Jellyfish removal Koeberg Power Station

Application market
Industry

Market segment
Water Intake & Power

Pumped medium
Seawater

Pump product
Immersible

Country
South Africa

Challenge
The Koeberg nuclear power plant is located on the west coast of South Africa, just north of Cape Town and within sight of Table Mountain. Seawater supply for cooling is crucial for the reliable operation of the plant. An annual jellyfish inundation clogged the inlet to the cooling unit and thus, was a risk to safe operation of the whole plant. Due to their composition, it was not possible to screen the jellyfish from the water, alternative solutions were demanded.

Solution
To solve the problem, the Hidrostal Screw Centrifugal Pump is used, which has the unique ability to reliably pump seawater with a very high solids content without clogging. The jellyfish reach an immersible pump unit installed on a floating structure by means of a system of booms, and the jellyfish are pumped away.

Benefits
The main requirements of the customer could all be fulfilled satisfactorily:
- Supply of cooling water with safe operation and correspondingly high reliability
- Non-clogging pump operation
- Gentle handling of live Jellyfish

Quantity of units sold
2

Pump type
F10K-SS2R + FEVB4

Motor data
45 kW / 4 pole / 50 Hz / Immersible

Material combination
Cast iron pump body, nodular iron impeller and Hidrohard wear parts

Duty point
Flow : 220 litres per second / Head : 14 meters

In operation since
2008