TECHNICAL SPECIFICATIONS
(METAL ROOFING SYSTEM)

METAL ROOFING SYSTEM – STANDING SEAM, CLIPLOCK OR EQUIVALENT

1. SYSTEM DESCRIPTION

1.1 ROOFING PANEL AND CLIPS

The roofing system shall be of double skin roofing Galvalume Profiled sheet with 0.50 mm (Min) TCT. Roofing system panels shall be rolled profiled sheet of nominal 400-500 mm effective panel width with two major corrugations, 50 mm high (65-80mm including seam). Manufactured from min 550 MPa yield strength coated with hot dip metallic Aluminium /Zinc alloy coating, Zincalume or Galvalume AZ150 as 150 gms/ sq.mt total on both sides of Aluminium (55%) & Zinc (43.50 %) & Silicon (1.50%), conforms to ASTM792M from BlueScope Steel or Equivalent. The steel manufacturers test certificate for the chemical and mechanical properties of steel shall be submitted for approval by the concerned authority prior to installation.

The panels and concealed anchor clips shall be capable of supporting a 150 kg temporary concentrated load at the panel mid-span in the installed condition. The load shall be applied over the entire panel width. The panels shall support this concentrated load without displaying permanent distortions that would affect the weather tightness of the roofing system. The clips shall be capable of transmitting all reaction forces to the purlin without the aid of any other material, thus resulting in an overall ''self-supported standing seam roof system, for structural support purlin shall be design considering all the load and forces of the roof.

Deflection requirements shall be in accordance with the applicable IS codes, with a minimum of L/180 (L being the span between adjacent purlins. Accessories and their fasteners/clips shall be capable of resisting the specified design wind uplift forces and shall allow for thermal movement of the roof panel system.

1.2 INSULATION

Insulation between top layer & bottom layer are of Rockwool Insulation or as requirements of the acoustics also Meeting K-value, U-value, sound Transmission Class (STC) as per acoustical requirements. Thermal insulation shall not be less than 16 kg per cu. m. density, minimum 50 mm thickness. 50mm wide continuous vapour-tight edge tabs. Vapour barrier shall be vinyl-aluminium foil laminate.

1.3 INSTALLATION

Installation shall be in accordance with the latest IS codes with compliance of acoustical and thermal requirements. The roofing system shall be designed by the Manufacturer as a complete system. Members and connections not indicated on the drawings shall be the responsibility of the Contractor. All components of the system shall be supplied or specified by the same manufacturer. Any additions/revisions to framing members supporting the roofing system to accommodate the

manufacturer/fabricator's design shall be the Contractor's responsibility, and shall be submitted for review and approval by the Engineer in Charge. The metal roof system installer shall be a firm regularly engaged in the installation of metal roof systems. The contractor shall be an authorised and franchised dealer of the metal roofing system manufacturer capable of showing successful installation similar to the work required for this project.

Panel side laps shall be field-seamed by roof seamer machine which is self-propelled and portable electrical lock-seaming machine. The machine field forms the final 180 degrees of a 360-degree double-lock standing seam, all side lap sealant shall be applied during rolling of the panels on the roll forming machine. Manufacturers recommended specially designed ridge capping, flashing; trims, gutter and down pipe shall be used for fixing roof system which shall be approved by concerned authority.

Roof panel mounting clip shall be of Galvanised steel/aluminium, clip base with sliding mechanism to allow movement without binding. Clip base shall be pre-punched or predrilled for mounting to roof structural members or deck. Sliding clip tab shall be made from stainless steel/aluminium, designed to lock into and become an integral part of the roof panel seam. Provisions shall be incorporated into mounting clip assembly to keep sliding clip tab cantered on mounting clip during installation of roof panels. The clip is designed to move freely in both directions to take care of thermal expansion and contraction.

2. Submittals

2.1 PRODUCTION DATA

The manufacturer shall submit manufacturer's product information, specifications and installation instructions for building components, accessories and insulation.

2.2 DRAWINGS:

The Manufacturer shall submit complete erection drawings showing roof framing, transverse cross sections, covering and trim details and accessory installation details to indicate proper assembly of building components.

3. Warranty

Contractor shall provide written weather tightness warranty for a minimum period of ten (10) years against leaks in roof panels arising from or caused by ordinary wear and tear under normal weather and atmospheric conditions. Warranty shall be signed by both the metal roofing system manufacturer and the metal roofing system contractor. When warranty is issued, instructions shall detail the preventive maintenance required and shall list harmful substances that may damage the roofing.