HINDUSTAN PREFAB LIMITED
(A Govt. Of India Enterprise)
JANGPURA NEW DELHI 110014
(CIN-U74899DL1953GO1002220)

Technical Specifications

SUBJECT: Proposed Renovation work- Providing and Fixing of PUF roofing and wall cladding work in existing building at Hindustan Prefab Limited HQ Premises, Jangpura , New Delhi 110014.

1. Description of work

Proposed Construction of Installation and Fixing of PUF Panel roofing and wall Cladding work on existing building at Hindustan Prefab Limited HQ Premises, Jangpura, New Delhi, complete in all respects as per the concept drawings attached and general specifications as detailed below & as per the directions of Engineer-in-Charge.

2. Building sizes

Existing Building as shown in drawing floor plan attached. Over all area 18m.x 15.5 sqm.approx . The scope of work covers supplies (inclusive of all taxes, VAT, loading, unloading charges etc), installation, testing and commissioning of
1-PUF Roof Panel work, **2-** PUF Wall panel cladding work, 3**-**Sunshades (projection) over door & ventilators openings, **4-** Roof rain water gutter in front side of entrance.

3. Roofing & Walling

A. Main Building = Roof puf panels with guard film shall be made up of 50-80 mm with 0.50 mm thick PPGI trapezoidal Bus Green or Blue colour coated sheet with depth of crest 28-30 mm, pitch 195-250 mm on top side & 0.50 mm thick PPGI on bottom side having V-ribbing pattern for aesthetic appearance with a 50-80 mm thick layer of rigid CFC free polyurethane foam of density 40 kgs +/- 2 kgs/cum as insulation in between. The polyurethane foam shall be self – extinguishing fire retardant type conforming to IS 12436/1988.

The Roof puf panels will be provided with the overlap provision. The roof Panels fixed on to the structural steel frame work using 5x95mm self tapping self drilling screws with suitable Epdm seal fasteners / J hooks & nuts of 8mm diameter with Bitumen & GI limpet washers complete up to the pitch of the sheet.

B. The roof shall be provided in a two-way slope and One way as required and shown in drawings with PPGI trapezoidal colour coated sheet of 0.5mm thick. The roof shall have minimum projection of 300 mm from the eaves & gable wall. The roof sheets shall be fixed on to the structural steel frame work using 5x95mm self tapping self drilling screws with suitable Epdm seal fasteners / J hooks & nuts of 8mm diameter with Bitumen & GI limpet washers complete up to the pitch of the sheet.

The roof sheeting junction at centre will be covered with 0.50 mm thick PPGI ridge cover of size 300 x 300 mm fixed over the roof sheeting & on to the structural steel frame work using 95 mm self tapping self drilling screws with suitable rubber fasteners. The roof will have a minimum projection of 300 mm all around the eaves & gable walls.

The PPGI sheets shall be of minimum 240 mpa steel grade & shall have a zinc coating of minimum 120 gsm as per IS 277/1992, 5-7 microns of epoxy primer on both sides of the sheet & polyester top coat of 18-20 microns on one side / outer side. The PPGI sheets / Puf panels shall have a protective guard film of minimum 20-25 microns to avoid scratches to finished panel during transportation. The Engineer in charge shall specify while ordering the colour of PPGI sheets to be used for the wall panels.

C. Providing and Fixing Gutter: Rainwater Gutters are troughs that collect rain running off a roof and channel it, with proper slopes, to downspouts that carry the rain water to the ground and away from your siding, windows, doors and foundation. Proper size Gutter shall be fixed with roof edge with clamps and screwed and shall be ensured water sealed all components shall be compatible with the roof panel furnished. Downspout shall be not less than 75mm dia of UPVC pipe as specified for Rain water pipe in CPWD specifications.

D. WALL: All Wall panels shall have same specifications as roof wall panel in item no. 3 A, B. The PPGI sheets / Puf panels shall have a protective guard film of minimum 20-25 microns to avoid scratches to finished panel during transportation. The Engineer in charge shall specify while ordering the colour of PPGI sheets to be used for the wall panels.

The wall panels exposed edges at bottom & top side shall be covered using bottom & top U track of appropriate size made out of PPGI sheet & shall be secured to the wall panels using pop rivets. The U track at bottom shall be fixed on to the concrete coping using expandable fasteners of 8mm diameter & 80 mm in length provided at a spacing of 450 mm C/c.

The wall panels shall be fixed to the steel frame structure on top & bottom using nut/bolts tightened through the steel frame cleats. Wall panels at gable ends will also be covered with the same single panels without any horizontal joint.

The joints all around the wall panels shall be joined & covered by means of PPGI flashing of size 50x50x0.60mm fixed using pop rivets at a minimum distance of 200 mm on all exposed faces. All the wall joints shall be sealed with transparent / white colour silicon sealant.

4. Flashing

It will be responsibility of the contractor to fix & cover all joints using proper & suitable size PPGI flashing in 0.6mm thickness. The drawing of the same has to be approved by the Engineer-in-charge. The PPGI sheets shall be of minimum 240 mpa steel grade & shall have a zinc coating of minimum 120 gsm as per IS 277/1992, 5-7 microns of epoxy primer on both sides of the sheet & polyester top coat of 18-20 microns on one side / outer side. The PPGI sheets / Puf panels shall have a protective guard film of minimum 20-25 microns to avoid scratches to finished panel during transportation. The Engineer in charge shall specify while ordering the colour of PPGI sheets to be used for the flashings.
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5. Sunshades (Projections over Door Windows & Ventilators opening):

Suitable sunshades made out of 50-80 mm thick PUF roof panel will be provided to all external windows and doors not covered under rooms. Ms Sections frame shall be made for support the entire sunshade projection. The specifications of the PUF panel shall be same as described under roofing item 3. The minimum projection for the sunshades will be 450 mm and 300 mm wider than the width of the opening.

6. Structural steel frame work

The structural steel frame work shall be designed in accordance to IS 875 /1987 reaffirmed 2003. The frame work shall consist of Portals / trusses, Purlins, column etc. as per requirement in roofing and wall cladding work. All the steel work shall be given 2 coats of Zinc chromate primer. The steel work shall be painted with 2 coats of synthetic enamel paint of approved shade & make.

7. Removal of existing Roofing Materials

Removal of roof including ridges, hips, valleys, Purlin and gutters etc., and stacking the material within 50 metres lead of.

Drawings: Proposed concept layout drawing is enclosed.