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CVR No. 20675136

Aluflam Fire-Rated Aluminum Windows- MARINE 3-Part Specification

Notes to Specifier:

This product specification is written to assist specifiers in the preparation of project specifications. The section must be carefully reviewed and edited to meet the requirements of the project and local building code.

Section numbers are from MasterFormat 1995 Edition, with numbers from MasterFormat 2004 Edition in parentheses. Delete the version that is not required.

Notes to the specifier are contained in boxes and should be deleted from final copy. Optional items requiring selection by the specifier are enclosed within brackets and highlighted in yellow. Make appropriate selections and delete others.

When editing is complete, delete all text on this page, then remove the section break at the top of the next page to remove this page from the document.

For assistance, call Aluflam Denmark at +45 4650611.

SPECIFICATION BEGINS ON THE FOLLOWING PAGE.



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SECTION 08120 (08 11 16)

ALUFLAM FIRE-RATED ALUMINUM WINDOWS- MARINE

PART 1 - GENERAL

SECTION INCLUDES

A. Fire-rated aluminum full vision Aluflam windows, glazing

2.01 RELATED SECTIONS

2.03 Section: Fire-Rated Glass & Framing.

REFERENCES

- A. Module B of European Union Council Directive 96/98/EC on marine equipment
 - 1. FTP Code Annex 1, Part 3 [Testing standard: IMO Resolution A.754 (18)].
- B. Regulations and standards:
 - 1. SOLAS 74 Convention, as amended by SOLAS Amendments 2000, Regs.II-2/9.4.1.1.2, II-2/9.4.1.2.1, II-2/9.4.2 - IMO Resolution A.754(18) - IMO Resolution MSC. 61(67) [FTP Code] Annex 1, Part 3 - IMO MSC/Circ.916 - IMO MSC/Circ.1004.
 - 2. ISO 21005 - Ships and Marine Technology- Toughened safety glass panes for windows and side scuttles.
 - 3. ISO 614 – Ships and marine technology – Toughened safety glass panes for rectangular windows and side scuttles- Punch method of non-destructive testing.

SYSTEM DESCRIPTION

A. Performance Requirements:

Notes to Specifier: Select fire rating to meet vessel code requirements.

1. Fire classification: **[B15] [A60]**.
2. Certification: Windows shall be tested in accordance with IMO Resolution A.754(18).
3. Testing Laboratory: Fire tests shall be conducted by an approved independent testing laboratory, similar to DBI(Dansk Brand Institut), Inc.

1.04 SUBMITTALS

- A. Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedure Section.
1. Shop Drawings: Submit shop drawings showing layouts, profiles and product components.
 2. Samples: Submit samples for finishes, colors and textures.
 3. Technical Information: Submit latest edition of manufacturer's product data providing product description, technical data and installation instructions.

1.05 QUALITY ASSURANCE

- A. Listings and Labels:
Fire rated framing and glazing shall be under current follow-up services by an approved independent agency and maintain a current listing or certification. Assemblies shall be labeled in accordance with limits of listings.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Ordering: Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- B. Delivery: Deliver materials to specified destination in manufacturer's packaging undamaged, complete with installation instructions.
- C. Storage and Protection: Store off ground, under cover, protected from weather, direct sunlight, construction activities and at temperature conditions recommended by manufacturer, -12°C to +43°C.
- D. Handling: Protect materials and finish during handling and installation to prevent damage.

1.07 PROJECT CONDITIONS

- A. Field Measurements: Verify actual measurements for openings by field measurements before fabrication. Show recorded measurements on shop drawings. Coordinate field

measurements and fabrication schedule with construction progress to avoid construction delays.

PART 2 - PRODUCTS

2.01 FIRE-RATED ALUMINUM WINDOWS

A. Manufacturer: Aluflam A/S

1. Contact: Langebjergvænget 13 4000 Roskilde: Telephone +45 4675 0611 Fax +45 4675 0811 E-mail info@aluflam.dk Website www.aluflam.com, or local representative (www.aluflam.dk).

2.02 MATERIALS – ALUMINUM FRAMING

- A. Frame construction: Integral structure and glazing stops from extruded and thermally broken aluminum profiles. Filled internally with cement composite material.
- B. Dimensions:
1. Window framing face dimension: 62 mm
 2. Depth of window framing: 85 mm
 3. Window stile face dimension: 62 mm
 4. Window cross rail (if applicable): 90 mm
- C. Assembly: Frame corners assembled by means of crimped and bonded miter joints.
- D. Sealing: Framing system shall insulate against effects of fire, smoke, and heat transfer from either side. Perimeter of the framing system to the rough opening shall be firmly packed with mineral wool insulation.

2.03 MATERIALS – FIRE RESISTANT GLAZING

Notes to Specifier: Select glazing type based on fire rating of system.

- A. Assemblies shall be glazed with glass product types: **A0, (B0-B15)-[15 minutes fire rated insulation glass 16 mm thick SGG Contraflam Lite Marine]**; **A30,A60-[60 minute fire rated insulation glass 25 mm thick SGG Contraflam 60 N2]** as manufactured by Vetrotech Saint-Gobain (www.vetrotech.com).
1. Individual lites shall be permanently identified with a listing mark.
 2. Glazing material installed in "Hazardous Locations" shall be certified to meet the applicable requirements acc. to ISO 21005, ISO 614.
 3. Visible daylight transmission shall be a minimum of 81%. Glazing material shall be optically clear, colorless and free from unusual distortion.

Notes to Specifier: Specify the following paragraph for exterior applications.

- B. Fire-rated glazing shall be insulated with 8 mm airgap and 6 mm low-E coated outboard glass lite. Installation conditions shall be analyzed to assure that fire-rated glazing is not exposed to temperatures outside the -12 to +43 degrees C limits.

2.04 MATERIALS – GLAZING AND ASSEMBLY ACCESSORIES

- A. Fasteners: All fasteners, setting pads, and glazing clips, shall be stainless or zinc-plated steel.
- B. Glazing Accessories: The glazing material perimeter shall be separated from the perimeter framing system with approved flame retardant intumescent glazing tape. Ceramic setting blocks shall be placed between the metal setting pads and the glazing material. Setting pads and blocks provided by manufacturer.

2.05 FABRICATION

- A. Window frames shall be furnished pre-assembled. Windows shall be field glazed.
- B. Window assemblies shall be factory prepared.
- C. Fabrication Dimensions: Fabricate to approved dimensions. The general contractor shall guarantee dimensions within required tolerance (+ - 3 mm). Obtain approved shop drawings prior to fabrication.

2.06 FINISHES

- A. Framing shall be chemically cleaned and pretreated, then finished on all exposed areas with:

Notes to Specifier: Select finish and color.

[Anodized – Clear] [Anodized – Light Bronze] [Anodized – Medium Bronze] [Anodized – Dark Bronze] [Powder Coated Epoxy – Color RAL#XXXX].

- B. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Slight variations in appearance of abutting or adjacent pieces are acceptable. Noticeable variations in the same piece are not acceptable.



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PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine area to receive windows. Openings shall be plumb, square and within allowable tolerances. Notify Architect of conditions that would adversely affect installation or subsequent use. Do not proceed with installation until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Window installation shall be by a specialty contractor with appropriate experience qualifications; and in strict accordance with the approved shop drawings.

3.03 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Glass and frame should be cleaned using soft clean cloth, chamois leathers, sponges or soft paper. Use clean warm water with a mild detergent. Do not use detergent that contains either alkaline, acids or fluoride! Abrasive cleaning methods can damage surfaces! Clean prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.

END OF SECTION