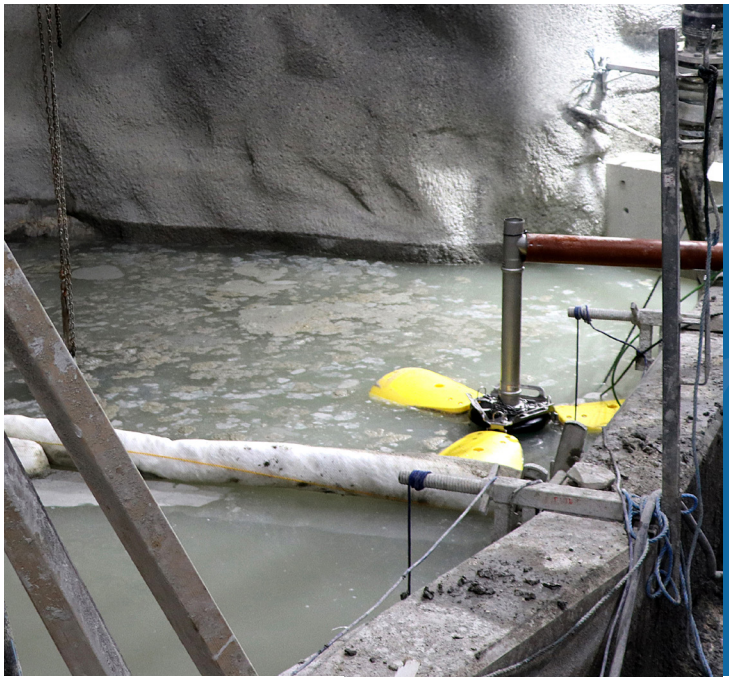
Reference Story

SurfCleaner supports road tunnel construction



> “Eliminating the €23,000 annual cost for booms, absorbents and chemicals, while being able to recycle the process water.”
>
> Sales Director SurfCleaner

Equipment: 3 x SCO 1000
Year: 2021–2022

The SCO 1000 requires just 20W on average of electricity, equivalent to a small household lightbulb, making it ultra-energy efficient. Other comparable devices require circa 7.5kW, close to 13 times the energy demand. This low power profile means devices can be operated using mobile batteries for up to four days.

SurfCleaner supports one of the world’s longest road tunnel constructions. Due for completion in 2030, it will feature one of the world’s longest urban road tunnels, at 18km, just shorter than Tokyo’s Yamate Tunnel.

The tunnels run under a lake, which is the metropolitan area’s most important water source, which means that the project is subject to clear requirements on how water may be handled during the construction of the tunnel. The construction companies working in the tunnels reuse cooling water for their drilling rigs, which must be cleaned of oil and other contaminants.

The drilling rigs work 24/7 under extreme conditions and can sometimes suffer breakdowns. Common causes of stoppages are hydraulic lines breakage, causing hydraulic oil leaks. The contaminated water requires extra purification. Before SurfCleaner, the cleaning was done using oil booms and absorbents followed by chemical treatment before it can be reused. If the water is not clean enough, it must be disposed to a municipal treatment plant for additional tretment and cannot be reused. The estimated cost of oil booms, absorbents and chemicals amounts to approximately €23,000 per year.

SurfCleaner Sales Director, says:
“We are using the world’s first hybrid skimmer separator to drive greater operational efficiency, energy and cost-savings. Our devices offer a series of major benefits for tunnel construction projects, helping remove, separate and recover contaminants from water sources, including oil, diesel, petrol, sludge and other pollutants.

We installed three Surfcleaner SCO1000 units on the site — two in the tunnels and one at the purification stage to be able to separate all the oil before the water reaches the purification system. In order to make the units as durable as possible, extra heavy duty bearings were chosen for the machines to cope with the abrasive media.”

The amount of recirculated water increased via this pre-treatment method

The installation of the SurfCleaner units provided more control over the water content and a guarantee that no oil was emitted to the internal purification stage, eliminating the risk of leaks to the surrounding environment. More cooling water could be recirculated minimizing the need to top up with raw water.

The purification process became more efficient after the oil was separated, which in turn means a cleaner pre-treated water, requiring less chemicals in the secondary treatment stage. Since the SurfCleaners collects all oil from the drill riggs, the on-site service technicians can focus on other duties instead of exchanging oil booms and absorbents on a daily basis.

The installed SurfCleaner units minimize unexpected oil spills that potentially could result in steep fines for the contractor and contamination of Stockholms raw water intake.

SurfCleaner AB
info@surfcleaner.com
www.surfcleaner.com