



SpandrelTech Ltd. THERMASPAN™

July, 2007
 Composite Wall Panels 07 42 43
 [Project]

CUSTOM LAMINATED INSULATED WALL PANELS

SPECIFICATION

This specification has been numbered, organized and formatted in accordance with the MasterFormat, Section Format and Page Format documents published jointly by Construction Specifications Canada (CSC) and Construction Specifications Institute (CSI).

The content of this specification is of general order and must be adapted to the specific requirements of a project. It is offered as a guide to experienced and knowledgeable construction professionals who must assume full responsibility for its interpretation and use. SpandrelTech Ltd. is a panel material supplier only and does not provide installation services.

The square brackets [] containing texts indicate an option to be inserted by the specifier. Remove brackets and unused options before printing.

Part 1. General

1.01 SECTION INCLUDES

- A. Panels consisting of metal skins laminated to stabilizer substrates [with an insulating core material] designed to be glazed into [a window system] [curtain wall system].

1.02 RELATED REQUIREMENTS

- A. Structural steel supports to which cladding framing is attached [Section 05 10 00]
- B. Back-up walls [Section 06 10 00]
- C. Insulation (veneer wall) [Section 07 21 00]
- D. Metal flashing [Section 07 60 00]
- E. Caulking [Section 07 92 00]
- F. Windows [Section 08 50 00]
- G. Storefront/Curtain wall [Section 08 43 00/08 44 00]
- H. Interior Wall finish [Section 09 20 00]

1.03 REFERENCE STANDARDS

- A. Canadian General Standards Board
 - 1. CGSB-93-GP-1M, Type 2, Class F1S Sheet Aluminum.
 - 2. CGSB-93-GP-3M Hardboard.
 - 3. CGSB-GP-20M, Type 2, Expanded Polystyrene.
 - 4. CGSB-51-GP-21M, Type 4, Rigid Polyisocyanurate Insulation.
 - 5. CGSB-41-GP-6M, Fibre Reinforced Plastic (FRP) Finishes.
- B. Canadian Standards Association
 - 1. CSA 0121-M, Plywood.
- C. Porcelain Enamel Institute (PEI)
 - 1. ASTM-C-282: Spot Acid.
 - 2. ASTM-C-283: Boiling Acid.
 - 3. ASTM-C-703: Antimony Chloride Spall Tes.

4. ASTM-C-346: Gloss Retention.
5. ASTM-C-486: Spall Resistance.
6. Brunnel Hardness: 600 - 700.

D. Aluminum Association (AA)

1. A-C22-A41: Anodized Clear.
2. AA-C22-A42: Integral Colour Anodized.

E. American Architectural Manufacturers Association (AAMA).

1. 603.8-92: Pigmented Organic Coatings on Aluminum - (Polyester).
2. 605.2-92: High Performance Organic Coatings on Aluminum - (Kynar).

F. American Society of Testing Materials (ASTM)

1. E330-84: Structural Performance of Exterior Windows, Curtain Walls and Doors under the influence of wind loads.
2. D1781-76: Climbing Drum Peel Test for Adhesives.
3. D3363-74: Method for Film Hardness by Pencil Test.
4. D2794-90: Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
5. D3359-90: Method for Measuring Adhesion by the tape test.

1.04 DESIGN REQUIREMENTS

A. Design wall panel assembly to provide for thermal movement of component materials caused by ambient temperature range of 80°C (176°F) without causing buckling, failure of joint seals, undue stress on fasteners or other detrimental effects.

B. Maximum deviation from vertical and horizontal alignment of erected panels: 1 to 1000.

1.05 SUBMITTALS

A. Submit the following in accordance with Section [01 33 00 - Submittal Procedures]

1. Product Data: Insulated wall panel manufacturer's printed product literature and specifications.
2. Samples: Duplicate 300 mm x 300 mm (12" x 12") samples of panel material, of colour and profile specified, and two samples of each different colour and finish texture in 75 mm x 125 mm (3" x 5") size.
3. Shop Drawings: Indicate dimensions, profiles, attachment methods, schedule of wall elevations, trim and closure pieces, [fascia], [metal framing] [____], and related work.

B. Warranty: Provide panel manufacturer's sample warranty certificate.

C. Maintenance Instructions: Provide panel maintenance and cleaning instructions for [porcelain enamel] [anodized] [painted] finishes.

1.06 QUALITY ASSURANCE

A. Wall panel manufacturer: to have minimum of ten projects of similar type in the past 5 years.

B. Installer: to have minimum 5 years' experience installing similar products.

C. Mock-up

1. Construct mock-up consisting of a minimum of 2 over 2 panels including roof coping and fascia.
2. Include following components in mock-up:
 - a. Structural support framing for panel system.
 - b. Associated components and accessories.
 - c. Fastening system.
 - d. Panels.
3. Erect mock-up as part of building installation, leave in place when accepted.
4. Obtain [Consultant's] [Architect's] [Engineer's] review of mock-up prior to proceeding with panel installation work accordance to sample as noted in 1.05 of this section.

1.07 DELIVERY, STORAGE AND HANDLING

SPEC NOTE: A. below is a unique requirement provided by the panel manufacturer for the handling and installation convenience of the panel contractor.

- A. Deliver panels on an incremental floor-by-floor or elevation-by-elevation basis as required by the contractor for installation convenience.
- B. Do not expose panels with strippable film to direct sunlight or extreme heat.
- C. Discard any damaged products.

1.08 WASTE MANAGEMENT AND DISPOSAL

- A. Separate waste materials for [reuse] [and] [recycling] [_____] in accordance with Section [01 74 19 - Construction/Demolition Waste Management and Disposal] [_____].
- B. Divert used metal cut-offs from landfill by disposal [into the on-site metals recycling bin] [removed for disposal at the nearest metal recycling facility] [_____].
- C. Divert reusable materials for reuse at nearest used building materials facility.
- D. Divert unused caulking, sealants, and adhesive materials from landfill through disposal at hazardous material depot.

Part 2. Products

2.01 MANUFACTURERS

- A. Acceptable Wall Panel Manufacturer: SpandrelTech Ltd., 16 Erin Park Drive, Erin, Ontario N0B 1T0; Tel: (519) 833-9684 or 1-888-833-9684; Fax: (519) 833-0845; Email: sales@spandreltech.com; Web: www.spandreltech.com
- B. Substitutions: Not permitted, however requests for substitutions will be considered providing substitute products and methods of execution are submitted at least 10 days prior to bid closing date. Accompany requests with evidence substantiating similarity in quality, including technical data sheet, specifications and willingness to supply product on an incremental floor-by-floor or elevation-by-elevation basis.

2.02 PANEL MATERIALS

- A. Insulated Wall Panels: SpandrelTech "Thermaspan" laminated metal faced panels of shape and dimensions as indicated on the drawings.
- B. Finish:
 - 1. Porcelain on Aluminum (Embossed)
 - 2. Porcelain on Steel (Smooth)
 - 3. Kynar/Hylar - AAMA 665.2-92 resin based - 70%
 - 4. Anodized Clear, Light, Medium, Dark Bronze and Black - Class I and II
 - 5. Polyester - AAMA - 603.8-92
- C. Colour as specified from manufacturer's standards.
- D. Panel fabrication:
 - 1. Composition: two sheets of [aluminum] [steel] bonded to stabilizer substrates [with an insulated core].
- E. Substrates:
 - 1. High density tempered hardboard
 - 2. Fire code gypsum (Internal Only)
 - 3. High-density polyethylene (HDPE)
- F. Cores:
 - 1. [_____] density rigid fibreglass to CAN4-S114-M
 - 2. [2 lb.] density polystyrene to ASTM C 578 - 06
- G. Aluminum faces: Thickness range ____ (.012") to 3 mm (.125")
- H. Tolerances: 0.8% of panel dimension length and width +/- 1.5 mm (1/16") thickness.
- I. Panel thickness: as required in range of 6 mm (1/4") to 125 mm (5").
- J. Sealant:

Spec Note: Polyurethane and silicone based sealants with 20 year life are recommended.

PART 3. Execution

3.01 EXAMINATION

- A. Before installation examine alignment of substrate and notify [Consultant] [Architect] [Engineer] in writing if substrate does not comply with requirements of panel installer.
- B. Ensure panel surfaces are free from defects prior to installation.

3.02 INSTALLATION

- A. Erect panels plumb, level and true.
- B. Glaze panels securely and in accordance with approved shop drawings and manufacturer's instructions to allow for necessary thermal movement and structural support.
- C. Do not install panels that are observed to be defective including warped, bowed, dented, scratched, and delaminating components.
- D. Weather-seal all joints as required using methods and materials as previously specified.
- E. Separate dissimilar metals using gasketed fasteners and blocking to eliminate the possibility of electrolytic reaction.

3.03 ADJUSTING AND CLEANING

- A. Remove masking film as soon as possible after installation. Masking intentionally left in place after panel installation will be the responsibility of the contractor.
- B. Ensure weep holes and drainage channels are unobstructed and free from dirt and sealant.

END OF SECTION



SpandrelTech Ltd.
16 Erin Park Dr.
Erin ON N0B 1T0 Canada
e-mail: sales@spandreltech.com

Tel (519) 833-9684
Toll free 1-888-833-9684
Fax (519) 833-0845
Web: www.spandreltech.com