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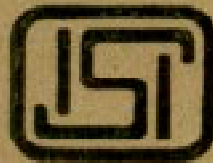
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Indian Standard
SPECIFICATION FOR
STEEL GLASS-FRONT CABINETS
(*First Revision*)

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SPECIFICATION FOR
STEEL GLASS-FRONT CABINETS
(First Revision)

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Indian Standard
SPECIFICATION FOR
STEEL GLASS-FRONT CABINETS
(*First Revision*)

0. FOREWORD

- 0.1** This Indian Standard (First Revision) was adopted by the Indian Standards Institutions on 25 January 1985, after the draft finalized by the Furniture Sectional Committee had been approved by the Civil Engineering Division Council.
- 0.2** Sheet metal furniture is being made in the country for a number of years. However, the sizes, finish and function of these furniture items as made by various manufacturers require to be coordinated. With a view to rationalizing the sizes and specifying finishes consistent with corrosion protection, this standard was first published in 1975. In this revision besides incorporating three amendments, the grades of materials to be used in the components have been given. The height of the pedestal is changed from minimum 100 mm to 125 mm.
- 0.3** In the formulation of this standard due weightage has been given to international coordination among the standards and practices prevailing in different countries in addition to relating it to the practices in this country.
- 0.4** This standard contains clause 8 which requires the purchaser to supply certain technical information at the time of placing orders.
- 0.5** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (revised).

1. SCOPE

1.1 This standard covers the requirements for materials, size, construction and finish of steel glass-front cabinets.

2. MATERIALS

2.1 Electrodes — The welding electrodes for gas, arc and spot welding shall conform to IS : 1278-1972*, IS : 814 (Part 2)-1974† and IS : 4972-1968‡ respectively.

2.2 Mild Steel Rounds and Flats — Mild steel rounds and flats shall conform to IS : 1732-1971§ and IS : 1731-1971|| respectively.

2.3 Mild Steel Sheets — Mild steel sheets shall conform to grade 0 of IS : 513-1973¶ or grade 0 of IS : 1079-1973**.

2.4 Screws — Screws shall conform to IS : 1365-1978†† and IS : 1366-1968‡‡.

3. DIMENSIONS AND TOLERANCES

3.1 Dimensions — The overall dimensions of steel glass-front cabinets shall be as follows (*see also* Fig. 1):

Height	1 980 mm
Width	910 mm
Depth	480 mm

3.2 Tolerances — The overall dimensions specified in **3.1** shall not vary by more than ± 5 mm.

4. FABRICATION

4.1 Components — Steel glass-front cabinets shall be assembled from the components as given in **4.2** to **4.14**.

*Specification for filler rods and wires for gas welding (*second revision*).

†Specification for covered electrodes for metal arc welding of structural steel: Part 2 For welding sheets (*fourth revision*).

‡Specification for resistance spot-welding electrodes.

§Dimensions for round and square steel bars for structural and general engineering purposes (*first revision*).

||Dimensions for steel flats for structural and general engineering purposes (*first revision*).

¶Specification for cold rolled carbon steel sheets (*second revision*).

**Specification for hot rolled carbon steel sheet and strip (*third revision*).

††Slotted countersunk headscrews (*third revision*).

‡‡Specification for slotted cheese head screws (dia range 1.6 to 20 mm) (*first revision*).

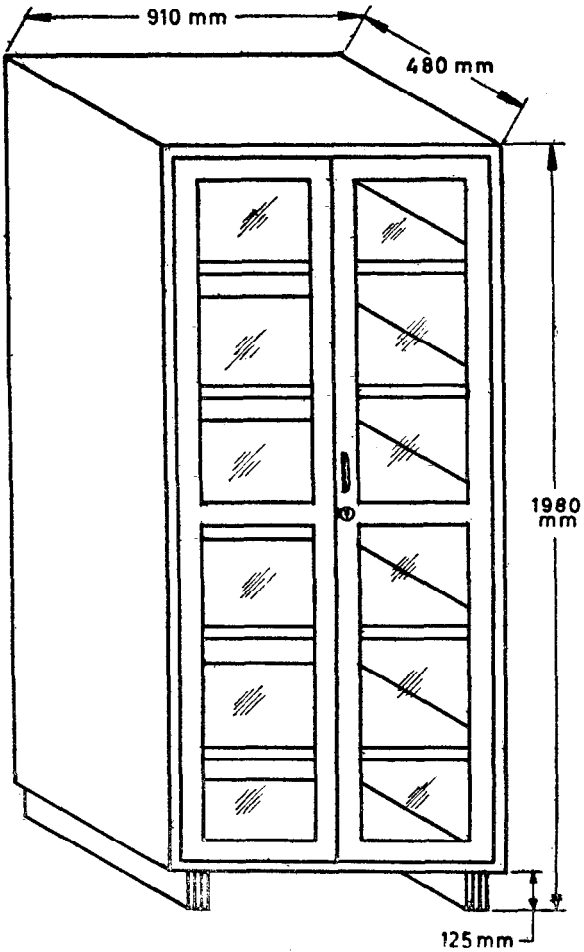


FIG. 1 TYPICAL SKETCH OF STEEL GLASS-FRONT CABINET

4.2 Sides — The sides shall be made from steel sheet not less than 0·8 mm thick and without any burrs or dents. The width of the sides shall correspond to the depth of the cabinet. The sides shall extend between the extreme surface of top and bottom.

4.3 Back — The back shall be made from steel sheet not less than 0·8 mm thick and without any burrs or dents. The width of the back sheet shall correspond to the width of the cabinet. The back shall extend between the extreme surfaces of top and bottom.

4.4 Top — This shall be made from steel sheet not less than 0·8 mm thick. The length of top shall cover the width of the cabinet and breadth shall cover the depth of cabinet. The front of the top shall have round lipped flange.

4.5 Bottom — This shall be made from steel sheet not less than 0·8 mm thick. The length of the bottom shall cover the width of the cabinet and breadth shall cover the depth of the cabinet.

4.6 Shelves — The shelves shall be made from steel sheet not less than 0·8 mm thick. The shelves shall have lipped flanges 25 mm in width and 15 mm in depth. Each shelf shall be supported on four brackets. The brackets shall be made of steel sheet not less than 1·6 mm thick. The brackets shall be so designed and constructed that the shelf is securely supported and adjustment inside the bracket can be effected easily. Four rack strips shall be provided for supporting the shelves, covering the full height of the cabinet. Rack strips shall be made of steel sheet not less than 1·0 mm thick.

4.6.1 Shelf Supporting Arrangement — The shelves shall be supported on four adjustable brackets.

4.7 Doors — The steel glass-front cabinets shall be provided with two door-leaves as described in **4.7.1** and **4.7.2**.

4.7.1 Right Door — This shall be a frame with not more than 65 mm border and shall be made from steel sheet not less than 1·0 mm thick. The door shall be in two sections, the top section and the bottom section each fitted with the glass. The door shall be hinged to the right side of the cabinet and shall have hole for handle and slot for the key.

4.7.2 Left Door — This shall be similarly constructed as the right door except holes for handle and key slot, and shall be hinged to the left side of the cabinet. The door shall have a rebate on the free and over which the right door shall overlap.

4.8 Clearance Around the Doors — The clearance between the door flanges and side, top and bottom flanges shall not be more than 1·25 mm. The clearance between two doors, when closed, shall not be more than 1·25 mm.

4.9 Pedestals — The pedestals shall be made from steel sheet not less than 1.0 mm thick and shall be properly stiffened. They shall not project out of the cabinet. The minimum height of the pedestal shall be 125 ± 5 mm.

4.10 Hinges — Hinges shall be made from steel sheet not less than 2.0 mm thick and shall be secured to the hinge brackets not less than 3.15 mm thick on one side and shall be secured to the door on the other side of the fulcrum. The hinges shall be welded to the sides of the cabinet.

4.11 Locking Mechanism — There shall be two-way bolting arrangements for locking the cabinet, at top and bottom. This shall be arranged in such a way that it is not accessible from outside when locked.

4.12 Lock — The lock shall not be less than six-lever lock with duplicate keys of non-corrosive metal and shall conform to IS : 729-1979*. The base plate for lock shall be fitted to the right door and shall be not less than 2.0 mm thick.

4.12.1 Non-interchangeability — No lock shall be opened by any other key than its own specific key. For this purpose, there shall not be same lever combination for any two locks. A given combination of levers, once used, shall not be used again unless the thickness of levers and their numbers or radius of sweep of steps, or the increment in steps is altered.

4.13 Handles — The handle shall be made from cast brass conforming to IS : 292-1961† or zinc base alloy casting conforming to IS : 742-1981‡.

4.14 Glasses — Two plain glasses 850 mm in length and 350 mm in width shall be fitted to each door. The glass shall have a thickness not less than 3 mm and shall conform to IS : 1761-1960§. Vertical and horizontal strips shall be screwed from inside the door to hold the glasses. These strips shall be made out of mild steel sheets not less than 0.8 mm thick.

5. ASSEMBLY

5.1 The various components shall be assembled by means of welding or bolting.

5.2 The method of gas, arc and spot welding shall conform to IS : 1323-1966||, IS : 816-1969¶ and IS : 819-1957** respectively.

*Specification for drawer locks, cupboard locks and box locks (*third revision*).

†Specification for brass ingots and castings (*first revision*).

‡Specification for zinc base alloy die castings (*second revision*).

§Specification for transparent sheet glass for glazing and framing purposes.

||Code of practice for oxy-acetylene welding for structural construction work in mild steel (*first revision*).

¶Code of practice for use of metal arc welding for general construction in mild steel (*first revision*).

**Code of practice for resistance spot welding for light assemblies in mild steel.

6. FINISH

6.1 Sheet Metal Components

6.1.1 All dents, burrs and sharp edges shall be removed from the various components. The components shall be individually pickled, scrubbed and rinsed to remove grease, rust, scale or any other foreign element.

6.1.2 Immediately after pickling, all the mild steel parts shall be given phosphating treatment conforming to Class C of IS : 3618-1966*. The process for application of phosphate coating shall be in accordance with IS : 6005-1970†.

NOTE — Putty shall be applied to all the surfaces requiring filling and shall conform to IS : 110-1968‡. Aluminium primer shall conform to IS : 5660-1970§.

6.1.3 Coat/coats of enamel paint shall then be applied as follows:

Finish coat with enamels conforming to IS : 151-1950||, IS : 2932-1974¶ or IS : 2933-1975**.

6.2 All components shall be finished in colour as agreed to between the purchaser and the manufacturer.

7. PERFORMANCE REQUIREMENTS

7.1 Scratch Hardness Test — A sample of mild steel plate 150 × 50 mm in size and thickness 0.315 mm and finished as given in 6 shall be subjected to scratch hardness test in accordance with 15.1 of IS : 101-1964††. A scratch, showing the bare metal shall not be produced on the test sample.

7.2 Pressure Test — Samples prepared from mild steel plate of thickness 0.315 mm and finished as given in 6 shall be subjected to pressure test in accordance with 15.2 of IS : 101-1964††. The metal surface shall not be rendered visible when the test pieces are separated after the test.

*Specification for phosphating treatment of iron and steel for protection against corrosion.

†Code of practice for phosphating of iron and steel.

‡Specification for ready mixed paint, brushing, grey filler, for enamels for use over primers.

§Specification for ready mixed paint, brushing aluminium red oxide primer.

||Specification for ready mixed paint, spraying, finishing, stoving, enamel, for general purposes, colour as required.

¶Specification for enamel, synthetic, exterior (a) undercoating, (b) finishing (*first revision*).

**Specification for enamel, exterior (a) undercoating (b) finishing (*first revision*).

††Methods of test for ready mixed paints and enamels (*second revision*).

7.3 Flexibility and Adhesion Test — A sample of mild steel plate 150×50 mm in size and thickness 0.315 mm and finished as given in 6 shall be subjected to flexibility and adhesion test in accordance with 16 of IS : 101-1964*. The paint film on the test piece shall not show damage, detachment or cracking when examined under $\times 10$ magnification.

7.4 Stripping Test — A sample of mild steel plate 150×50 mm in size and thickness 0.315 mm and finished as given in 6 shall be subjected to stripping test in accordance with 17 of IS : 101-1964*. The scratch produced after the test shall be free from jagged edges.

7.5 Test for Protection Against Corrosion Under Conditions of Condensation — A mild steel panel of size 150×100 mm and thickness 1.25 mm and finished as given in 6 shall be subjected to test for protection against corrosion under conditions of condensation in accordance with 18 of IS : 101-1964*. The metal surface shall show no signs of corrosion after the test.

8. INFORMATION TO BE SUPPLIED BY THE PURCHASER

8.1 The purchaser shall supply the following information to the supplier along with the order:

- a) Number of adjustable shelves required;
- b) Colour of finish; and
- c) Where alternative methods of construction and finish are specified, they shall be clearly stated in the order.

9. PACKING

9.1 All the component parts shall be packed in such a way that no damage is caused to them during transit.

10. MARKING

10.1 All steel glass-front cabinets shall be marked with a suitable mark identifying the manufacturer. Marking on key shall bear the maker's name and identification number which shall not be same as the numbers of key steps. Marking on the lock shall have the identification number as that of the keys.

*Methods of test for ready mixed paints and enamels (*second revision*).

10.1.1 The steel glass-front cabinets may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.



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