

Inspection Check Sheet  
for  
Fish Plate and Fish Plate Bar

## Inspection Check Sheet for Fish Plate and Fish Plate Bar

**Specification:** Indian Railway Standard Specification for Fish Plate and Fish Plate Bar:  
IRS/T-1-2012(Provisional ).

Name of the firm :

Purchaser Railway :

Fish Plate/Fish Plate Bar Drawing No. :

Quantity:

Call Letter no. :

S.N	Clause/Para No.	Description of Item	Observation/Remarks ( Yes/No)
	Contract details		
1.		Original copy of Purchase Order	
2.		Adequate Delivery Period	
3.		Consignee details	
	Inspection Gauges		
4	Para no. 3 & 8 of IRS/T-1-2012( Provisional ).	Working gauges/templates approved by RDSO is available.	
5		Approval certificate for inspection gauges/templates issued by RDSO is available and valid	
	Quality Assurance Plan		
6		Approved copy of Quality Assurance Programme (QAP) is available.	
7		Firm is following approved QAP ( To be verified from the records )	
	Measuring Instruments		
8		Measuring & testing instruments/machines have valid calibration.	
9		Instruments which are required to be cross checked with test pieces, have been checked. i) Spectrometer ii) Brinell Hardness Tester	
	Internal Test Report		
10		Vendor's Internal Test Report is satisfactory	
11		Samples used in preparation of Internal Test Report are available	

	For Fish Plate Bar														
12	Para no. 4.1 of IRS/T-1-2012( Provisional ).	<p>The steel of billets is of killed quality. (To be verified from the record of source of purchase of Bloom/Ingots )</p> <p>Secondary refining has been done or not (To be verified from the record of source of purchase of Bloom/Ingots).</p>													
13	Para no. 4.2 of IRS/T-1-2012( Provisional ).	<p>Verification of following documents. (To be verified from the record of source of purchase of Billet).</p> <p>(i) Hot rolled from concast blooms/ingots.</p> <p>(ii) Minimum reduction ratio of 3:1 (concast bloom/ingot to the rolled billet).</p> <p>(iii) Minimum size of the billet for manufacturing fish plate 125mm x 125mm.</p>	<p>i)Concast Bloom/Ingot</p> <p>ii)Reduction ratio is .....</p> <p>iii)Minimum size of billet is.....</p>												
14	Para no. 4.4 of IRS/T-1-2012( Provisional ).	<p>The billets used for re-rolling of fish plate is free from all harmful defects such as cracks, surface flaws, laminations and rough jagged and imperfect edges.</p> <p>The billet is reasonably free from harmful defects such as segregation, piping, inclusions, blow holes etc.(To be verified from the record of source of purchase of Billet).</p>													
15	Para no. 4.5 of IRS/T-1-2012( Provisional ).	<p>Chemical composition test certificates of billets as per laid down sample size is available. (To be verified from the record of source of purchase of billets).</p> <table><thead><tr><th>Element</th><th>%age</th></tr></thead><tbody><tr><td>Carbon</td><td>0.40 - 0.50 (+/- 0.03)</td></tr><tr><td>Silicon</td><td>0.15 - 0.35(+/- 0.03)</td></tr><tr><td>Manganese</td><td>0.60 - 0.90(+/- 0.04)</td></tr><tr><td>Sulphur</td><td>0.04max(+0.005)</td></tr><tr><td>Phosphorus</td><td>0.04max(.+0.005)</td></tr></tbody></table>	Element	%age	Carbon	0.40 - 0.50 (+/- 0.03)	Silicon	0.15 - 0.35(+/- 0.03)	Manganese	0.60 - 0.90(+/- 0.04)	Sulphur	0.04max(+0.005)	Phosphorus	0.04max(.+0.005)	
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16	Para no. 4.6 of IRS/T-1-2012( Provisional ).	<p>Mechanical and metallurgical properties test certificates of billets as per laid down sample size is available. (To be verified from the record of source of purchase of billets).</p> <table><thead><tr><th>Test</th><th>Value</th></tr></thead><tbody><tr><td>Ultimate Tensile</td><td>620 MPa</td></tr></tbody></table>	Test	Value	Ultimate Tensile	620 MPa									
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		Strength (Min.) Yield Strength (Min.) 320 MPa % age Elongation 15 (Min.) Hardness (HB) (min.) 175 Grain size as per 6 or Finer IS:4748-1988	
17	Para no. 4.7 of IRS/T-1-2012( Provisional ).	Cast-wise record of source of purchase of concast blooms/Ingots and requisite test pieces of the raw material of billet are available. (To be verified from the record of source of purchase of blooms/Ingots and billets available with bar manufacturer).	
18	Para no. 4.8 of IRS/T-1-2012( Provisional ).	Whether fish plate bar manufacturer has conducted the chemical & physical test using test pieces of raw material of billets available and the values are within permissible limit as given under para 15 & 16 above.	
19	Para no. 5.0 of IRS/T-1-2012( Provisional ).	Is Fish Plate Bar has been rolled and heat treated ( To be verified from documents )	
20	Para no. 14.0 of IRS/T-1-2012( Provisional ).	Marking is proper	
21	Para no. 15.0 of IRS/T-1-2012( Provisional ).	All the tests as mentioned below has been conducted by inspecting authority on fish plate bar as per laid down frequency/sample size : i) Visual Examination - 100% ii) Dimensions - 20% selected at random iii) Chemical Composition - 2 iv) Tensile Strength , Yield Strength & % age Elongation - 2 v) Hardness - 3% vi) Macrostructure - 1 vii) Grain Size - 1 <b>( Observations to be filled in Annexure I, II, , IV )</b>	
22	Para no. 17.3 of IRS/T-1-2012( Provisional ).	Every accepted fish plate bar stamped with inspecting officer's stamp.	

	<b>Fish Plate</b>		
1		Is fish plate bar has been procured from approved vendors as appearing in Master List of Approved Vendors issued by QA/Civil directorate.	
2	Para no. 4.9 & 15.0 of IRS/T-1-2012(Provisional ).	Inspection certificate along with test certificates of fishplate bar duly signed by inspecting authority are available.	
3	Para no. 6.2 of IRS/T-1-2012(Provisional).	Is the Fish Plate holes are without burrs and chamfered	
4	Para no. 9.0 of IRS/T-1-2012(Provisional).	Is fishplates has been sawn properly and all burrs caused by the saw has been removed.	
5	Para no. 11.0 of IRS/T-1-2012(Provisional).	Fish plate holes should be drilled and not punched ( except for joggled fish plate )	
6	Para no. 15.0 of IRS/T-1-2012(Provisional).	<p>Tests on fish plate as listed below as per laid down frequency/sample size properties has been conducted by inspecting authority:</p> <ul style="list-style-type: none"> <li>i) Visual Examination - 100%</li> <li>ii) Correctness of bolt holes 100% Dimensions and weight - 20% selected at random except combination fish plates where it is 100%</li> <li>iii) Fitment Checks - 3%</li> <li>iv) Chemical Composition - 2</li> <li>v) Tensile Strength , Yield Strength &amp; % age Elongation - 2</li> <li>vi) Bend Test - 2</li> <li>vii) Hardness - 3%</li> <li>viii) Macrostructure - 1</li> <li>ix) Grain Size – 1</li> </ul> <p><b>( Observations to be filled in Annexure II, III, IV, V &amp; VI)</b></p>	
7	Para no. 17.3 of IRS/T-1-2012(Provisional).	Every accepted fish plate stamped with inspecting officer's stamp.	
	<b>Rejection &amp; Retesting on Fish plate bar &amp; fish plate</b>		
8	Para no. 16.0 of IRS/T-1-2012(Provisional).	<p>Is retesting has been done as per laid down provision</p> <ul style="list-style-type: none"> <li>i) Visual examination and dimensional checks – No retest permitted</li> <li>ii) Other Tests – Retesting at Double sample size</li> </ul>	

9	Para no. 18.1 of IRS/T-1-2012( Provisional ).	All rejected fish plate bars/fish plates has been cut in such a way so that it cannot be reoffered.	
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Inspecting Authority

Name:

Designation:

Signature:

Stamp:

### Check sheet about receipt of material by consignee

P.O No. –

Consignee –

Delivery Period -

S. No.	Item	Observation/Remarks (Yes/No)
1.	Whether material has been received within D.P. ?	
2.	Whether material is accompanied with Inspection Certificate ?	
3.	Whether no. of packets/bags are as per Inspection Certificate ?	
4.	Whether packet/bags are not torn out and are in proper condition ?	
5.	Whether quantity is as per Inspection Certificate ?	
6.	Whether condition of material is satisfactory ?	
7.	Whether inspection Certificate is duly signed and stamped by inspecting agency ?	
8.	Whether inspection Certificate is valid ?	
9.	Whether marking on material is matching with marking mentioned in Inspection Certificate ?	
10.	Whether unloading of material done properly ?	
11.	Whether material stacked properly ?	

Authority receiving material

Name:

Designation:

Signature:

Stamp: