

**Project:**

Concrete repair, protection and waterproofing of a water tower.

**Location:**

Mechelen, Belgium

**Project completed:**

2021

**Owner/s:**

PIDPA. Water company of the province of Antwerp

**Applicator/Contractor:**

Renotec NV - Belwall

**Market sector:**

Water Management Industry

**Products used & quantities:**

MasterEmacoT 450

MasterEmaco S 480

MasterProtect 330 EL

MasterSeal 560

## Water tower Mechelen-South

The highest water tower in the world at 143 meters



Concrete repair, protection and waterproofing on the highest water tower in the world.

### The background

Constructed in 1978, the Mechelen-South (Mechelen-Zuid), water tower is a record-breaking 143 meters high.

This impressive tower serves a dual purpose, providing water to the city of Mechelen, Belgium, and hosting a range of television and telecommunications aerials.

A 40-meter diameter disc-shaped reservoir with a capacity of 2,500 m<sup>3</sup> stores water fifty meters above the ground and, at a greater height, a smaller disc houses the aerials and telecommunications equipment.

### The challenge

The job consisted of the repair and waterproofing of the reservoir which was in a bad condition.

The biggest challenges were due to accessibility and the application conditions:

All the products used for repair and waterproofing of the inner surface had to be carried up via the stairs through several manholes.

This was a completely closed reservoir, so heating and extra ventilation had to be installed to create necessary conditions for the application of the products.

**Contact:**

Master Builders Solutions Belgium nv

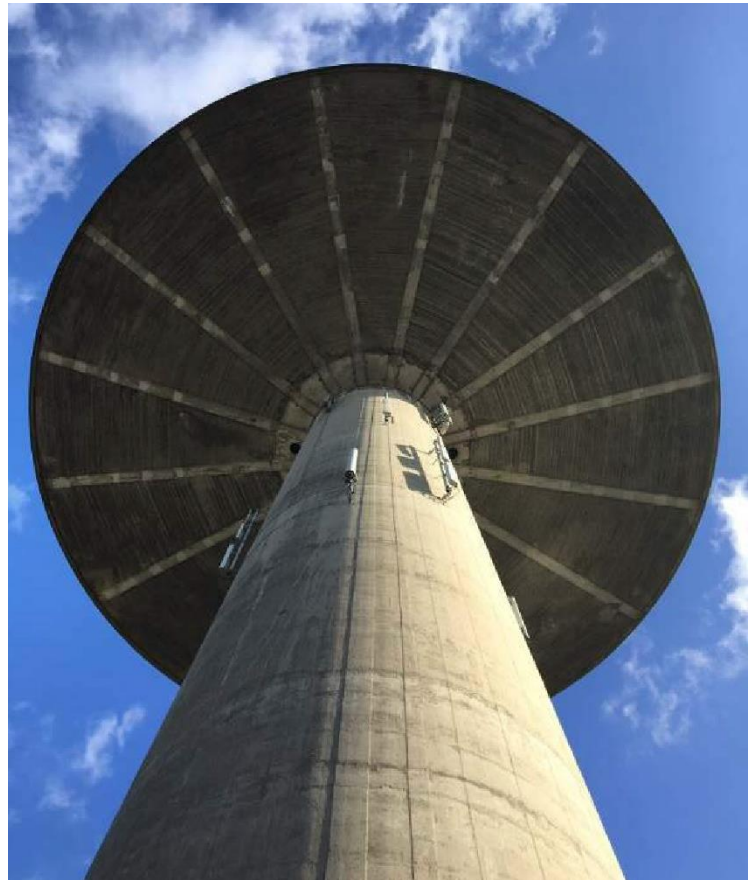
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# Water tower Mechelen-South

The highest water tower in the world at 143 meters



Our reference in Mechelen, Belgium

## Our solution

The structure required functional and structural repair. Additionally, the external lower part of the water reservoir was coated with MasterProtect 330 EL, as the upper part had been years ago. The following products comprised the solution.

**MasterEmaco T 450:** Flowable repair mortar for repair of horizontal or slightly sloping concrete surfaces.

**MasterEmaco S 480:** Shrinkage compensated, thixotropic mortar for structural repair of concrete. To be hand or spray applied in layer thicknesses up to 40 mm.

**MasterProtect 330 EL:** Single-component, ready-to-use, water-based coating, with crack bridging capacity and carbonation protection properties.

**MasterSeal 560:** two-component, cement based, elastic and flexible lightweight membrane with fast-hardening for waterproofing and concrete protection. With BELGAQUA certificate for direct contact with drinking water.

## Project facts at a glance

- Total treated surface: Approx 2,500 m<sup>2</sup>

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Master Builders Solutions is built on the experience gained from more than a century in the construction industry. At the core of the Master Builders Solutions brand is the combined know-how and experience of a global community of construction experts, who connect with you to solve all your construction challenges.

Further information is available at:  
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