

INTEGRAL COACH FACTORY , CHENNAI- 600 038					
SCHEDULE OF TECHNICAL REQUIREMENTS FOR SS END WALL					ICF/MD/SPEC-315 ISSUE STATUS: 01 Rev.: 00 DATE: 27/02/2017
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Amendment Nos.	1	2	3	4	5
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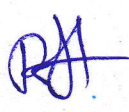
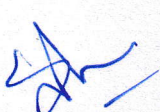
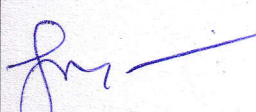
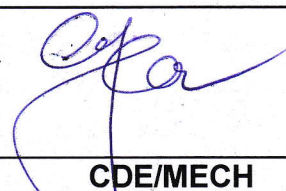
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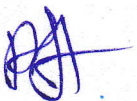

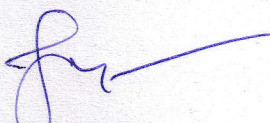
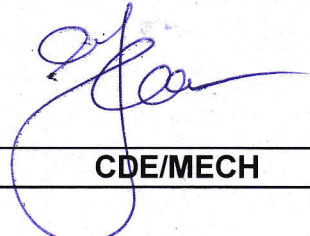
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Amendment No-01	Date-02-08-2025	Pages - 1 of 1

Clause amended as below:
Ref :E office No-304704

Page No.	Clause No.	Existing	Revised
2 of 3	2.2 (C)	Newly added	A portable spectrometer should be available in-house for inspection of raw materials and assemblies, prior to manufacturing and during inspection by ICF or by ICF authorized inspection agencies. The manufacturer shall also cross verify the raw material and other sub- assemblies at different stages and maintain records.

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1.0 SCOPE

This document covers the infrastructural requirements for manufacture and supply of SS End Wall.

2.0 REQUIREMENTS

All firms seeking approval with ICF for supplying SS End Wall must fulfill the requirements given below.

2.1 AREA.

Firm should have minimum area as follows:

Covered area for working – minimum 500 Sq. Mtrs.

Covered area for storage of raw materials and finished products – 100 Sq. Mtrs.

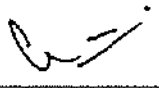
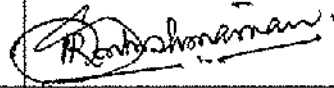

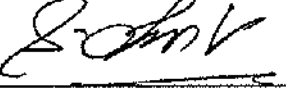
2.2 MANUFACTURING FACILITIES:

a) Firm should have the following minimum in-house facilities.

- | | |
|---------------------------------|----------------------------|
| Shearing machine | - 8mm th x 3000 mm W |
| Laser Cutting machine | - 1500 mm W x 3000 mm L |
| Straightening/Rolling machine | - 8mm th x 1500 mm W |
| Press Brake | - 8mm th x 3000 mm , 150 T |
| Press | - 200 Tons |
| Radial drilling m/c | - upto 50mm dia |
| TIG Welding m/c | - 2 nos. |
| Spot Welding m/c | - 150 KVA ✓ |
| Polishing m/c | - 2 HP |
| Painting facility | - suitable to items |
| EOT Crane for Material handling | - 5 T. |

Suitable Jigs & Fixtures for manufacturing SS End Wall

Firm should have basic in-house facilities of Lathe, Drilling m/c, Portable Grinders with suitable capacity.

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(For process involving similar operations, if higher end machine is available with firm, lower end machine requirement can be avoided)

Firm should have the following calibrated, minimum in-house facilities for Quality Assurance.

Vernier caliper	- (least count 0.02mm)
Micrometer	- (least count 0.01mm)
Measuring gauges	- Profile, GO, NO-GO gauges, etc.
Surface table with Height gauge	- (Suitable size)
Dye Penetrant testing kit	
Facility for Macro etch test for fusion of fillet weld.	

b) Firm should have in-house facilities for Chemical & Mechanical Testing.

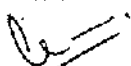
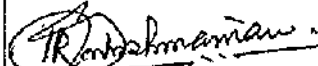

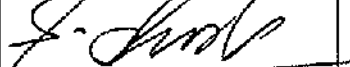
3.0 MAN POWER

Firm should have employed min. 15 permanent workers at their workshop.

Supervisor	- Min. qualification DME
Quality in charge	- Min. qualification DME
Welders	- 2 nos. (ITI, AWTI/ICF, ATI/GUINDY or any other Certificate issued by authorised inspecting agencies)
Fitters	- 2 nos. (ITI)
Skilled operators	- 4 nos.
Helpers	- 4 nos.

However, the monthly capacity of the firm for each item, will be with respect to the man power.

Regarding the qualification of the manpower ,firm has to follow the criteria fixed by ICF time to time, as required .

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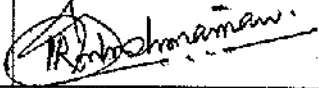
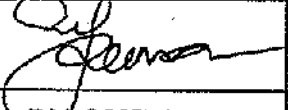

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- 4.1 The manufacturer shall have ISO-9000 series Certification for SS Fabrication.
- 4.2 There shall be a system to ensure traceability of the product from raw material stage finished product stage.
- 4.3 Firm shall submit a QAP (standard or item specific) for fabrication, which should involve the following.
- 4.3.1 Process flow chart
- 4.3.2 Brief details of manufacturing of the product.
- 4.3.3 Raw material inspection chart with sampling plan
- 4.3.4 In-process inspection details and chart with sampling plan
- 4.3.5 Final inspection chart with sampling plan
- 4.3.6 Documents of system for rejection of materials.

5.0 DOCUMENTATION (to be verified by the assessing official at the time of assessment)

- Incoming raw material register.
- Stage inspection details including finished products.
- Records of internal rejection and its analysis against action plan.
- Records of final products inspection by external agencies.
- Records of maintenance schedule of M&P.
- Records of training imparted in Production, Quality control, Safety parameters & Maintenance of machinery.

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