

SECTION – XII
FALSE CEILING WORK

1.0 GENERAL

1.1 Indian Standards

Work shall be carried out to Indian Standards and Code of practices. In absence International standards shall be followed. These shall be latest issue. List given hereunder is not to be considered as conclusive and is for reference guidance only. Any discrepancies / conflict noticed shall be directed to the PM for his direction / approval. However, as a general rule more stringent specification shall take precedence.

1. IS 2547 Specification for Gypsum building plaster
2. IS 2818 Specification for Indian Hessian
3. IS 412 Specification for Expanded metal steel sheets for general purpose.

2.0 MATERIAL

2.1 Plaster of Paris ceiling tiles shall be reinforced with Hessians cloth. Maximum size shall be limited to 750 mm x 750 mm. Tiles shall be true and exact shape with clean and regular chamfers and shall give a ringing sound when struck. The exposed face shall be truly plane and smooth.

2.2 Metal lath shall confirm to IS and, as specified, wire netting for metal laths shall be galvanised.

2.3 Cementations sheets shall confirm to IS and shall be from approved manufacturer. Sheet shall be sound and free from defects.

2.4 Gypboard as manufactured by Saint-Gobain (Gyproc) or equivalent approved. Board shall confirm to CBRI certification. Gypboard are formed by enclosing and bonding together a core of set Gypsum plaster by two sheets of heavy paper. Board shall be fire resistant, light weight, strong, durable dimensionally stable, smooth surface finished such that ready to receive directly painting, wall papering.

2.6 Suspension System

2.6.1 G.I. suspension system manufactured from pressed steel metal sheets such as angles, channels “Tee” etc. shall be used. GI wire and rawl plug fasteners shall be of approved size as per false ceiling drawing for desired location.

2.6.2 Aluminium sections suspension system with or without powder coating may also be used as specified and approved by the PM.

2.7 Suspension System Accessories

Consisting of M6 Anchor Fasteners with hanger hole, pre Straightened Hanger wire of dia – 2.5 mm of 1.80 m length having a tensile strength of 344-413 MPa, along with Adjustable hook clips of 0.8mm thick, galvanized spring steel for 2.5 mm wire with a minimum pull strength of 110 kg.

3.0 WORKMANSHIP

3.1 Suspension system

3.1.1 Pressed GI metal sections in combination of GI wire/section hangers are fixed with anchor fasteners to ceiling providing basic hanging and

suspension frame work. These are readily available or may be specially fabricated to suit site requirement. Hangers are provided @1200 mm c/c on both ways. Grid shall be adjusted to suit other requirements to approval of the PM.

- 3.2 Use special corner metal studs and special metal trim corner beads at acute and obtuse corners of inter-sectioning wall and partition.

Aluminium angles / Tees and channels suspended in combination of GI/Aluminium hangers are also provided for creating hanging and suspension framework.

- 3.3 Wooden framework shall consist of main and cross batten of specified sections in approved shop drawing. The longitudinal and header scanting shall be arranged so that tiles can be fixed to form the panel arrangement. The framework shall be treated with approved wood preservative lacquer.

- 3.4 False ceiling panels

- 3.4.1 False ceiling may be concealed type or with lay in panels as detailed in Bills of quantities. All lay in panels shall be fixed on back with non uplifting pins. False ceiling shall be finished as with POP or painting or may be prefinished decorative tiles.

- 3.4.2 Plaster of Paris ceiling tiles shall be fixed with brass screws. Gypboard and other material shall be fixed such that they are rustless and in combination of suspension or panels not going to cause any harmful effect or get deteriorated. Fixing shall be approved by the Engineer.

- 3.4.3 False ceiling shall be provided to correct line, level with required finishes as specified.

- 3.4.4 Woodworks panels (Armstrong or equivalent) of width 192mm, thickness of 15mm and length 2400 mm or as required by the Architect / PM, made of a Moisture resistant fibre board with minimum 595 Kg/M3 density substrate with a laminated facing as per the approved shade and finish and a melamine balancing layer on the reverse side.

- 3.4.5 GI Lay in plain 600x600mm Lay in Tiles of pre-coated galvanized steel in 0.5mm thickness in approved color tile.

- 3.5 Metal lathing Plaster

This shall be carried out to create a false ceiling or surface specially to cover up services behind it. Hence, all services must be tested and approved by the PM prior to this plastering.

- 3.5.1 The GI metal lath used shall be of a specified gauge. Lath shall be supported and stretched with long way of the mesh across the support before nailing. Support of timber batten depending upon the location shall be spaced but shall not be greater than 450 mm centre to centre. Metal lath shall be secured with wooden batten by GI staples or nails and 0.9 mm GI wire. Overlap shall be arranged over intermediate support and not in the corners.

- 3.5.2 Plastering in lathing shall be carried out in two coats. The first coat shall be with stiff consistency mortar, applied uniformly with a trowel and keyed. It shall be allowed to harden and dry for a minimum period of 3 days. The second coat shall be applied in the usual manner of plastering and finished as specified. Both coats shall be wet cured as detailed earlier.

- 3.6 Points to be checked are
- 3.6.1 It shall be responsibility of the false ceiling contractor to prepare coordinated reflected ceiling layout and get approved prior to start. He shall be responsible to provide and arrange required service doors, cut outs, fixing arrangements to receive light fitting, AC diffusers, Grills, etc.
- 3.6.2 Prior to start of false ceiling services work above false ceiling is completed.
- 3.6.3 Edge angle are fixed to correct line and level.
- 3.6.4 Hangers are located allowing movement of services within false ceiling.
- 3.6.5 Main and secondary runners are spaced with due care and perfect rigid frame work is achieved to correct line and level.
- 3.6.6 False ceiling panels shall be fixed with suspension by GI screws/pin etc. Joints shall be well treated and neatly finished as detailed.

4.0 MEASUREMENTS

Measurement for false ceiling shall be in square metre area in plan only. All up stands or vertical fascias forms part of false ceiling in continuation of the same ceiling; shall not be measured separately.

5.0 RATES

False ceiling rates shall include

- ☐ Required suspension system
- ☐ Required false ceiling material
- ☐ Required arrangement to receive light fittings, fixtures, AC grills, diffusers, etc.
- ☐ Required access service door / shutter
- ☐ Masking tape
- ☐ Required finishing with POP or approved filler or painting or polishing as case may be.

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