



No more disturbing odor from the pump station at the harbor in central Stockholm

Nodora Cat solved a delicate case with high H₂S emissions in a crucial location

MELLIFIQ

Stockholms Hamn, Sweden

Due to its location on the coast, the city of Stockholm has an intense naval activity, both for commerce and passengers. Goods continuously arrive and departure from the harbors, while people use ferries for leisure tours or for travelling to Finland and the other Baltic countries. Stockholms Hamn AB is the public organization coordinating the operations in the harbors of Stockholm and the nearby municipalities. Founded back in 1908, Stockholms Hamn AB ensures a smooth transit of ships and ferries for the most diverse purposes.

Facts

Name:	Stockholms Hamn AB
Location:	Stockholm, Sweden
Industry:	Wastewater treatment
Air volume:	200 L/s
Purpose:	Min. 98 % H ₂ S removal
Performance:	Complete H ₂ S removal over time

Solution:

Nodora CAT

Dimensions (HxWxD):	2,070 x 760 x 2,320 mm
Weight:	1,500 kg
Connection:	125 mm circular duct

The problem

This case is related to the most central harbor in Stockholm: Masthamnen. Here passenger ferries dock after cruising in the Baltic sea. The problem was related to their wastewater, discharged in the nearby pump station, prior being transferred to the wastewater treatment plant. The pit of the pump station was not completely sealed, so emissions of H₂S originated

from the water. Upon docking, the H₂S concentration frequently spiked up to 600 ppm. Under such conditions, H₂S causes a characteristic unpleasant odor and an environmental hazard. Therefore, the treatment system was required to reduce H₂S concentration down to 10 ppm, meaning a reduction higher than 98 %.

The solution

Mellifiq has the most cost-effective solution for this case: the Nodora™ CAT, which contains the active material called Rubicat™. This granular adsorbent is specifically designed to remove H₂S from air streams, even at high concentrations. Unlike similar materials such as activated carbons, it is not flammable and does not need to be disposed as hazardous material.

A Nodora CAT was connected to the newly built ventilation system from the pit to the air exhaust. All emissions from the wastewaters were conveyed into the H₂S treatment system, avoiding leakages in the room. The Nodora CAT was designed to completely remove H₂S, lasting for several years without significant maintenance.



The installed Nodora CAT ready for shipment.

Evaluation

H₂S was effectively removed with the Nodora CAT, with emissions well below the limits since installation. For many weeks, a H₂S sensor was placed at the outlet of the treatment system validating the performance. No significant values of H₂S were observed. Even if a tolerance up to 10 ppm was accepted in the process requirements, the Nodora CAT removed 100 % of H₂S even during the highest loads.

The system has been in operation for a long time now, fulfilling both requirements in terms of performance and low operational costs. Thanks to the Nodora CAT, there will be no more hazardous H₂S emissions from the pump station, regardless the load of wastewater. The benefits for the surrounding environment are particularly significant, especially considering the crucial central location of the site.

“Since the installation of the Nodora CAT, no significant H₂S emissions were detected”

Michael Söderström, Project Supervisor

About Mellifiq

Mellifiq is a multi-awarded environmental service company group, that has since the early nineties evolved into a world leading system and solution provider with multiple groundbreaking applications for industrial, municipal, and real estate clients. We supply cutting-edge technologies to manage the most sophisticated air, water, and energy challenges.

Mellifiq offers a complete range of air and water treatment technologies and solutions across multiple industries such as processing industry, energy sector, food and beverage, pharmaceutical, wastewater treatment and commercial real estate.

Mellifiq offers strong and renowned brands, such as Ozonotech, Nodora and Water Maid, and world-class engineering services combined an excellent track record of more than 40 years of innovation. We help our clients achieve the most efficient and sustainable solutions while creating the maximum value for their businesses.

With several business units across Europe, Mellifiq is headquartered in Stockholm where research and development, production, QA and certification all take place. Our unique technology and our extensive expertise have made us the Center of Excellence for the world's most complex projects, and a global player with installations on all six continents.

Everyday millions of people rely on our solutions for ventilation, disinfection, sanitation, and odor control. We are committed to raising the bar for the concept of clean and the industry standard for engineering, technical services and general contracting.

For additional information, visit our website at www.mellifiq.com

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