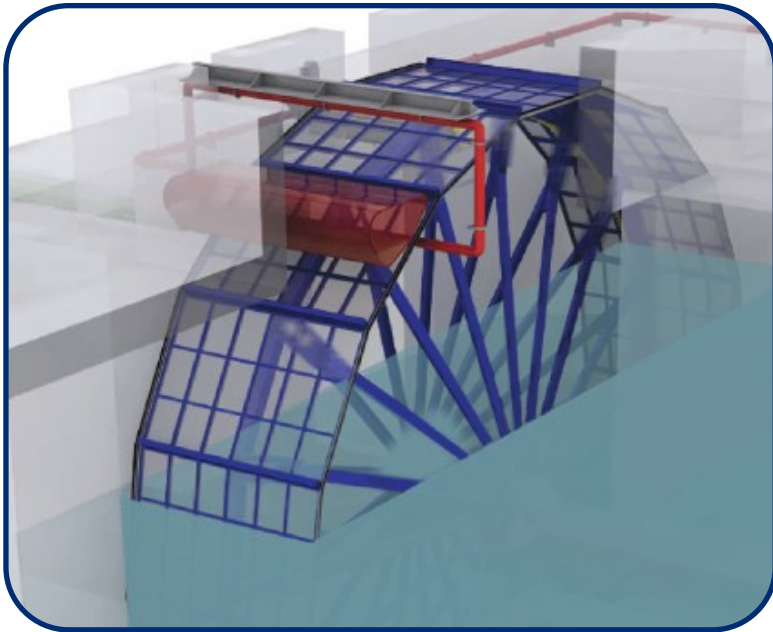


# DRUM SCREEN

## OUT-TO-IN FLOW



### PURPOSE

- ◆ Drum screens are used to arrest the small debris contained in a large flow of water so that the downstream users remain unobstructed and clean
- ◆ The debris can be of all types including fish, shrimps, jellyfish, leaves, grass, man-made refuse, plastics, seaweed, etc.
- ◆ Drum screens are used in thermal and nuclear power plants, LNG terminals, desalination and fertilizer plants, drinking water and irrigation plants.
- ◆ They are especially recommended for very large flow rates

### DESCRIPTION

- ◆ The drum screen is installed in a concrete chamber between two parallel side walls with large apertures. The drum consists of a cylindrical rotor with a cylindrical surface made of side-by-side rectangular mesh panels. The rotor has two bearings and a drive at deck level. The panels travel down into the water. The water flows through the mesh panels into the drum chamber via the upstream inlet, around the outside of the drum and flows out after passing through the mesh via the two side-wall outlets
- ◆ The debris-laden panels travel up above deck level around the top and down again. One or two spray pipes with fantail jet nozzles located inside the drum screen at deck level, back-wash the panels and remove the debris which are projected into an external collection trough. The debris travel in a deck flume to the debris disposal system (basket, separator, etc.)
- ◆ The screens are normally stopped and are washed periodically when obstructed by the debris. Permanent rotation can be provided

### ADVANTAGES

- ◆ 90 years' experience
- ◆ Permanently resists high levels of head-loss
- ◆ Large debris-handling capacity
- ◆ Well-suited for permanent rotation
- ◆ Compact civil structure
- ◆ Fully-automatic
- ◆ Fish-friendly option
- ◆ Next to no maintenance required.
- ◆ Cost effective
- ◆ Easy access to the external debris trough
- ◆ No internal debris interference

## OPTIONAL FEATURES

- ◆ Two or three-speed operation
- ◆ Seismic qualification
- ◆ Special high travel speed design for handling very heavy debris loads
- ◆ Jellyfish lifting trays
- ◆ Screening medium resistant to fiber build-up
- ◆ Screening medium preventing jellyfish adherence
- ◆ Low pressure water-life protection system
- ◆ “Scoop-a-fish™” total fish survival system
- ◆ Atex compliance
- ◆ By-pass valves



## ANCILLARIES

- ◆ Spray-water supply circuit
- ◆ Head-loss monitoring system
- ◆ Electrical control cabinet
- ◆ Upstream bar rack (25 to 75 mm spacing (1 to 3”))
- ◆ Pit dewatering stoplogs
- ◆ Trash collection system (basket, etc.)



## MATERIALS

- ◆ Drum rotor, mesh carrying structure, hub and shaft, bearing blocks: fresh-water: painted carbon steel or AISI 304L stainless steel; seawater: AISI 316L stainless steel with anodes, duplex or super-duplex stainless steel
- ◆ Transmission shaft and bearings: fresh-water: carbon steel or AISI 304L stainless steel; seawater: AISI 316L stainless steel, duplex or super-duplex stainless steel
- ◆ Bolts, nuts, washers: fresh-water: A2 or A4 stainless steel; seawater: A4, duplex or super-duplex stainless steel

## SIZES AND DATA

- ◆ Mesh aperture from 1x1 to 10x10 mm (0.04 to 3/8”), or less upon special request
- ◆ Flow rate up to 170000 m<sup>3</sup>/h (500000 gpm)
- ◆ Tidal variation: no practical limit
- ◆ Panel frame useful width: 1.3 to 6 m (2 to 13 ft)
- ◆ Wider machines on special request (two-wheel layout)



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