

Hydrotech gives sharks a clearer view

Hydrotech's world leading filters are used in many different areas such as effluent polishing, stormwater, waterworks, process plants and fish farms.

Now people are seeing the possibilities of using Hydrotech in other areas. The Meereszentrum tropical aquarium in northern Germany is just one example.

We dedicate resources to continued product development to ensure our customers receive modular, flexible systems that give maximum filtration effect and maximum operating economy.

The Meereszentrum tropical aquarium in northern Germany has chosen Hydrotech Drumfilters to treat its "shark infested" waters. This gives clearer water, saves on energy and minimizes the loss of artificial sea water – a great improvement on using traditional sand filters.

The Meereszentrum is one of Europe's major sea world attraction centres and one of the largest tropical aquariums. It boasts a 3000 m³ sea water tank that allows it to hold bigger sharks than anywhere else in northern Europe. People can see different kinds of sharks including the 5 m long Sand Tiger Shark.

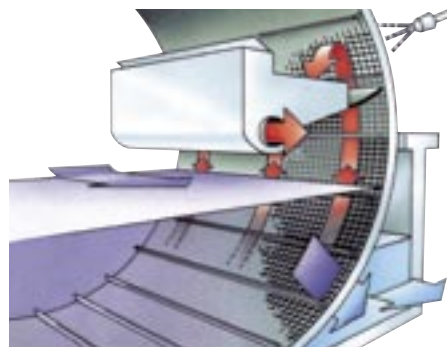


There are 12 sharks in the tank for the time being. The most spectacular one is the big Sand Tiger Shark.

The problem such aquariums face is how to filter the sea water in as cheap and effective way as possible. Apart from hygienic concerns the water also has to be highly visible to

allow visitors to view the sharks without any problem. Traditional sand filters had proved energy expensive and sea water intensive, so the company reviewed several alternatives before deciding to buy its solution from Hydrotech systems.

This is an expensive way of renewing water. One requirement was that the purification system had to be as efficient as possible in preserving water, while holding a constant temperature of 23 °C. Meereszentrum chose Hydrotech as it saw the advantages gained in increased efficiency in saving sea water.



Hydrotech Drumfilters eliminate the smallest particles.

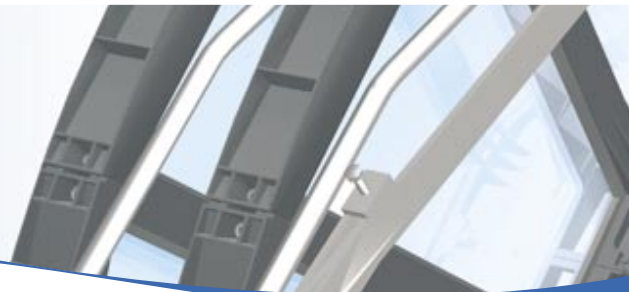
Drumfilters

from Hydrotech

Sea water at the aquarium is made artificially by adding salt to fresh water.

The complete process line consists of 3 pieces HDF1203-1P Hydrotech Drumfilters, filtering at 40 micro meter at a total flow of 500 m³/h.





Continued: Hydrotech gives sharks a clearer view

Microscreening

Microscreening is an efficient and reliable technique for separation of particles from all kinds of liquids. The Hydrotech Drumfilter is a mechanical and self-cleaning filter specially designed with a view to achieving high performance in systems where it is essential to prevent the particles from fragmentation, as high visibility in the water is important.

Flow capacity in filters:
up to 1000 l/s per filter.

Filter openings:
10 to 1000 micro meter.



Drumfilter, HDF501-1P.

Water passes from a drum filter to a protein skimmer. This combined process eliminates even the smallest particles that might otherwise impair visibility in the water. The final step in the process is a trickling filter, filled with elements to get rid of ammonia by bacterial degradation and to ensure degassing and correct oxygen levels in the water. To ensure total control of hygienic conditions in the water a small amount of ozone is added to the protein skimmer.

Energy saving

The process line is kept to minimum headloss to save energy. All that is needed to run this part of the treatment system is a total of 1.4 m from inlet

reservoir to drum filter to exit of the protein skimmer. This is excellent compared to a traditional sand filter that would need 8-10 m of headloss.

the drum filters and foam from the protein skimmer are the main losses of water, but they save far more water than any of the alternatives."

"Aquariums are a whole new and very interesting usage area for Hydrotech filters"

A whole new application area for Hydrotech

"Aquariums are a whole new and very interesting usage area for Hydrotech filters", says Henrik Mortensen, Sales Manager at Hydrotech. "Our process saves much more water than any alternative. We see that rinse water from

All industries strive to become as cost efficient as possible while becoming even more environmentally friendly. Drumfilters from Hydrotech are one way aquariums can fulfil these ambitions. ■



Three filters HDF1203-1P installed in parallel. Inlet valves to each filter.



Clean water is collected in a reservoir.