

**AMENDMENT NO. 2 JANUARY 2025**  
**TO**  
**IS 17941 : 2022 HANDPUMP CUM SOLAR PUMPING SYSTEM —**  
**SPECIFICATION**

(*Second cover page, Foreword, para 4*) — Insert the following at the end:

‘This standard also provides guidance for tank mounting structure as given in Annex B.’

(*Second cover page, Foreword, para 5*) — Substitute the following for the existing:

‘The composition of the Committee responsible for the formulation of this standard is given in Annex C.’

(*Page 6, Annex A*) — Delete IS 1161 : 2014, IS 2062 : 2011, IS 2629 : 1985, IS 4759 : 1996, IS 4923 : 2017, IS 9595 : 1996, IS 1367 : Part 13 : 2020/ISO 10684 : 2004 and entries relating thereto.

(*Page 6, Annex A*) — Insert the following at the end:

**‘ANNEX B**  
*(Informative)*  
**GUIDANCE FOR TANK MOUNTING STRUCTURE**

**B-1 TANK MOUNTING STRUCTURE**

**B-1.1 Raw Material**

**B-1.1.1** Components of the structure should be made out of M. S. tubes, square tubes, angles and channels covered under quality A of grade E 250 of IS 2062 : 2011 ‘Hot rolled medium and high tensile structural steel — Specification (*seventh revision*)’ to withstand self-weight and weight from 2 000 up to and including 5 000 litres of water at wind speed of 150 km/h.

**B-1.1.2** Structure may be of 3, 4.5, 6 m or higher height as per the requirement of the purchaser.

**B-1.1.3** Preferably, structures should be in knockdown condition for ease of transportation and installation (*see Fig. 5, 6, 7, 8, 9 and 10*).

**B-1.2 Welding**

**B-1.2.1** Various mild steel components of the structure should be welded in accordance with IS 9595:1996 ‘Metal - Arc welding of carbon and carbon manganese steels — Recommendations (*fifth revision*)’.

**B-1.2.2** Unless otherwise specified, the minimum specified thickness of the metal to be welded will be the guiding factor for deciding the weld fillet size. It should normally be not less than the specified thickness of the metal to be welded.

**B-1.3 Anti-Rusting Treatment – Galvanizing**

**B-1.3.1** All the components of the structure should be hot-dip galvanized in accordance with IS 2629 : 1985 ‘Recommended practice for hot-dip galvanizing of iron and steel (*first revision*)’ and IS 4759 : 1996 ‘Hot dip zinc coatings on structural steel and other allied products — Specification (*third revision*)’.

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**B-1.3.2** All the fasteners used for the structure should be hot-dip galvanized as per IS 1367 (Part 13) : 2020/ISO 10684 : 2004 'Technical supply conditions for threaded steel fasteners: Part 13 Hot dip galvanized coatings on threaded fasteners (*third revision*)'.

### **B-1.4 Workmanship**

**B-1.4.1** All the components should be free from rough edges, burrs and other surface defects.

**B-1.4.2** All the components of the structure when assembled should be free from internal stresses. The members of the structure should have interchangeability. Components/members of the structure should fit in the place freely without applying any external forces while installing the structure on site.

### **B-1.5 Panel Mounting Structure**

**B-1.5.1** Panels can be mounted on tank tower structures as per Fig. 6, Fig. 7, Fig. 8, Fig. 9 and Fig. 10.

**B-1.5.2** Panels can be mounted separately on a single pole arrangement at a minimum height of 2 500 mm.

**B-1.5.3** Single panel structure should be made of pipe conforming to IS 1161 : 2014 'Steel tubes for structural purposes — Specification (*fifth revision*)' or tube conforming to IS 4923 : 2017 'Hollow steel sections for structural use — Specification (*third revision*)'.

**B-1.5.4** Channels and angles conforming to quality A of grade E 250 of IS 2062: 2011, may be used as the support structure for the panels.

### **B-1.6 Foundation for Tank Tower Structure and Single Pole Structure**

The foundation shall be made out of RCC (reinforced cement concrete). Design of the foundation structure should be suitable to withstand self-weight of structure, deadweight of the tank with water and wind forces acting on the structure.

## **B-2 STABILITY CERTIFICATE**

The structure design should be approved by the qualified structural engineer for its stability at wind speed of 150 km/h.

## **B-3 STAND POST**

**B-3.1** Stand post should be made of prefabricated hot-dipped galvanized square pipe with 1, 2 or 4 stainless steel 25 mm taps with self-closing arrangement (*see* Fig. 12).

**B-3.2** Platform for stand post should be minimum (1 000 mm × 1 000 mm) in square or circular in shape, and should be made of grade 10 concrete with proper drainage arrangement. To strengthen the platform in loose formation, rubble soling of minimum 300 mm depth shall be provided. Alternatively, mild steel reinforcement may be provided. (*see* Fig. 12)