



Kaldnes™ RAS
Recirculating Aquaculture Systems | STANDARD

Multilevel flatfish farm

Start up: 2008
Investor: Seafarm BV
Consultant: Biodesign

1. Raceways for flatfish with CO₂ control integrated with air ventilation system
2. Oxygenation and N₂ stripping from level 3-4
3. Pumping
4. Ozonation, foaming oxygenation and N₂ stripping
5. Blowers
6. Mechanical filtration
7. Biofilter for level 1
8. Biofilter for level 2
9. Biofilter for level 3
10. Biofilter for level 4

Challenge

The Dutch company Seafarm BV had concluded that their fishing activity was not a sustainable business due to declining catches of wild fish. They searched for new technology all over Europe for a fish farming system integrated with a RAS system, able to meet high demands: Low cost, small footprint, low energy consumption including full temperature control without the use of external heating, almost no water consumption, virtually no pollution including no need for antibiotics (green production).

Solution

A multilevel shallow raceway flatfish farm combined with a multilevel RAS system based on Kaldnes™ Moving Bed process- technology, Hydrotech drum filters and an ozonation and foaming unit.

Design capacity

- ▼ Seafarm BV installation (color photos): 200 ton/year
- ▼ Modular unit (3D drawing): 100 ton/year

Background

Krüger Kaldnes has for more than 15 years cooperated with fish farming companies for integrating their MBBR-technology in land based fattening farms.

In the spring of 2008, the Dutch company Seafarm BV put into operation a multilevel turbot farm based on shallow raceways. Kaldnes™ Moving Bed process-system with Hydrotech drumfilters are the core of the Kaldnes™ RAS integrated with this highly innovative farm.

The plant needs less space and has been performing excellent, providing a high yield on production with minimal use of energy.

