



MAZAGON DOCK SHIPBUILDERS LTD.,  
(A Govt. Of India Undertaking)  
Dockyard Road, Mumbai -400010.

INDIGENISATION  
DEPARTMENT

T.S.P. NO.

INDG/108

REV. NO.

00

FIRE RETARDANT  
DOORS

DATE

21 Aug 2020

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## TECHNICAL SPECIFICATION

For

### FIRE RETARDANT SINGLE DOOR (B15)

1. **Preface.** The ships under constructions are having modular construction for messes, lobbies & alleyways. The modular compartments are fitted with fire retardant doors.
2. **Scope of Supply:-** Scope covers Design, Manufacture, Inspection, Trial, Certification of Fire Retardant doors & Satisfactory operation for use on Naval Vessels

The supplier has to indigenously design, develop & manufacture 01 no of door, as per details given below: -

<u>SNo</u>	<u>Dimension (W x H x thk) mm</u>	<u>Qty</u>	<u>Fire Class qualified</u>	<u>Regulations</u>
(a)	1700 x 750 x 38 thk	01	B15	IRS rules for Naval ships (Non-combatant)/SOLAS 1979 (FTP(code))

3. **Testing requirements:** Following Testing has to carried out on developed doors. The test has to be carried out on any Govt lab/NABL/IACS approved lab & the test is to be duly witness & certify by IRS/ any IACS member for marine. In addition, any other test required by testing agency: -
  - (a) Material Testing Report
  - (b) Physical properties of Panel
  - (c) Smoke Density
  - (d) Toxicity
  - (e) Low flame Spread
  - (f) Fire Retardant
  - (g) HFC free
4. **Scope of Offer.** The supplier shall supply a minimum of the following information along with his technical offer: -
  - (a) Technical Specification of Panel
  - (b) Basic GA drawing of panel.
  - (c) Flow Chart for manufacturing process
  - (d) Draft QAP
  - (e) Technical parameters of panels & lab details.
  - (f) Previous experience of designing & manufacturing of similar items
  - (g) List of tests & trials to be conducted on prototype.
  - (h) Indigenisation Content in his offered item.
  - (i) Details item sourced from Indian manufacturer & foreign manufacture.



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### FIRE RETARDANT SINGLE DOOR (NON WATER TIGHT)

5. The Fire Retardant doors are pre insulated doors with insulating material such as Rock wool/Mineral wool sandwiched between two metallic sheets.
6. **Construction:** - The Construction of doors are as follows: -
  - (a) **Insulating Core:** -The insulating core material is made up of Compressed Rockwool slab/Mineral Wool having density of minimum 150Kg/Cu.M of thickness 35. mm.
  - (b) The Insulating core is covered by metallic sheets made up of CRCA of 0.6mm or higher conforming to IS 513-D/IS 227 or equivalent.
  - (c) The panel should be baked enamel powder coated as per ISO 101 to achieve thickness of 40µ phosphate or 150 µ of PVC film with protective foil.
  - (d) Dimensions of door : 1700 Height, 750 width & 38 Thk.
  - (e) Reinforcement: It should be fitted with reinforcement plates for locks, doors & hinges.
  - (f) Frame The frame shall be made up of 1.6mm Stainless steel with baked enamel powder coat.
  - (g) Recess Handle, Lock case, Door closure, Cylinder shall stainless steel.
  - (h) Sill shall stainless steel U Profile.
  - (i) A typical drawing of Doors is attached for ready reference & for purpose of understanding of items only.
7. **Material.** The material used for doors shall have the following properties: -
  - (a) Light weight
  - (b) Non corrosive and should be able to withstand prolonged exposure to marine environment without corrosion/ material deterioration.
  - (c) Fire Retardant
  - (d) High toughness
  - (e) Flexibility for sustaining load due to ship cruise
8. **Technical Properties:** - The developed door shall have minimum of following technical requirements not limited :-
  - (a) Thermal transmission :  $\leq 1.4 \text{ Kcal/M}^2\text{H}^\circ\text{C}$
  - (b) Fire Qualification : B15.(On two samples)
9. **Testing & Certification:** - The panel shall be fire retardant to B15 class as specified in
  - (a) SOLAS 1979 (FTP Code)
  - (b) IRS rules for Naval ships (Non-combatant)
  - (c) IMO resolution MSC 61(69)
  - (d) IMO 210.FTP code part 3
10. **Documentation.** The supplier has to submit following drawing & documents during stages of development for reference & comments prior to start of manufacturing.
  - (a) Detail General Arrangement & assembly drawing of panel.
  - (b) Assembling, Installation, Operation manual & Maintenance
  - (c) Quality Assurance plan.
  - (d) Test & Trial plan

NO	DESCRIPTION
1	DOOR PANEL
2	STIFFENER
3	FRAME
4	HINGE
5	DOUBLING PLATE
6	BUMPER
7	FITTING ANGLE
8	MACHINE SCREW
9	EDGE COVER
10	INSULATION
11	DOUBLING PLATE
12	LOCK CASE
13	LOCK SET
14	STIFFENER
15	SILL PLATE
16	HOOK OUT PANEL W/R/R OUT PANEL
17	R/H MACHINE SCREW

