

## **Annexure-I**

### **TECHNICAL REQUIREMENT FOR ADJUSTABLE SLOTTED ANGLE STORAGE SYSTEM LONG SPAN IN SL.NO. 38 (Vol- V/ Page-15/SI. No. 38)**

The Long-span system consists of Frame, Beam & Panels. Detail specifications are as given below.

#### **A. Frame: (Verticals)**

Frame consists of Upright & Bracing, details of which are as given below

##### **1. Upright :**

- a) Should take the load put on the decking levels
- b) Should have a construction of 55 (W) x 45 (D) mm & minimum 6 bends on its profile.
- c) Should be of rolled formed construction, made in single piece without any welding
- d) Should have slots at a pitch of 50 mm to provide flexibility in adjustment of loading levels.
- e) The manufacturing process of punching and forming should be synchronized operation to ensure dimensional accuracy and contour uniformity.
- f) Material should confirm to IS 5986, Fe 510
- g) Should be designed as per Design Code IS 800/801 with a minimum factor of safety of 1.67 with respect to yield stress
- h) Base-plate of suitable thickness should be provided to transform the load to ground. Base-plate should be grouted to the floor by using 2 nos of expansion bolts.
- i) Color: As required by user

##### **2. Diagonal and Horizontal Bracing Channels:**

- a) Lipped Channel of section 25 x 20 x 6 mm & 1.6 mm thk should be used as bracing and should be suitably arranged to provide stability to the frame. All bracings are to be roll formed.
- b) Material should confirm to IS 5986, FE 410
- c) Color: As required by user

#### **B. Beam :**

- a) Beams should be of rolled formed construction
- b) Material should confirm to IS 5986, FE 410.
- c) Beam should have a Z profile .
- d) The beams should be designed with the consideration that deflection at the centre of the beam at service load should not exceed  $1/200^{\text{th}}$  of its span.
- e) Lip connectors are to be welded to the beams, which will in turn help in assembly of beams with upright.
- f) Beam locking pin is provided for connecting beam with upright to avoid accidental dislodging of beam.
- g) Color: As required by user

#### **C. Decking Panels:**

- a) Panels should have 6 Bends
- b) Material should confirm IS 513 D.
- c) Panels should be tested for the specified loads to ensure that the deflections observed at various critical points are within permissible limits and that after unloading there is no permanent deformation.
- d) Color: As required by user

#### **E. Nuts & Bolts:**

All the nuts and bolts should be galvanized.

#### **F. Assembly**

- a) All frame components should be assembled through bolting.
- b) No welding is permitted for the assembly at site.

#### **G. Pretreatment and Final Finish of the System:**

- a) All the components should be subjected to 5 Zone- 8 Stage Special Pre-Treatment.
- b) Pre-treatment process will have to consist of Degreasing, Phosphating and Demineralise water rinse. All these processes will have to be interspersed with rinsing at appropriate temperatures.
- c) All the components should be painted with Epoxy-polyester Powder Coating after doing the above surface treatment
- d) Dry Film Thickness should not be less than 40 Microns.