

200 INTERNAL CLADDING

200.1 GENERAL

200.1.1 CROSS REFERENCES

General

Conform to the General Requirements worksection.

Related worksections

Conform to associated worksections as follows:

- Vitreous Enamel Panels.
- Adhesives, Sealants and Fastenings.
- Metals and Pre-finishes.
- Glass Reinforced Gypsum.
- Partitions.
- Stone Cladding
- Operable walls
- Granite flooring
- Suspended ceiling.

200.1.2 CIVIL DEFENCE (CD) REQUIREMENTS

General

Refer to Worksection 20 General Requirements

200.1.3 EQUIPOTENTIAL BONDING REQUIREMENTS (EPB)

Cross Refer: Section 20.2.7 'Design' of the General Requirements.

200.1.4 TOUCH VOLTAGE PROTECTION

Cross Refer: Section 20.2.7 'Design' of the General Requirements.

200.1.5 INTERPRETATION

Fixing: the term 'fixings' shall be taken to mean:-

Supporting fixings that transfer the dead and imposed loads on the cladding to the structure. Supports may also include a restraint function.

Authority's Sample: A control samples of each of the different internal cladding types is held by the Authority and available for viewing during the tender and construction periods

200.1.6 DESIGN

Drawings

Contract drawings show generic design principles and design intent only.

200.1.7 STANDARDS

General

All aluminium materials shall be of consistent high quality regardless of source.

Contractor shall submit proposed manufacturer supplying internal cladding materials to the ENGINEER for acceptance.

Relevant Standards (British)

- BS 1161 - Specification for aluminium alloy sections for structural purposes.
- BS 1470 - Specification for wrought aluminium and aluminium alloys for general engineering purposes – plate, sheet and strip.
- BS 1471 - Specification for wrought aluminium and aluminium alloys for general engineering purposes – drawn tubes.
- BS 1473 - Specification for wrought aluminium and aluminium alloys for general engineering purposes – rivet, bolt and screw stock.
- BS 1474 - Specification for wrought aluminium and aluminium alloys for general engineering purposes – bars, extruded round tubes and sections.
- BS 4873 - Specification for aluminium alloy windows.
- BS CP 118 - The structural use of aluminium.

Relevant Standards (US)

- ASTM B221 - Specification for aluminium alloy extruded bars, rods, wire, shapes and tubes.
- ASTM B429 - Specification for aluminium alloy extruded pipe and tube.
- ASTM B483 - Specification for aluminium alloy drawn tubes for general purpose applications.
- ASTM B209 - Specification for aluminium alloy sheet and plate.
- ASTM B247 - Specification for aluminium alloy die forgings, hand forgings, and rolled ring forgings.

For Aluminium Panels

The Contractor shall provide the ENGINEER reviewed without objection aluminium extrusions and/or sheet of alloy and grades suitable for the structural requirements, applied finishes and project conditions not less than the strength and durability properties of the alloy and temper designated in the relevant Standards. Submit details including proposed alloy types with supporting justification data.

- ASTM B026 - Specification for aluminium alloy sand castings.

Extrusions shall be an aluminium alloy AA 6063-T5, conforming to BS 1474 and PVDF factory spray paint finished. Extrusion shapes and thicknesses shall withstand all required loads, and shall be rigid with straight and sharply defined profiles, free of draw marks. Structural sections minimum wall thickness is 3.0mm, and the minimum wall thickness of non-structural trims is 1.5mm.

Extrusion walls and screw flutes shall be of sufficient thickness for all fixings including flush countersunk where required.

200.2 QUALITY

200.2.1 INSPECTION

Witness points

Give sufficient notice so that inspection may be made at the following stages:

- Completion of the support framing.
- Unfixed proprietary cladding panels on arrival on site.
- Cladding prior to the sealing of joints.

Hold points

- Completion of all prototypes.

Corrosion

Cross refer: General Requirements Clause 20.4.1.

200.2.2 TESTS

Carry out all tests in accordance with Section 20.3.2, 'Tests' of the General Requirements.

Steel based cladding

- 1,000 hour intermittent salt spray test to ASTM B117-02. Pass criteria, no visible changes.

Sandwich Panels

- To ASTM C 481-62 'Standard Test Method for Laboratory Aging of Sandwich Constructions.

200.2.3 SAMPLES

General

Submit samples of each of the following in accordance with Section 20.3.4 'Samples', of the General Requirements.

- Each pre-finished cladding material used to show the extent of colour variation.
- Each type of cladding panel showing proposed edge and jointing details.
- The support structure.
- All accessories and fixings.
- All jointing materials.
- Movement joints
- Secondary support system
- Gaskets, seals
- Interface elements
- Signage
- Finished samples of major extrusion.
- M&E fittings interfaces.
- Fire-fighting interfaces.

Size of samples

- Sample panels: minimum 600mm sq.
- Panels showing jointing techniques 1.0m sq.
- Linear samples : minimum 600mm.

No of samples: 3.

200.2.4 PROTOTYPES

General

Construct all prototypes in accordance with the requirements of Section 20.3.5, 'Prototypes' of the General Requirements.

Construct prototypes in sufficient size to demonstrate the aesthetic effects of the finishes, the proposed range of colour and texture as well as qualities of material and workmanship to be expected in the finished work. The prototypes shall include all anchors, flashing, support angles, support system members, sealants, etc., proposed for use on the actual job installation.

Build prototypes to comply with the following requirements, using materials indicated for the final completed installation.

- Notify the ENGINEER two weeks in advance when the prototype will be constructed.
- Demonstrate the proposed range of aesthetic effects and workmanship.
- Obtain ENGINEER'S acceptance of prototypes before commencement of work.

Design Prototype

Cross refer; General Requirements.

Location: As agreed with the Engineer.

- Minimum size (mm):
- 2.0m x2.0m.
 - complete wall panel as directed.
- Incorporating
- Horizontal and vertical joints.
 - Internal and external corners.
 - Edge details as directed.
 - Interfaces as directed.

Confirmation Prototype

Location: As agreed with the Engineer.

- Minimum size (mm):
- 2.0m x2.0m.
 - complete wall panel as directed .
- Incorporating
- Horizontal and vertical joints.
 - Corners as directed by the Engineer.
 - Edge details as directed by the Engineer
 - Interfaces as directed by the Engineer
 - Main frame and sub-frame installation as directed by the Engineer.

Retain all confirmation prototypes until the completion of the works or as directed by the Engineer.

Incorporate accepted prototypes into the work as directed by the Engineer.

200.2.5 SUBMISSIONS

General

Make all submissions in accordance with the requirements of Section 20.3.6, 'Submissions' of the General Requirements.

Submit manufacturer's certificate of compliance or test report for each batch of material supplied.

Cross reference each batch of material with the certificate of compliance or test report.

Subcontractors

Submit names and contact details of proposed manufacturers and installers.

Shop drawings

General: Submit shop drawings in accordance with Section 20.3.6, 'Submissions' of the General Requirements.

Shop drawings shall show, but not limited to, the following information:

- Elevations plans and sections of all cladding showing the supporting structure and, where appropriate, panel layout.
- A numbering system enabling all panels to be identified.
- Details of all supporting structure.
- Details of all required joints and interfaces.
- All components interfacing with the cladding.
- Details of all penetrations.
- Touch voltage electrical insulation and EPB provisions.
- Allowances for movement.
- Method of assembly.
- Attachments other than as shown on the Working Drawings for handling transportation and erection.
- Procedures and sequence to produce distortion-free components and assemblies.
- Marking plans, sections and details of all structural steel supports, frames and subframes.
- Method of installation/erection including:
 - . Type and location of anchors and other attachments to be cast or otherwise built in to the building structure;
 - . Erection tolerances;
 - . Accurate locations and full size details of machined slots, keyholes and other penetrations in frame extrusions for lifting and installing the units;
 - . Junctions and trim to adjoining surfaces;
 - . Caulking and flashing; and
 - . Locations of visible heads of fastening.
- Provision for differential vertical or horizontal movements, including
 - . Thermal expansion and contraction;
 - . Column shortening; and
 - . Frame deflections.

Do not proceed with fabrication until all shop drawings have been accepted by the ENGINEER.

No. of copies to be submitted: As Particular Specification.

Engineering endorsement

- Submit calculations and drawings from a Singapore licensed Professional Engineer concurrently with the shop drawings and showing, but not limited to, the following:-
- Compliance with all relevant Singapore legislation and regulations.
- Submit a report from a Singapore registered Electrical Engineer certifying that the design and installation of internal cladding comply with LTA Civil Design Criteria Section 13 and CP 5 on the requirements of equipotential bonding and touch voltage requirements.

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/746050120042010212>