

SPECIFICATIONS FOR PROPOSED PROFILED ROOF / WALL CLADDING

Client:

Site address:

Proposed material:

Proposed profile:

Rib / Seam centers:

Seam height:

ARCHTECH STANDING ANLGE SEAM METAL ROOF / WALL CLADDING

1.0 GENERAL

This section deals with the supply and fixing of ARCHTECH standing angle seam metal roof / wall cladding along with all associated substrates, underlay and fixings.

Documents

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

- AS/NZS 1170.2 Structural design actions - Wind actions
- NZS 3604 Timber framed buildings
- NZS 4203 General structural design and design loadings for buildings
- AS 1397 Steel sheet and strip – hot dipped, zinc coated or aluminum/zinc coated
- AS 4040.0 Methods of Testing Sheet Roofing and Wall Cladding
- AS 4040.1 Resistance to Concentrated Loads
- AS 4040.2 Resistance to Wind Pressure for non-Cyclonic Regions
- EN988 Specification for zinc alloy sheet and strip
- NZMRM NZ Metal roof and wall cladding – Code of practice

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
ARCHTECH Technical Literature

Copies from the above literature are available from ARCHTECH.

Web www.Archtech.co.nz

Email info@archtech.co.nz

Ph 0800 252 383

1.3 ABBREVIATIONS

The following abbreviations are used throughout this part of the specification:

BMT - Base Metal Thickness

NZMRM - New Zealand Metal Roofing Manufacturers Inc

Requirements

1.4 QUALIFICATIONS

Roofing / wall cladding to be installed by ARCHTECH.

Guarantees

1.5 WARRANTY

Warranty period for this work under normal environmental and use conditions against failure of weatherproofing and materials:

- Perforate - 15 years (or as suppliers warranty states)
- Coating - 15 years (or as suppliers warranty states)
- Workmanship - 5 years from date of practical completion

Performance

1.6 FIXINGS, WIND

Design and use the fixings appropriate for the wind zone (R) and topographical classification (T) of this site and building height; as required by NZS 3604 and the wind loads on various wall areas as given by NZS 4203 or AS/NZS 1170.2. Allow for specific loadings at corners and the periphery of the roof, where localized pressure factors apply.

1.7 COORDINATE

Coordinate to ensure substrate and preparatory work is complete and other work programmed in the order required for access and completion of the roof/wall.

1.8 PERFORMANCE

Accept responsibility for the weather-tight performance of the completed roofing/wall system, including all penetrations through the roof and junctions with walls and parapets.

2.0 PRODUCTS

Materials

2.1 PLYWOOD SUBSTRATE

Plywood thickness 15 mm minimum, H3 treated, CPD grade. Refer architectural drawings.

2.2 UNDERLAY

Thermakraft (or similar) breather type paper laminates.

2.3 HOT DIPPED ALUMINIUM/ZINC COATED STEEL, UNPAINTED

Formability G300 steel sheet coated to AS 1397.

2.4 PRE-FINISHED HOT DIPPED ALUMINIUM/ZINC COATED STEEL

Formability G300 steel sheet coated to AS 1397.

2.5 ALUMINIUM

Aluminum alloy series 5000 temper H16.

2.6 PRE-FINISHED ALUMINIUM

Aluminum alloy series 5000 temper H16.

2.7 STAINLESS STEEL

Strip grade MM45 finish 2B, with strippable protective film.

2.8 COPPER

Half-hardened commercial finished.

2.9 TITANIUM ZINC

Coil to EN988

2.10 COR-TEN STEEL

Coil or sheet to AS1594-HW350 Weather Resistant

2.11 PROFILES

Single Lock Standing Angle Seam as per ARCHTECH specifications

Double lock Standing Seam as per ARCHTECH specifications

Roll Cap / Seam by ARCHTECH specifications

Variable Tray width – from 230 to 730 mm by ARCHTECH. Refer architectural drawings for setout.

Cassettes

Flat lock / hook panels

Interlocking panels

Weatherboard Step Panel

2.12 FLASHINGS GENERALLY

Supplied by ARCHTECH. Formable grade flashings, material to match selected roofing or cladding, to the same standards as the profiled sheets, notched cross profile where necessary. Refer architectural drawings for detailing.

2.13 FLASHINGS TO VERGE, RIDGE AND HIP

Supplied by ARCHTECH to match or to suit the roofing / wall cladding. Refer architectural drawing for detailing.

Components

2.14 FASTENERS GENERALLY

Durability of all fasteners not less than the roofing material being fixed.

All fasteners for Standing Angle Seam are 316 grade stainless steel.

All fasteners for Roll Cap / Seam are hot dipped galvanized screws g12x35

2.15 FIXING CLIPS

Clips shall comply with NZBC E2/AS1: 8.4.9 Fixings: trough profile. Clips to suit the material and profile.

2.16 FIXING SCREWS / NAILS

Each clip will be fixed with two 10 gauge by 25mm counter sunk screw / nail (minimum). Screws / nails to be manufactured from material appropriate to the roofing material and the supporting structure, as required by the manufacturer and with durability no less than the material fixed. Fixing nails are to be HAUBOLD, 25 mm, arrow counter sunk body, 316 grade Stainless Steel.

2.17 RIVETS

Minimum diameter 4.0mm sealed rivets. For Stainless Steel and Titanium Zinc use stainless steel rivets; for Copper use copper rivets; for Aluminum and Zinc coated steel use aluminum rivets.

Accessories

2.18 SEALANT

Neutral curing silicone or polymer sealant.

3.0 EXECUTION

Conditions

3.1 INSPECTION

Inspect the roof/wall framing and supporting structure to ensure that it is complete and fully braced ready for plywood substrate.

3.2 PLYWOOD SUBSTRATE

Plywood to be a minimum of 15 mm thick and complying with AS/NZS 2269, minimum CPD grade with the sanded side upwards. Treated H3 with waterborne CCA treatment and kiln dried after treatment. Lay with the face grain at right angles to the supports, staggered joints (brick bond) with all edges of the sheets fully supported. Fix with 10 gauge x 50 mm stainless steel countersunk head screws, with a 3 mm gap between all sheets. Fix at 150 mm centers on edges and 200 mm in the body of the sheets. Minimum screw penetration into purlins is 20 mm.

3.3 STORAGE

Take delivery of and accept packs of panels dry and undamaged on delivery. Reject all damaged material. Store on a level firm base with packs well ventilated and completely protected from weather and damage. Do not allow moisture to build up between panels.

3.4 HANDLING

Avoid distortion and contact with damaging substances, including cement. Do not drag panels across each other and other materials. Protect edges and surface finishes from damage. Use soft, flat sole shoes when fixing and for all other work on the roof.

3.5 SEPARATION

Isolate dissimilar materials in close proximity as necessary by painting the surfaces or fitting separator strips of compatible materials. Place isolators between metals and treated timber and cement based materials. Do not use lead sheet in contact with or allow water run-off onto galvanized or aluminum/zinc coated steel.

Application

3.6 SET-OUT

Carefully set out with side laps away from the prevailing wind, with the widths of end sheets the same, all sheets square and over sailing the gutter true to line. Check during fixing to eliminate creep or spread and string lines along purlin centers to keep fastenings in line.

3.7 FORMING

Form stop-ends and downturns to the ARCHTECH details and techniques using the required tools.

3.8 SEAL CUT EDGES

In very severe marine environments seal cut edges of pre-coated steel sheet with edge protection lacquer before fixing to the manufacturer's requirements.

3.9 END LAPS

Panel end laps to manufacturer's recommended detail.

3.10 THERMAL MOVEMENT

Roof / Wall fixing and jointing to conform ARCHTECH requirements for thermal movement. NZBC E2/AS1: 8.4.10 Allowance for expansion, notes specific design is required for lengths exceeding 18 meters. Sliding clips are to be used where roofing material exceeds 4 meters in length.

3.11 FIXING GENERALLY

Install and fix in accordance with the NZMRM NZ Metal roof and wall cladding - code of practice recommendations, and to the roofing manufacturer's required fixing patterns and details for each area of the building roofing. Use only screws as required by the roofing manufacturer. Paint color matched fixings and accessories before installation.

3.12 FIX UNDERLAY

Fit and lap roofing underlay over the roofing or cladding plywood substrate, with 25 mm over sail into gutter, to the underlay manufacturer's requirements.

3.13 MARKING AND CUTTING

Cut only by shearing tools. Do not use black lead pencils for marking aluminum/zinc coated products.

3.14 FIX SHEETS

Fix sheets in place using the clips as previously set out. For Roll Cap and Roll Seam, fit cap flashings once sheets have been fitted.

3.15 FLASH

Flash roof to parapets, walls and penetrations to detail, to the NZMRM NZ Metal roof and wall cladding - Code of practice recommendations and the roofing manufacturer's requirements. Cut accurately and fix using sealant and rivets to detail and to the roofing manufacturer's requirements to form a weatherproof cover.

3.16 FIX RIDGES AND HIPS

Cut accurately and fix using primary fasteners to the purlins. Join using sealant and rivets to detail and to the NZMRM NZ Metal roof & wall cladding - code of practice. All laps 150 mm minimum.

3.17 FIX VERGE AND CAP FLASHINGS

Cut accurately and fix using primary fasteners to the purlins. Join using sealant and rivets to detail and to the NZMRM NZ Metal roof & wall cladding - Code of practice. All laps 150 mm minimum.

3.18 PENETRATIONS

Flash and over-flash all penetrations through the roof.

3.19 PENETRATIONS AND JUNCTIONS

Check that adjoining walls and parapets are prepared ready for the installation of the roofing. Confirm that openings have been prepared ready for the installation of skylights and other penetrations through the roof. Required work includes the following:

- underlay turned up at wall and parapet lines
- underlay finished and dressed off to all openings, ready for the installation of skylights and other penetrations
- roofing installation neatly finished to all sides of openings and to all wall and parapet junctions
- installation of flashings (those required to be installed prior to installation of penetrating elements and/or wall linings).

Completion

3.20 REPLACE

Replace damaged or marked elements.

3.21 LEAVE

Leave this work complete with all necessary flashings, under cloaks, valleys, ridges and hips all properly installed as the work proceeds so the finished roof is completely weather tight.

3.22 REMOVE

Remove trade rubbish and unused materials from the roof and surrounds daily during the work. Sweep down at the end of each day, and clean out spouting, gutters and rainwater pipes on completion of the roof. Remove debris, unused materials and elements from the site.

4.0 SELECTIONS

4.1 PLYWOOD SUBSTRATE

Type: H3 treated / CPD grade

Thickness: 15 mm minimum

4.2 ROOFING UNDERLAY

Brand: Thermakraft

Type: COVERTEK 407 / 403

4.3 ROOF / WALL CLADDING PROFILE

Profile / rib centers:

Seam:

Curving: Where necessary. Refer architectural drawings

4.4 PREPAINTED ALUMINIUM/ZINC COATED STEEL

Manufacturer / supplier:

- KIWI STEEL - www.kiwicolor.co.nz
- New Zealand Steel – www.nzsteel.co.nz
- COLORCOTE Pre-painted Metal Products – www.colorcote.co.nz

Thickness: 0.55 mm BMT min

Grade: As per architect's selection

Color: As per architect's selection

4.11 METAL FIXING CLIP

Profile: To suit the chosen profile

Material: 0.55 mm BMT Stainless Steel

Spacing: As specified by ARCHTECH

Fixings: Stainless Steel HAUBOLD arrow thread nails, 25 mm

4.12 METAL FLASHINGS

Location: Refer architectural drawings
Material: Same as roof cladding
Thickness: 0.55 mm min. Refer architect's selection

4.13 RAIN WATER GOODS

Type & Location: Refer architectural drawings
Material: Refer architect's selection
Color: Refer architect's selection
Brackets: Powder Coated to match gutters / downpipes color