

DELTA SERVICE

WATERPROOFING OF TANKS



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WATERPROOFING OF TANKS WITH THERMOPLASTIC MEMBRANES IN POLYOLEFINS (FPO)

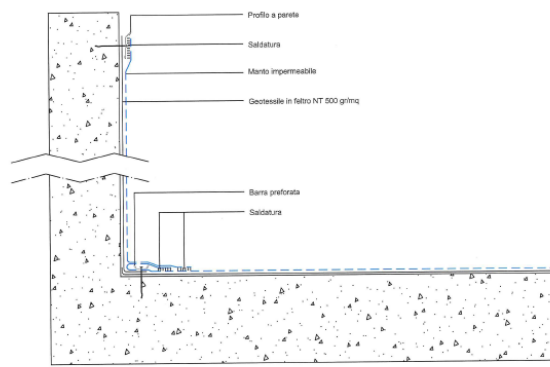
Waterproofing with thermoplastic membrane for food use coupled with 500 gr/m² polyester geotextile on the tank faces. Membrane joined with both single-track and double-track welding, constructions that allow pneumatic air testing.

Installation method:

HORIZONTAL PLANE

1. Preparing the installation plan

The concrete laying surface must be smooth, free from debris and roughness that could cause damage to the waterproofing layer by punching. Laying of a regularization layer made of a geotextile made of 100% pure polypropylene fiber felt, heat-treated, needle-punched, rot-proof, resistant to microorganisms, weighing 500 g/m². Dry laying with overlapping edges of 10÷15 cm.



2. Sealing element

Installation of a sealing element made with a synthetic waterproof layer made of flexible polyolefin "alloy" (FPO-PE, a material highly compatible with drinking water, high resistance to atmospheric agents, UV rays, excellent mechanical resistance to punctures).

Installation features:

- Semi-independent installation using special fixing profiles.
- Minimum overlap of the edges of 8 cm.
- Welding of the overlaps carried out:
 - or by manual heat welding with a hot air dispenser;
 - or by heat welding with an automatic hot air welding machine.

Manual weld control using a Welding Tester, pneumatic weld testing using appropriate equipment and triple point testing using a vacuum bell.

3. Perimeter fixing element

Installation of a fastening element consisting of a pre-drilled bar in galvanized sheet metal, fixed using

expansion bolts and subsequent installation of a tear-proof PVC cord appropriately positioned with respect to the pre-drilled perimeter fastening bar, welded using a hot air dispenser.

VERTICAL PLANE

1. Preparing the installation plan

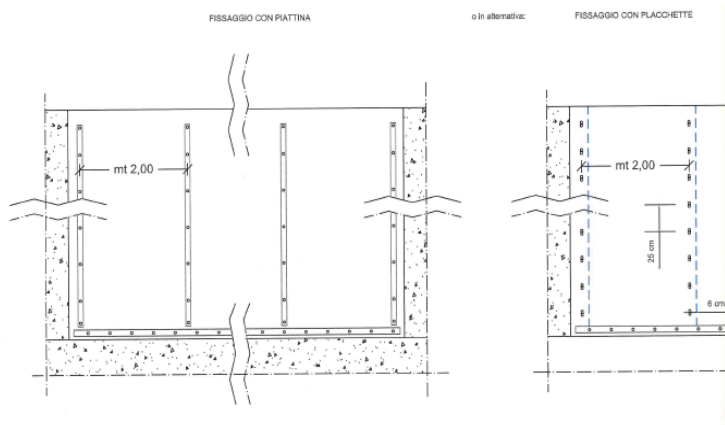
The vertical plane must, in turn, be smooth, free from debris and roughness that could cause damage to the waterproofing layer by puncturing. Installation of a regularization layer made of a geotextile in NT felt of 100% pure polypropylene fibers, heat-treated, needled, rot-proof, resistant to microorganisms, weighing 500 g/m². Dry installation with overlapping edges of 10÷15 cm.



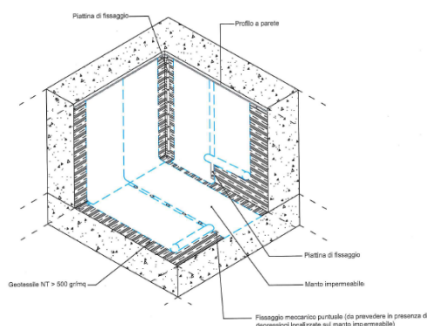
2. Sealing element

Installation of a sealing element made with a synthetic waterproof layer made of flexible polyolefin "alloy" (FPO-PE). Caratteristiche della posa in opera:

- Semi-independent installation using special fixing profiles;
- Minimum overlap of the edges of 8 cm.
- Welding of the overlaps carried out by manual heat welding with a hot air dispenser; Controllo manuale delle saldature mediante Welding



Triple point tester and testing with vacuum bell.



3. Fixing element of the sealing element on the vertical plane

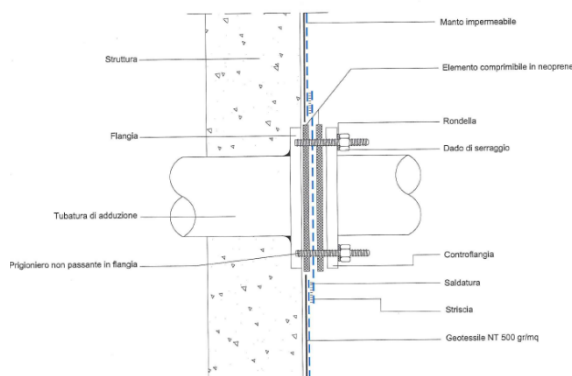
Installation of a fastening element consisting of a 5 cm fastening strip in 0.6 mm thick galvanized sheet metal coupled with a synthetic waterproofing layer made of flexible polyolefin "alloy" (FPO-PE). Fixing using expansion bolts.

4. Closing element of the sealing element at the head of the vertical

Installation of a fixing element consisting of a 7 cm long wall profile in 0.6 mm thick galvanised sheet metal coupled with a synthetic waterproof layer made of flexible polyolefin “alloy” (FPO-PE). Fixing using expansion bolts.

5. Supply pipes

Positioning of stainless steel pipes for supply or connection between tanks, equipped with special flanges (and relative counterflange system) flush with the wall with threaded non-through holes. Creation of a sealing system with flange, waterproof covering, neoprene gasket and counterflange.



Characteristics of the thermoplastic membrane

Synthetic waterproofing membrane made of a high quality flexible polyolefin “alloy” (FPO-PE) with internal glass fibre reinforcement, single layer, non-prelaminated, resistant to UV rays, non-toxic, compliant with the provisions on drinking water set out in Ministerial Decree 21-03-1973 (and subsequent updates) and Ministerial Decree 06/04/2004 n° 174, compliant with the product standard UNI EN 13361, Sikaplan WT 4220-15C

type model, thickness 1.5 mm, obtained in a single layer using a direct extrusion spreading process in a single step on both faces of the reinforcement.

