

Project:

Mølleåværket Treatment Plant.
Renovation of the digester.

Location:

Kongens Lyngby (Denmark)

Project completed:

2018

Owner/s:

Lyngby-Taarbæk Forsyning A/S
Lyngby-Taarbæk Municipality

Applicator/Contractor:

Centrum Enterprises ApS/
Christiansen & Esserbæk A/S

Designer/Architect/Specifier:

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Market sector:

Water Management Industry

Products used & amounts:

MasterEmaco S 5400
MasterSeal P 770
MasterSeal M 790

Mølleåværket Treatment Plant Renovation of the digester



Digester renovated with MasterSeal 7000 CR, (Kongens Lyngby - Denmark)

The background

The Mølleådal treatment plant is a modern wastewater treatment plant, which handles the treatment of wastewater from around 150,000 people in the Lyngby-Taarbæk, Gladsaxe, Rudersdal and Gentofte municipalities.

The wastewater is cleaned using a high-tech process that also involves energy recovery through gases extracted during the purification process.

The challenge

In 2018, a digester at the plant needed refurbishment. The concrete surface had become degraded and needed to be fully repaired and protected with surface treatment to ensure a longer lifetime of the structure.

Concrete structures in wastewater plants are exposed to some very strong effects: Not only must they be able to resist mechanical wear from the flow of water and build-up of solids, but they must also be able to handle the high levels of sulfates and biogenic acids. Concrete cannot manage this without help! Some type of protective surface treatment is necessary.

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Mølleåværket Treatment Plant

Renovation of the digester



MasterSeal M 790 is applied in two coats - first in gray and then in red

Our solution

First, the concrete surface was pretreated by sandblasting and then reprofiled with the sulfate resistant repair mortar, MasterEmaco S 5400.

To treat the surface, the consultant, in close cooperation with the Master Builders Solutions specialist, opted to use the unique MasterSeal 7000 CR which comprises the products MasterSeal P 770 and MasterSeal M 790.

The surface was primed with MasterSeal P 770, and after hardening of the primer, finally, the protective membrane MasterSeal M 790 was applied twice in gray and red coats, in order to reliably ensure complete coverage of the surface.

The customer's benefit

MasterEmaco S 5400 – repair mortar

- Single component (simply mix with water).
- Shrinkage compensating chemicals and fiber reinforcement minimizes cracking.
- Fulfills requirements for extra aggressive environmental classes in accordance with DS 2426 and the freeze/thaw testing in SS137244 method A.
- Sulfate resistant.

MasterSeal 7000 CR – surface treatment

- Unique chemical resistance – including to biogenic acids.
- Crack-bridging.
- Quick-drying primer.
- Can be used on damp substrates.
- Apply in two layers with different colors, making it easy to ensure complete surface coverage.
- Ideal for equalization and neutralization tanks, sedimentation and venting tanks, sludge treatment, etc.
- Based on Xolutec™ technology.

Projects facts at a glance

- Approx. 500 m² of treated surface.

Master Builders Solutions by MBCC Group

The Master Builders Solutions brand brings all of our expertise together to create chemical solutions for new construction, maintenance, repair and renovation of structures.

Master Builders Solutions is built on the experience gained from more than a century in the construction industry. The know-how and experience of a global community of construction experts form the core of Master Builders Solutions. We combine the right elements from our portfolio to solve your specific construction challenges.

Further information is available at:

<https://www.master-builders-solutions.com/da-dk>