

Practical experience: ACO Surface Water Management

Kamen, Germany
2021



Advantages

- Filterless multi-channel technology
- non-clogging- low maintenance work
- high operational reliability

Off to a flying start

ACO delivers a low-maintenance and close-to-nature rainwater management system

At airports, reliable drainage of traffic areas is essential while simultaneously complying with all environmental standards. The filterless light liquid separator system from ACO ensures maximum operational safety at the new Terminal 3.

The construction of the new Terminal 3 at Frankfurt Airport is subject to high environmental and safety standards. The drainage concept provides for decentralised, near-natural rainwater management via a rainwater retention basin and an infiltration system.

Since the surface water from the access roads to Terminal 3 is contaminated with oils, greases and other light liquids, an additional treatment stage must be integrated between rainwater collection and infiltration.

Conventional light liquid separators with coalescence mats are not suitable for this purpose - the filters quickly become clogged due to the high sand deposits on

the traffic areas. This leads to high maintenance costs and endangers operational safety.

As an alternative, the filterless cleaning system ACO Oleosmart is used at Terminal 3, which works reliably and almost maintenance-free with a throughput of 500 litres of water per second. The water that requires treatment is guided downwards by means of a baffle and then distributed to three coalescence channels, which results in significantly reduced turbulence. Perforated plates are mounted in the coalescence channel at right angles to the direction of flow. This promotes self-coalescence - the contact of the oil droplets with each other - in addition to which coalescence takes place at the perforated plates. Water and oil separate, while the light liquid collects on the surface.

The system can be configured modularly in line with the modular system concept. At Frankfurt Airport, six separators with a nominal capacity of 90 litres each were arranged next to each other.





Information at a glance

Object: Fraport T3 Drainage of road surfaces in Cargo City, Frankfurt/Main, Germany

Customer/ Investor: Fraport AG, Frankfurt - Axel Kirn

Planner: Deutsche Abwasser-Reinigungs-GmbH DAR, Wiesbaden

Contractor/ Installer: STRABAG Großprojekte GmbH, Direktion Bayern Süd/ Direct, Bereich Großprojekte/ Fraport

Year of construction: 2021

ACO Products:

- ACO Oleosmart-PR-C NST 90
- Sludge trap-PR-C 13000/400
- Sampling shaft
- Stilling basin
- Large basin

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