

1.0 SCOPE

This specification covers additional and supplementary requirements for weldable structural quality Steel Plates to IS:2062 (latest), intended primarily for storage tanks and vessels.

2.0 GENERAL

2.1 ✓ ✓ The maximum under tolerance permissible on the thickness of plate shall be 0.25 mm. Tolerances on other dimensions of plates shall be as per IS:1852.

2.2 ✓ ✓ Direction of final rolling shall be lengthwise.

2.3 ✓ ✓ Reconditioning/Repair of plates by welding shall not be permitted. Surface condition shall meet requirements of EN 10163 (Part 2) Class A Subclass 3.

2.4 ✗ Invoicing shall be based on theoretical mass calculated on the basis of 7.85 g/cm³.

3.0 SUPPLEMENTARY TECHNICAL REQUIREMENTS

3.1 ✓ Heat analysis and product analysis shall be carried out for each heat and chemical composition shall meet the limits as specified in IS: 2062.

3.2 ✗ Y-groove weld crackability test as per IS:10842 shall be carried out for plates conforming to IS:2062 Gr.C having thickness 12mm and above.

3.3 ✓ Charpy impact test shall be carried out on the plates conforming to IS:2062 Gr B and Gr C. Test temperature shall be as specified in the material requisition and acceptance criteria for energy absorption shall be as mentioned in Table-2 of the specification IS:2062.

3.4 Simulation Heat Treatment of Test Coupons

3.4.1 *check max strength as per IS* Simulation heat treatment of test coupons is required for plates above 25mm thick. For plates of thickness 25mm and below, simulation heat treatment is not required unless otherwise specified in material requisition. ✗

3.4.2 The heat treatment shall be carried out on test coupons before mechanical testing like bend, tensile, impact, etc. The test coupons shall be drawn from one plate (in each thickness) per heat. Results shall be reported on test certificate along with the simulated heat treatment cycle. ✗

Recommended heat treatment cycle :

No. of Cycle : One

Holding Temperature : 600°C to 650°C



ENGINEERS INDIA LIMITED
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**STANDARD SPECIFICATION FOR
WELDABLE STRUCTURAL QUALITY
STEEL PLATES FOR STORAGE TANKS
AND VESSELS**

SPECIFICATION

6-12-0014

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Holding Time	:	Minimum one hour per 25mm of thickness but in no case less than half an hour.
Furnace Temperature at the Time of Loading	:	Not to exceed 400°C.
Rate of Heating	:	200°C max./hr.
Rate of Cooling	:	250°C max./hr.

4.0 CERTIFIED DOCUMENTS

The supplier shall furnish 6 copies of the following certificates / documents inclusive of results of all tests required as per specification, duly certified by the Inspecting Authority before shipment of plates. The actual values obtained during tests shall be recorded in the test certificates / documents. Material certificates shall conform to DIN 50049 Type 3. 1B / EN 10204 Type 3.1B.

- a. Chemical Analysis
- b. Mechanical Tests
- c. Details of simulation heat treatment *(Wherever applicable)*
- d. Data of heat treatment
- e. Charpy V-notch impact tests
- f. Y- groove crackability test
- g. Date of manufacture (final rolling)

5.0 PAINTING AND COATING

No painting/coating of any kind is permitted on the steel plates except stencil marking.

6.0 INSPECTION AUTHORITY

- 6.1 Unless otherwise stated in requisition, no third party inspection is required. Material test certificate duly certified by Mill's quality assurance/quality control department is acceptable.
- 6.2 However, if third party inspection is specified in requisition, all test certificates and documents shall be duly certified by the third party.