

## **Section II C - 2023OVM013**

### **(Guidelines for Trial assembly of Ceiling Girder for MEL Adani project)**

#### **Scope:**

This procedure specifies the quality requirements for trial assembly of the bolted type Ceiling girders for MEL ADANI project, at manufacturing works w.r.t fit-up, punching, bolting, match marking/level marking, and identification before dispatch.

Ceiling Girder trial assembly includes:

- Two and more consecutive ceiling girders for full length
  - Cross Girders between main girders wherever applicable
  - Welded beams between ceiling girders.
  - Rolled beams with cleat angles bolted to welded beams.
  - Horizontal bracings at Ceiling Girder TOS
1. Before carrying out compartmental trial assembly of ceiling girders, individual top piece and bottom piece of the ceiling girder shall be trial assembled.
  2. Trial assembly position “I” (web vertical) and water level between shall be within 2mm and alignment / verticality of the web of both top and bottom pieces of the Individual girder shall be checked by plumb and piano wire method.
  3. Check the flatness of end plates / rest plates of the individual Ceiling girder using straight edge and feeler gauge. For end flanges/ splice plates, the flatness shall be within 0.3mm. Local depressions up to 0.5mm (within 20% area) are acceptable
  4. Matching ends of top piece and bottom piece of ceiling girder before match drilling of holes shall be butted over whole length in vertical position and held tightly together with suitable clamps/EOT crane. Ensure proper supports and restraints for doing the trial assembly.
  5. Check the gap between top piece and bottom piece end flanges of mating Girder by feeler gauge. Up to 0.5 mm gap between end flanges is permitted. However, 80% contact (zero gap) area between the end flanges of mating Ceiling Girder pieces shall be ensured.
  6. All the bolt holes of end flanges/ cleats shall be match drilled on with Girders/welded beams as shown in drawing. All the bolt holes as per drawing shall be match drilled through the flange plates at one operation with provision for subsequent reaming/drilling as per drawing requirements.
  7. After bolting the end flanges/ cleats of top piece and bottom piece of Individual Ceiling girder in hand snug tight condition, check the gap between top piece and bottom piece end flanges of mating Girder by feeler gauge. Up to 0.25 mm gap between end flanges is permitted. However, 80% contact (zero gap) area between the end flanges of mating Ceiling Girder pieces shall be ensured.
  8. After trial assembly of individual top piece and bottom piece of the ceiling girder, compartmental trial assembly shall be done involving minimum two and more consecutive main ceiling girders along with cross girders and welded beams between main ceiling girders and rolled beams bolted to welded beams and horizontal bracings as per SIP NP 20.
  9. Ensure proper supports and restraints for doing the compartmental trial assembly.
  10. Check the squareness of the girder compartment by verifying the spacing between the girders and diagonals between work points.
  11. Centerline alignment of welded beams, rolled beams shall be within 2 mm.
  12. On satisfactory completion of trial assembly, ensure proper match marking / punching of all members connected at all joints including end plates / lug plates in the respective girders / welded / rolled beams / bracings and ensure these match marks shall also be stenciled after painting as per SIP NP 20.