope of Application: This shall be applicable for Initial capability assessment / Fresh vendor registration, Quality Audit, Up-gradation of Vendors and maintaining their Vendor list. 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-I.	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.																								
6.	4.0 Procedure / Details: Procedure / details are annexed.	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.																								
7.	5.0 Referred Document: <table><tr><td>S. No.</td><td>Document Name</td><td>Document No.</td></tr><tr><td>1.</td><td>Indian Railway Standard Specification for Fabricated Switches and Crossings, Welded/Heat Treated Crossings and Switch Expansion Joints (SEJ)</td><td>IRS: T-10-2023 (latest revision)</td></tr></table>	S. No.	Document Name	Document No.	1.	Indian Railway Standard Specification for Fabricated Switches and Crossings, Welded/Heat Treated Crossings and Switch Expansion Joints (SEJ)	IRS: T-10-2023 (latest revision)	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.																		
S. No.	Document Name	Document No.																									
1.	Indian Railway Standard Specification for Fabricated Switches and Crossings, Welded/Heat Treated Crossings and Switch Expansion Joints (SEJ)	IRS: T-10-2023 (latest revision)																									
8.	6.0 Referred Documents of External Origin: None.	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.																								
9.	7.0 Associated Records: None.	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.																								
10.	8.0 Responsibility and Authority: <table><tr><td>Activity</td><td>Responsible</td><td>Approver</td><td>Supporting</td><td>Consulted</td><td>Informed</td></tr><tr><td>Creation, maintenance of this document</td><td>ED/Track Design-II / Director/Track Design-III</td><td>PED/Infra-I</td><td>DD/AIE/ ADE</td><td>M&C Dte.</td><td>All vendors / concerned through website</td></tr><tr><td>Compliance of directives contained in this document</td><td>DD/AIE/ADE</td><td>irector/ Track Design-III</td><td>-</td><td>-</td><td>-</td></tr><tr><td>Requirement of deviation from this directive</td><td>ED/Track Design-II / Director/Track Design-III</td><td>PED/ Infra-I</td><td>DD/AIE/ ADE</td><td>M&C Dte.</td><td>All vendors / concerned through website</td></tr></table>	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	irector/ Track Design-III	-	-	-	Requirement of deviation from this directive	ED/Track Design-II / Director/Track Design-III	PED/ Infra-I	DD/AIE/ ADE	M&C Dte.	All vendors / concerned through website	Comment/ Suggestions during 30 days of uploading No comments received.	No changes made in proposed clause as no comments received from any vendor/ stake holders.
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	irector/ Track Design-III	-	-	-																						
Requirement of deviation from this directive	ED/Track Design-II / Director/Track Design-III	PED/ Infra-I	DD/AIE/ ADE	M&C Dte.	All vendors / concerned through website																						

11.	<div>9.0 Abbreviations:</div> <table><tr><td>PED/ Infra-I</td><td>Principal Executive Director/ Infrastructure-I.</td></tr><tr><td>ED/ Track Design-II</td><td>Executive Director/ Track Design-II</td></tr><tr><td>RDSO</td><td>Research Designs & Standards Organisation</td></tr><tr><td>M&C Dte.</td><td>Metallurgical & Chemical Directorate</td></tr><tr><td>DD</td><td>Deputy Director</td></tr><tr><td>AIE</td><td>Assistant Inspecting Engineer</td></tr><tr><td>ADE</td><td>Assistant Design Engineer</td></tr></table>	PED/ Infra-I	Principal Executive Director/ Infrastructure-I.	ED/ Track Design-II	Executive Director/ Track Design-II	RDSO	Research Designs & Standards Organisation	M&C Dte.	Metallurgical & Chemical Directorate	DD	Deputy Director	AIE	Assistant Inspecting Engineer	ADE	Assistant Design Engineer	<div>Comment/ Suggestions during 30 days of uploading</div> <div>No comments received.</div>	No changes made in proposed clause as no comments received from any vendor/ stake holders.		
PED/ Infra-I	Principal Executive Director/ Infrastructure-I.																		
ED/ Track Design-II	Executive Director/ Track Design-II																		
RDSO	Research Designs & Standards Organisation																		
M&C Dte.	Metallurgical & Chemical Directorate																		
DD	Deputy Director																		
AIE	Assistant Inspecting Engineer																		
ADE	Assistant Design Engineer																		
12.	<div>Item Specific Guidelines for Initial capability assessment / Fresh vendor registration, Quality Audit of vendor for manufacturing of 1:20, 1:16, 1:12 and 1:8.5 Fabricated-Over-riding Curved Switches</div> <div>In addition to the “ISO Apex document (latest version) of RDSO “ the following specific guidelines shall also be applicable for Initial capability assessment / Fresh vendor registration, Quality Audit of vendors for manufacturing 1:20, 1:16, 1:12 and 1:8.5 Fabricated Over-riding curved switches.</div> <div><div>1)</div><div>Vendor list shall be maintained for variants of 1:20, 1:16, 1:12 and 1:8.5 Fabricated Over-riding curved switches.</div></div> <div><div>2)</div><div>For the purpose of fresh approval of vendor for manufacturing of Fabricated Over-riding curved switches, the vendor shall be required to manufacture Prototype sets of Fabricated Over-riding curved switches for any of the design / drawing (variant) comprising of two sets-one set of left hand and one set of right-hand Fabricated Over-riding curved switch complete. One set of switches shall consist of two tongue rails, two stock rails and all components as per Part List of the respective drawing. Prototype approval for the other variants shall be carried out subsequently as and when offered by the vendor.</div></div> <div><div>3)</div><div>For the purpose of Quality Audit of the vendor for Fabricated Over-riding curved switches, one sample set of Fabricated Over-riding curved switch (either left hand or right hand switch) of any design/ drawing (variant) can be offered for inspection, provided vendor is approved for that variant.</div></div> <div><div>4)</div><div>The inspection gauges, jigs and fixtures shall be approved / revalidated at the time of inspection of infrastructural facilities during Fresh vendor registration / Quality audit of the firm.</div></div> <div><div>5)</div><div>The inspection gauges, jigs and fixtures and Prototype sets shall be required to be approved by RDSO for each design of Switches on order before regular production.</div></div> <div><div>6)</div><div>For up gradation of the vendor from “Developmental vendor” to “Approved vendor”, the minimum quantity of-Fabricated Over-riding curved switches of any design/ drawing (variant) is required i.e. 75 sets, and as per ISO Apex documents of RDSO.</div></div>	<div>Comment/ Suggestions during 30 days of uploading</div> <div>No comments received.</div>	No changes made in proposed clause as no comments received from any vendor/ stake holders.																
13.	<div>Minimum Facilities & Machineries required for manufacture of Fabricated- Over-riding Curved Switches and Fabricated-Crossings</div> <div>(Schedule of Technical Requirements)</div> <table><tr><th>S.N.</th><th>Description</th><th>Minimum Capacity</th><th>Minimum Quantity</th></tr><tr><td>1</td><td>Covered Area</td><td>-</td><td>1500 m²</td></tr><tr><td>2</td><td>Gantry Crane facilities</td><td>4 T</td><td>1 No.</td></tr><tr><td>3</td><td>Circular band saw</td><td>900 mm dia.</td><td>1 No.</td></tr></table>	S.N.	Description	Minimum Capacity	Minimum Quantity	1	Covered Area	-	1500 m ²	2	Gantry Crane facilities	4 T	1 No.	3	Circular band saw	900 mm dia.	1 No.	<div>Comment/ Suggestions during 30 days of uploading :</div>	
S.N.	Description	Minimum Capacity	Minimum Quantity																
1	Covered Area	-	1500 m ²																
2	Gantry Crane facilities	4 T	1 No.																
3	Circular band saw	900 mm dia.	1 No.																

	4	Hydraulic horizontal bending / straightening machines	350-500 T	1 No.	<p>Clause No. : Minimum Facilities & Machineries required for manufacture of Fabricated Over-riding Curved Switches and Fabricated Crossings:</p> <p>7. Planning Machine requirement to be replaced with CNC Plano Milling Machine (i.e. 'Optional' in phased manner):</p> <p>M/s PRAKASH METALLIC PVT LTD, Bemetara:</p> <p>CNC plano milling machine is not feasible for over-riding curved switches because undercut slope of 1:14 & 1:2.75 required in tongue rail will be a typical job in CNC plano milling operation as compared to planning operation. Moreover, the time required to carry out this operation in CNC plano milling machine will increase as compared to planning machine. Thereby increasing the production time & cost. However, CNC machines are feasible for items like thick-web switches which do not demand such undercut operations.</p>	<p>The comment by M/s PRAKASH METALLIC PVT LTD, Bemetara is not acceptable as it is possible to machine the rail using CNC plano milling machine if suitable tool will be developed for machining by firm.</p>
	5	Radial drill	32 mm dia.	1 No.		
	6	Shapers	600 mm stroke	3 Nos. 1 No.		
	7	Planning machines	i) 13 m stroke	1 No.		
			ii) 8.5m stroke	1 No.		
			iii) 5m stroke (For manufacturing Check rails)	1 No.		
		Plano- Milling machine	iv) 5m stroke	1 No.		
		CNC Plano- Milling machine* (optional)	v) 13 m stroke	1 No.		
	8	Universal Testing Machine	40 T (minimum)	1 No.		
	9	Charpy impact testing machine	-	1 No.		
	10	Hardness tester Poldi/Rockwell	-	1 No.		
		Hardness testers				
		a) Brinell Hardness testing machine / Rockwell Hardness testing machine	BHN hardness tester with ball size 2.5 to 10 mm dia.	1 No.		
		b) Poldi	-	1 No.		
	11	Compressor with riveting arrangement	-	One complete set including furnace & riveting gun etc.		
	12	CO ₂ / Mig welding equipment	-	One complete set with approved brand of welding wires		
	13	Jigs & fixtures for drilling stock & tongue rails for switches & fabricated crossings.	-	At least one set for each item separately as per Drawings		
	14	Assembly & Inspection Bay	-	A separate area to be dedicated with proper levelled floor		
	15	Chemical lab	For Chemical Analysis of MS,	1 Unit installed in house for		

		OR Spectrometer	Medium & Low alloy steel OR Spectrometer having vacuum emission CCD/PMT with printing facilities should be available for carrying out chemical analysis	wet chemical analysis OR 1 No. Spectrometer		
	16	Non-destructive testing facilities	i) USFD	1 No.		
			ii) D.P. test	1 No.		
			iii) Magnaflux	1 No.		
			iv) Metallurgical Microscope	1 No.		
			v) Polishing Machine.	1 No.		
	17	Dedicated area with all above machines installed in proper flow line	-	1500 m ²		
	18	Coordinate Measuring Machine (CMM) Electronic Dimensional measurements with auto recording facility(Optional)	Adequate for measurement of Tongue rail machining from ATS to JOH/ critical points (as per drawing)	1 No.		
	19	Surface Roughness Tester	3 – 7 micron	1 No.		
	<p>* The CNC Plano milling machine shall be installed and shall be in working order at the firm's premises in India to handle tongue rails and stock rails in the required length (minimum table length of 13m) in one setup for milling operation along all x, y & z axes without handling/ re-handling of rails involved in fabrication of tongue and stock rails. The firm shall furnish complete details of this machine such as performance characteristics, machining length, number of milling heads, make & photographs etc.</p>					
14.	<p>ASSESSMENT PERFORMA FOR APPROVAL OF MANUFACTURE (FRESH / RENEWAL) OF FABRICATED OVER-RIDING CURVED SWITCHES</p> <p>(To be prepared in duplicate)</p> <p>SECTION-I: GENERAL INFORMATION</p> <p>1. Name of the firm :</p> <p>2. Postal address :</p>				<p>Comment/ Suggestions during 30 days of uploading</p> <p>No comments received.</p>	<p>No changes made in proposed clause as no comments received from any vendor/ stake holders.</p>

	<p>2.1. Head office :</p> <p>2.2. Works :</p> <p>3. Telephone No. (with STD Code):</p> <p>3.1. Head office :</p> <p>3.2. Works :</p> <p>4. E-mail address :</p> <p>4.1. Head office :</p> <p>4.2. Works :</p> <p>5. Description of works:</p> <p>5.1. Total land area (in Sq. meters) :</p> <p>5.2. Total covered area (in Sq. meters) :</p> <p>5.3. Different sub-units:</p> <p>5.4. A fully dimensioned plan of the works showing covered area and different shops shall be enclosed :</p> <p>5.5. Special features, if any:</p> <p>6. Number of personnel employed (category-wise)</p> <p>6.1. Managerial :</p> <p>6.2. Supervisory : (Enclose list of Managers / Technical Supervisors)</p> <p>6.3. Skilled / Artisans :</p> <p>6.4. Unskilled :</p> <p>7. Hours of working :</p> <p>8. Weekly off day :</p> <p>9. State whether the firm is already in Vendor List for supply of Fabricated Over-riding Switches. If so, please give details of last approval.</p> <p>9.1. Letter dated and issued by</p> <p>9.2. Date of expiry of validity of approval.</p> <p>10. Details of important orders executed in past for switches :</p> <p>10.1. To other important firms / companies / undertakings.</p>	
--	--	--

	10.2. Directly to Railways.																																										
15.	<p>SECTION II: TECHNICAL INFORMATION</p> <p>1. Production capacity-</p> <p>i) Per month</p> <p>ii) Per year</p> <p>iii) Type of Stores / Items which the firm is capable of manufacturing:-</p> <p>2. Type of Stores / Items which the firm is capable of manufacturing:</p> <p>3. <u>Crane facilities</u> <u>No. of cranes</u> <u>Make of crane</u> <u>capacity</u></p> <p>3.1 EOT Crane-</p> <p>3.2 Mobile Crane-</p> <p>3.3 Jib Crane-</p> <p>4. Total Power Availability (in kVA / kW)</p> <p>a) From the State Electricity Board or other regular source (Enclose a copy of current electricity bill).</p> <p>b) From own stand by generating sets (Also give make, capacity and other details of each generating set).</p> <p>5. Machines (For manufacturing of Fabricated Over-riding curved switches and related components)</p> <table border="1"> <thead> <tr> <th>S. No.</th><th>Name of Machine</th><th>No. of Machine</th><th>Make of the Machine</th><th>Size & capacity of Machine</th></tr> </thead> <tbody> <tr> <td>5.1</td><td>Circular band Saw</td><td></td><td></td><td></td></tr> <tr> <td>5.2</td><td>Radial Drill</td><td></td><td></td><td></td></tr> <tr> <td>5.3</td><td>Hydraulic Bending Machine (Horizontal 350 T & to 500T)</td><td></td><td></td><td></td></tr> <tr> <td>5.4</td><td>Plano-Milling Machine with stroke of 5m</td><td></td><td></td><td></td></tr> <tr> <td>5.5</td><td>Shapers</td><td></td><td></td><td></td></tr> <tr> <td>5.6</td><td>Pillar Drills</td><td></td><td></td><td></td></tr> <tr> <td>5.7</td><td>Grinding Machine</td><td></td><td></td><td></td></tr> </tbody> </table>	S. No.	Name of Machine	No. of Machine	Make of the Machine	Size & capacity of Machine	5.1	Circular band Saw				5.2	Radial Drill				5.3	Hydraulic Bending Machine (Horizontal 350 T & to 500T)				5.4	Plano-Milling Machine with stroke of 5m				5.5	Shapers				5.6	Pillar Drills				5.7	Grinding Machine				<p>Comment/ Suggestions during 30 days of uploading</p> <p>No comments received.</p>	<p>No changes made in proposed clause as no comments received from any vendor/ stake holders.</p>
S. No.	Name of Machine	No. of Machine	Make of the Machine	Size & capacity of Machine																																							
5.1	Circular band Saw																																										
5.2	Radial Drill																																										
5.3	Hydraulic Bending Machine (Horizontal 350 T & to 500T)																																										
5.4	Plano-Milling Machine with stroke of 5m																																										
5.5	Shapers																																										
5.6	Pillar Drills																																										
5.7	Grinding Machine																																										

	5.8	Portable Grinders			
	5.9	Power Hammer			
	5.10	Forging Press			
	5.11	Forming Press			
	5.12	Slide chair straightening machine			
	5.13 5.12	Oil Fired / Coal Fired / Induction Furnaces for rivets			
	5.14 5.13	Electric welding sets (CO2 / Mig welding set) with approved brand of welding wires			
	5.15 5.14	Gas-welding / Gas cutting Facilities(Including preheating arrangements)			
	5.16 5.15	Jim Crow			
	5.17 5.16	Planning machines/ CNC Plano-Milling machine (optional) having stroke of 5m, 8.5m & 13m. i) Planning machines having stroke of 5m & 8.5m & 13m. ii) CNC Plano-Milling machine (optional) having stroke of 13m.			
	5.18 5.17	Air-compressor			
	5.19 5.18	Pneumatic riveting Gun for 1:12 or flatter angle switches.			
	5.20 5.19	Coordinate Measuring Machine (CMM) Electronic Dimensional measurements with auto recording facility(Optional)			
	<p>6. 7. Testing Equipment/ facilities Nos. Make Size / Capacity</p> <p>6.1 7.1 Ultrasonic test of rails</p> <p>6.2 7.2 Magnaflux</p> <p>6.3 7.3 Tensile testing machine (UTM Machine)</p>				

	<div>6.4 7.4 Polishing Machine</div> <div>6.5 7.5 Hardness testing machine</div> <div>i) Poldi</div> <div>ii) Brinell / Rockwell</div> <div>6.6 7.6 Charpy Impact testing machine</div> <div>6.7 7.7 Lab for finding out the chemical composition of any sample.</div> <div>6.8 7.8 Other NDT facilities (DP test etc.)</div> <div>6.9Surface Roughness Tester</div> <div>7. 8. Handling facilities (It should be mentioned whether there is proper facilities for handling of finished switches & crossings)</div> <div>8. 9. Jigs and fixtures</div> <div>8.1 9.1 Drilling Jigs (for switches) , As per Drawings</div> <table><tr><td>Name of the Jigs</td><td>No. of Jig</td><td>Drg. No.</td></tr><tr><td>8.1.1 9.1.1 Tongue Rail Drilling Jig , as per Drawings</td><td></td><td></td></tr><tr><td>8.1.2 9.1.2 Stock Rail Drilling Jig, As per Drawings</td><td></td><td></td></tr><tr><td>8.1.3 9.1.3 Check Rail Drilling Jig, As per Drawings</td><td></td><td></td></tr><tr><td>8.1.4 9.1.4 Drilling jigs for stretcher bars</td><td></td><td></td></tr><tr><td>8.1.5 9.1.5 Drilling jigs for slide chairs</td><td></td><td></td></tr><tr><td>8.1.6 9.1.6 Drilling jigs for Bearing Plates</td><td></td><td></td></tr><tr><td>8.1.7 9.1.7 Drilling jigs for Brackets</td><td></td><td></td></tr><tr><td>8.1.8 Drilling jigs for Tie plate</td><td></td><td></td></tr></table> <div>8.2 9.3 Bending Jigs & Fixtures As per Drawings</div> <div>8.2.1 9.3.1 Jig & fixture for Tongue Rail (for switches)</div> <div>8.3 9.5 Other Fixtures</div> <div>Fixtures for planning of-</div> <div>8.3.1 9.5.1 Tongue Rail Head Machining (for switches) As per Drawings</div> <div>8.3.2 9.5.2 Tongue Rail Flange Machining (for switches) As per Drawings</div> <div>8.3.3 9.5.3 Check Rail Machining (for switches) As per Drawings</div>	Name of the Jigs	No. of Jig	Drg. No.	8.1.1 9.1.1 Tongue Rail Drilling Jig , as per Drawings			8.1.2 9.1.2 Stock Rail Drilling Jig, As per Drawings			8.1.3 9.1.3 Check Rail Drilling Jig, As per Drawings			8.1.4 9.1.4 Drilling jigs for stretcher bars			8.1.5 9.1.5 Drilling jigs for slide chairs			8.1.6 9.1.6 Drilling jigs for Bearing Plates			8.1.7 9.1.7 Drilling jigs for Brackets			8.1.8 Drilling jigs for Tie plate				
Name of the Jigs	No. of Jig	Drg. No.																												
8.1.1 9.1.1 Tongue Rail Drilling Jig , as per Drawings																														
8.1.2 9.1.2 Stock Rail Drilling Jig, As per Drawings																														
8.1.3 9.1.3 Check Rail Drilling Jig, As per Drawings																														
8.1.4 9.1.4 Drilling jigs for stretcher bars																														
8.1.5 9.1.5 Drilling jigs for slide chairs																														
8.1.6 9.1.6 Drilling jigs for Bearing Plates																														
8.1.7 9.1.7 Drilling jigs for Brackets																														
8.1.8 Drilling jigs for Tie plate																														

	<p>9.5.8 Fixtures for machining of bearing plates (for switches)</p> <p>9.5.9 Fixtures for multiple drilling of slide chair base holes (for switches)</p> <p>9.5.10 Fixtures for drilling of Slide Chair Lug Hole (for switches)</p> <p>8.3.4 9.5.11 Fixtures for Drilling (for switches) As per Drawings</p> <p>9.5.12 Brackets (for switches)</p> <p>9.5.13 Lugs (for switches)</p> <p>9.5.14 Fixtures for Drilling of Special Chairs (for switches)</p> <p>8.3.5 Fixtures for Drilling of Tie plate As per Drawings</p> <p>9. 10. Inspection Gauges, jigs and fixtures As per Drawings Drawings of relevant inspection gauges, jigs and fixtures for checking dimensions of switches crossings & check rails etc including components shall be made available along with relevant inspection gauges, jigs and fixtures to inspecting agency at the time of Assessment/Reassessment Initial approval / Quality Audit.</p> <p>10. 11. Assembly of Switches It should be mentioned that how much leveled area is provided for the assembly 'Switches'.</p> <p>11. 12. Leveling -Jogan for laying the full turnout. It should be mentioned whether there is sufficient leveled space for laying the turnout, it should also be mentioned that there are facilities for track gauge, Jim Crow, Crow Bar, Spirit level, hammer etc.</p> <p>13. Railway siding facilities.</p> <p>12. 13. A fully dimensioned plan of the works showing locations of various equipment and facilities for the manufacture of Fabricated Over-riding curved switches flow line indicating location of various operations during manufacture in proper sequence and storage facilities for finished products and dispatch may please be enclosed.</p> <p>13. 15 QUALITY ASSURANCE</p> <p>13.1 15.1 Does the factory has any established quality assurance programme as per ISO-9000:2015 series. If yes, please enclose a copy of the ISO-9000:2015 certificate.</p> <p>13.2 15.2 Detail of quality assurance organization, Name of key personal, their qualification, designations and position in overall management structure (Enclose organizational chart for quality control)</p> <p>13.3 15.3 Quality control testing facilities laboratory equipment available to be listed along with the make, year of procurement and commissioning.</p> <p>13.4 15.4 Calibration of laboratory / test equipment / inspection gauge/ jigs and fixtures.. (Enclose copy of calibration certificate).</p> <p>13.5 15.5 Frequency of calibration. (Yearly/Half Yearly)</p> <p>13.6 15.6 Source of procurement of raw materials / bought outs and steps taken to ensure their quality.</p> <p>13.7 15.7 Brief details of manufacturing process as relevant to the items for which registration is sought (Switches).</p>		
--	---	--	--

	<p>13.8 15.8 Details of inspection / checks done on material during various stages of the above manufacturing process (Enclose copy of QAP).</p> <p>13.9 15.9 Has the acceptable value for the parameters inspected during the above stages checks been laid down? If yes, the action taken if value of the parameters inspected does not meet the desired laid down value.</p> <p>13.10 15.10 System for documentation of the results of the above stage check.</p> <p>14. 16-Whether one sample set of switches ready for inspection during Quality Audit (Report to be submitted by inspecting official).</p> <p>15. 17 Whether the firm is possessing officially issued prints of relevant drawings and specifications.</p>		
16.	<p>SECTION - III: DECLARATION</p> <p>(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.</p> <p>(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.</p> <p>(iii) We also declare that our concern has not been black listed by Railway, Railway Board / RDSO for business with the Railways.</p> <p>(iv) We hereby undertake that all our equipments for manufacturing and testing as listed above shall be maintained in good working order at alltimes.</p> <p>(v) We hereby declare that the contents and the instructions of latest ISO Apex Documents has been read and understood by us and our firm shall abide by all the stipulated laid therein.</p> <p>(vi) We hereby undertake to maintain the record of the procurement of any raw material for production of Fabricated Over-riding Curve Switch, supply of Fabricated Over-riding Curve Switch and disposal of scrap of Fabricated Over-riding Curve Switch in the proper format.</p> <p style="text-align: right;">Signature</p> <p style="text-align: right;">Name in full of Signing Authority</p> <p style="text-align: right;">Status of the Vendor</p> <p>Place :</p> <p>Date :</p> <p style="text-align: right;">Stamp of the firm</p>	<p>Comment/ Suggestions during 30 days of uploading</p> <p>No comments received.</p>	<p>No changes made in proposed clause as no comments received from any vendor/ stake holders.</p>