

H71 LEAD SHEET COVERINGS/FLASHINGS

ALL NEW LEAD IS TO BE TREATED WITH PATINATION OIL AS PER NOTED IN CLAUSE 460

GENERAL CONDITIONS**110 SCOPE OF WORK**

- Schedule of work: As noted on drawings 20-1012-201
- Identification of hidden damage: The Contractor and CA are to carry out an inspection following the removal of damaged gutter and substrate to investigate possible further damage caused by water ingress which is not visible from the roof surface or from within the church below. Any additional repair work as a result must be agreed and formally instructed prior to carrying out any additional works.

140 RECORD OF WORK

- General: Record work clearly and accurately using written descriptions, sketches, drawings and photographs as necessary.
- Specific records: Photographs to be taken before and after the works clearly stating the date and location of the photograph. Each photograph is to have a reference number, which is to be referenced back to the location of the works and indicated on the series of drawings.
- Documentation: Submit on completion of the work.
- Number of sets: Two sets of completed annotated drawings with photographic references clearly indicated, and series of photographs to be issued digitally on CD (2 copies).

TYPES OF LEADWORK**215 REPLACEMENT LEAD FLASHING**

- Lead: Code 6
- Dimensions:
 - Lengths: not more than 1500mm
 - End to end joints: laps of not less than 100mm
 - Upstand: Not less than 50mm, to suit existing location and coursing into stone wall.
 - Cover to abutment: Not less than 75mm
- Fixing: lead wedges into bed joint, ss clips as per clause 410 to bottom edge at laps and 500mm centres.

225 PITCHED VALLEY GUTTER (NORTH AND SOUTH VALLEYS)

- Substrate: 25mm treeded softwood board on treated softwood packers or as per existing substrate
- Preparation: Temporarily remove 4 courses of existing slates to east pitch to enable removal of lead to existing valley gutter. Inspect valley gutter boards and allow for full replacement of substrate as per note above. Existing formation of gutter is laid over a smaller number of bays, with the proposals to increase the amount of bays (refer to drawing 201). The proposal is to increase the amount of bays in order to work to Code 6 lead sheet tolerances (to reduce cost of the works). Upon completion each bay to be in accordance with LSA requirements.
- Underlay: Geotech 220PY Needle punched, nonwoven polyester geotextile, available from Calder Group, Chester or equivalent approved, laid in strips across the fall, lapped and stapled to deck. Upturn at abutments. Fix wood core rolls over.
- Type of lead: Rolled
- Thickness: Code 6
- Pre-treatment: Apply thin coating of patination oil to underside of the lead and allow to dry before laying.
- Joints in direction of fall. Wood cored rolls with splash-lap; spacing at 675mm.
- Design: The relaying of the lead is to work to new levels to suit the existing run-off level of the gutter incorporating drips and falls in accordance with the specification. The fall should be at a minimum of 1:80 with drips as shown on drawing 201, and in any event at maximum 2250mm centres.
- Drips: The drips to be 55mm high. The underlap sheet to be dressed up over the drip and the head only secured with copper nails. The overlap sheet is to be extended down over the drip. The sides of the lead to be turned up a minimum of 100mm. The sides of the lead where abutting tiled/slatted roof slopes are to be taken up the slope for a

minimum of 500mm. The top edge of the lead to be dressed over a timber fillet and end in a single welt below the lowest batten.

- Fixings: as per clause 415

WORKMANSHIP GENERALLY

305

STANDARDS

- Standard: To BS6915 and latest edition of 'Rolled lead Sheet, the complete manual', published by the Lead Sheet Association.
- Fabrication and fixing: To provide a secure, free draining and completely weathertight installation.
- Operatives: Trained in the application of lead coverings/flashings. Submit records of experience of request.
- Performing: Measure, mark cut and form lead prior to assembly wherever possible.
- Marking out: With pencil, chalk or crayon. Do not use scribes or other sharp instruments without approval.
- Bossing and forming: Straight and regular bends, leaving sheets free from ripples, kinks, buckling and cracks.
- Sharp metal edges: Fold under or remove as works proceeds.
- Finished work: Fully supported, adequately fixed to resist wind uplift but also to accommodate thermal movement without distortion or stress.

315

LEAD SHEET

- Production method:
Rolled to BS EN 12588
- Identification: Labelled to show thickness/code, weight and type.

325

SUITABILITY OF SUBSTRATES

- Condition: Dry and free of dust, debris, grease and other deleterious matter.

340

UNDERLAY

- Manufacturer: Calder Industrial Materials Ltd.
Web: www.calderlead.co.uk.
Email: buildingproducts@caldergroup.co.uk.
Product reference: Geotec Underlay

345

LAYING UNDERLAY

- Handling: Prevent tears and punctures.
- Laying: Butt or overlap jointed onto a dry substrate.

Fixing edges: With copper or stainless-steel staples or clout nails.

Do not lay over roof edges but do turn up at abutments.

- Wood core rolls: Fixed over underlay.
- Protection: Keep dry and cover with lead at the earliest opportunity.

FIXING LEAD

405

FIXINGS

- Nails to timber substrates: Copper clout nails to BS 1202-2, or stainless steel (austenitic) clout nails to BS 1202-1.

Shank type: Annular ringed, helical threaded or serrated.

Shank diameter: Not less than 2.65mm for light duty or 3.35mm for heavy duty.

Length: Not less than 20mm or equal to substrate thickness.

- Screws to concrete or masonry substrates: Brass or stainless steel to BS 1210, tables 3 or 4.

Diameter: Not less than 3.35mm.

Length: Not less than 19mm.

Washers and plastic plugs: Compatible with screws and lead.

- Screws to composite metal decks: Self tapping as recommended by the deck and lead manufacturer/supplier for clips.

410

CLIPS

- Manufacturer: Submit proposals.

Material:

Lead clips: Cut from sheets of same thickness/ code as sheet being secured.

Copper clips:

Thickness: 0.70mm.

Temper: BS EN 1172, designation R220 in welts, seams and rolls, R240 elsewhere; dipped in solder if exposed to view.

Stainless steel clips:

Thickness: 0.46mm.

Grade: BS EN 10088, 1.4301(304)terne coated if exposed to view.

- Dimensions:

Width: 50mm where not continuous.

Length: To suit detail.

- Fixing clips: Secure each to substrate with either two screws or three nail fixings not more than 50mm from edge of lead sheet. Use additional fixings where lead down-stands exceed 75mm.
- Fixing lead sheet: Welt clips around edges and turn over 25 mm.

420 SILICONE SEALANT FOR WEDGE FIXING INTO JOINTS/CHASES

- Manufacturer: Dow Corning, or similar and approved
Web: www.dowcorning.com/construction.
Email: bruce.nicol@dowcorning.com.
Product reference: 791 Weatherproofing Silicone Sealant
- Colour: Stone.

JOINTING LEAD

425 FORMING DETAILS

- Method: Bossing or lead-welding except where bossing is specifically required.
- Lead-welded seams: Neatly and consistently formed.
Seams: Do not undercut or reduce sheet thickness.
Filler strips: Of the same composition as the sheets being joined.
Butt joints: Formed to a thickness one third more than the sheets being joined.
Lap joints: Formed with 25mm laps and two loadings to the edge of the overlap.
- Bossing: Carried out without thinning, cutting or otherwise splitting the lead sheet.

455 WELTED JOINTS

- Joint allowance: 50mm overlap and 25mm underlap.
- Copper or stainless-steel clips: Fix to substrate at not more than 450mm centres.
- Overlap: Welt around underlap and clips and lightly dress down.

460 PATINATION OIL - ALL LEAD TO BE TREATED

- Manufacturer: 2iM.
Web: www.associatedlead.co.uk.
Email: steve@enviro-lead.co.uk.
Product reference: Patination Oil