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GRP *RE-STRUCT* Structural Profiles & Fabrications Engineering Specification

Part 1. General

1.01 Related documents

- A. Contract drawings, including general drawings and addenda drawings
- B. General specification sections.

1.02 Summary

- A. This section covers moulded grating products which include:
 - 1. GRP Profiles
 - 2. GRP Fabrications

1.03 Scope of Work

- A. The Contractor shall furnish all labour, materials, equipment and incidentals as required to properly install all of the GRP products specified herein.

1.04 Quality Assurance

- A. All GRP Products and Fabrications shall be supplied by an experienced firm who has continually engaged in the manufacture or fabrication of glass reinforced plastic products.
- B. The Installing Contractor shall assure that all field dimensions are taken accurately and communicated properly to the GRP Fabricator, that other trades will not affect a proper installation of the FRP, and that all manufacturer's instructions and recommendations are followed.
- C. No substitution of materials will be accepted unless they are submitted for review and the Architect/Engineer approves their use.

1.05 Design Requirements

- A. GRP profiles shall conform to EN13706 European standard for structural pultruded profiles.
- B. Stairs, ladders and walkways shall conform to BS5395 part 3 1985

1.06 Submittals

- A. Submit complete shop drawings and engineering data for all GRP materials and fabrications as required by the scope of work.

- B. Product data;
 - 1. Manufacturers catalogue with load data for all GRP profiles.
- C. Drawings showing all GRP materials as required and include all dimensions, fasteners, tolerances, assembly and installation details as required.

Part 2 Products

2.01 General

- A. All structural shapes are to be manufactured by the pultrusion process with a glass content minimum of 45%, maximum of 55% by weight. The structural shapes shall be composed of fibreglass reinforcement and resin in qualities, quantities, properties, arrangements and dimensions as necessary to meet the design requirements and dimensions as specified.
- B. Fibreglass reinforcement shall be a combination of continuous roving, continuous strand mat, and surfacing veil in sufficient quantities as needed by the application and/or physical properties required.
- C. Resins shall be isophthalic polyester or vinyl ester with chemical formulation necessary to provide the corrosion resistance, strength and other physical properties as required.
- D. All finished surfaces of GRP items and fabrications shall be smooth, resin-rich, free of voids and without dry spots, cracks, crazes or unreinforced areas. All glass fibres shall be well covered with resin to protect against their exposure due to wear or weathering.
- J. Suppliers, GRP Systems Ltd T/A Relinea, 14 Crosshill Road, Crumlin, Co Antrim, BT29 4BQ, Tel +44 (0) 2894 422270

Part 3 - Execution

3.01 Fabrication

- A. Measurements: Structural Shapes supplied shall meet the minimum dimensional requirements as shown or specified. The Contractor shall provide and/or verify measurements in field for work fabricated to fit field conditions as required by manufacturer to complete the work. Determine correct size and locations of required holes or coping from field dimensions before structural shape fabrication.
- B. Sealing: All shop fabricated cuts or drilling shall be coated with vinyl ester resin to provide maximum corrosion resistance. All field fabricated cuts or drilling shall be coated similarly by the contractor in accordance with the manufacturer's instructions.
- C. Hardware: stainless steel bolts shall be provided where required

3.02 Inspection

- A. Upon receipt of material at job site, the contractor shall inspect all materials for shipping damage

3.03 Handling and Storage

- A. Handle all GRP materials with reasonable care to prevent damage. Do not drag GRP material.
- B. If GRP materials are not being installed immediately, then store them to prevent twisting, bending or breakage of any kind.

3.04 Installation

- A. Installing contractor to coordinate and verify that other construction trades and materials have been installed per the contract drawings and that they are accurate in location, alignment, elevation, and are plumb and level.

End