



P-22084

MANUAL FOR TANK ERECTION WITH TRESTLES TYPE 12 TON

Web version manual

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1. BRIEF SPECIFICATION

- 1.1 The lifting equipment is composed of a number of trestle assemblies (lifting trestles with hydraulic climbing jacks) and one common high-pressure oil pump.
- 1.2 Lifting/lowering capacity: 12 metric tons per trestle.
- 1.3 Effective lifting height (= maximum shell-ring height): 2500 mm. Special trestles with other lifting heights available on request.

2. RANGE OF APPLICATION OF THE LIFTING EQUIPMENT

- Erection of tanks of steel or other materials.
- Repairs of tanks or tank foundations.
- Enlargement of storage capacity in existing tanks.
- Erection of other circular structures such as reactor shields in nuclear power stations, etc.

3. DESCRIPTION OF PRINCIPLE OF THE ERECTION SYSTEM

The following short description gives the working procedure in outline. It can in certain details be modified when required. See also fig 1.

- 3.1 The tank bottom-plates are placed on the prepared foundation and welded together.
- 3.2 Shoring trestles (CC-5) for guiding the sheets are placed approx 2 m centers in between and are tack-welded to the tank bottom along the periphery. The plates of the first shell ring (in fact the top ring of the tank) are positioned and welded together.
- 3.3 The beams or lattice work of the roof are assembled and finally joined to the upper rim of the shell ring. Possibly the inner sheets of the roof are placed and welded together and a special "run-around" crane for transporting and positioning of the following shell rings is installed.
- 3.4 The lifting equipment is assembled according to Chapter 11. The plates of the second shell ring (next to top ring) are positioned outside the first one.



- 3.5 The completed part of the tank (the roof and top shell ring) is lifted hydraulically to a height, at which the plates of the second shell ring can be moved into places and the roof sheeting can be completed.
- 3.6 The plates of the second shell ring are located exactly and welded together to the lower edge of the first shell ring.
- 3.7 The plates of the third shell ring are placed outside the second shell ring.
- 3.8 The completed part of the tank (the roof and the two uppermost shell rings) is lifted.
- 3.9 The above cycle of operations is repeated until the last (bottom) shell ring is finished.
- 3.10 The entire tank is lowered down to the bottom plates and welded to this. The lifting equipment is dismantled.

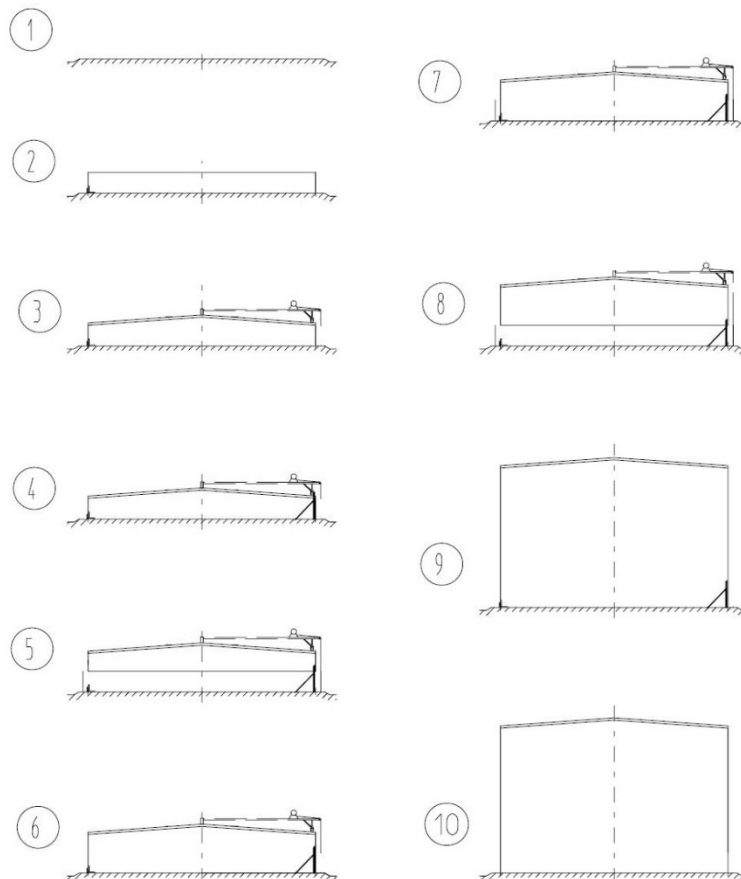


Fig. 1 Erection sequence

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4. MAIN COMPONENTS OF THE TANK TRESTLE

A tank trestle is composed of the following main components:

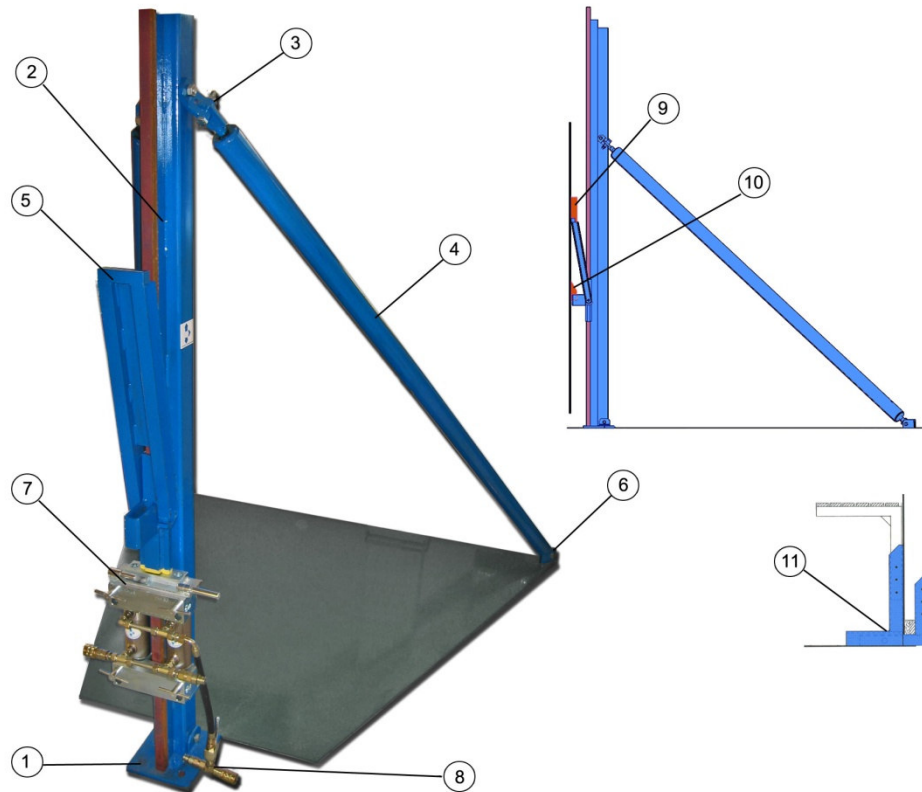


Fig. 2. Main components of the tank trestle

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(1)	Base Plate	13-2700
(2)	Trestle Stanchion	13-3901
(3)	Upper Stay Lug	13-3893
(4)	Stays	13-3902
(5)	Sliding chair and Lifting arm	13-LF06
(6)	Stay Lug Bottom	13-2706
(7)	Hydraulic Lift Climber 2510-35-D	10-JS35
(8)	Ball Valve with Coupling for High Pressure Hose	



Auxiliary Devices:

(9)	Lifting Lug	CC-7
(10)	Fend-off Lug	CC-6
(11)	Shoring Trestles	CC-5

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