Environmental ES Systems

Environmental Systems Product - Info No. 10

Treatment Systems for Waste Water

EVAPORATOR, Type ES-EP

Economical solutions for disposal of process wastewaters are essential issues in many companies. The Evaporator ES-EP provides maximum economy in wastewater processing. The cost savings they provide translate 100% to corporate profits, providing attractive improvements in bottom-line economics. The ES-EP-Plants for treatment of industrial wastewaters also fulfil strictest environmental standards.

With the unique Evaparator Units from Environmental Systems you:

- **save up to 85 % of your costs for wastewater treatment and/or disposal.**
- **reduce labour costs by up to 80 %.**
- **reduce your residual concentrate volume by up to 50 % as compared to conventional wastewater treatment systems.**
- **obtain a system requiring minimum maintenance and service work.**
- **invest in optimum efficiency and therefore in cost-efficient wastewater disposal.**

The Environmental Systems evaporators, Type ES-EP are used in the following industrial sectors:

- Surface treatment
- Disposal providers
- Die casting foundries
- Metals processing
- Pharmaceutical and chemical processing
- Foods processing
- Drum cleaning facilities
- Packaging , etc. etc. etc.

For treatment of various wastewater types including:

- Emulsions (e.g. containing coolants and lubricants)
- Release agents (Aluminium extrusion, autoclaves)
- Wash wastewaters (from cleaning of components and systems of all types)
- Rinsing and washing baths from pretreatment systems (powder coating, enamel coating, galvanization)
- Regeneration wastewaters from water deionization systems
- Concentrates from micro- and ultrafiltration
- Galvanic, vibratory grinding, and hardening wastewaters
- Radioactive wastewaters
- Landfill leachate waters
- Dying wastewaters
- Rinse waters from crack detection systems
- Washing lyes and
- Glycol-water mixtures.

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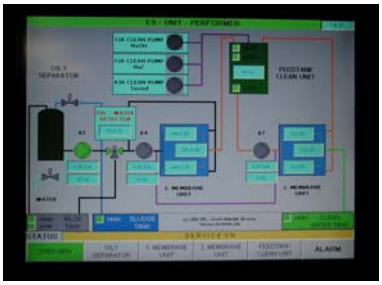
MEMBRANE-SYSTEM, Type ES-MEM

The functional basis of the Membrane-System, Type ES-MEM is the time-tested physical process of cross-flow filtration with chemically highly robust and resistant ceramic membranes.
Based on the membrane-filtration process it is possible to continuously filter particulate matter, emulsified oils, oils, bacteria and other matter and, hence, to regenerate the medium so that it can be re-used as process water or be conducted into the duct. If necessary a second treatment step can be implemented: Reverse Osmosis.

As opposed to microfiltration, in reverse osmosis no porous (“permeable”) membranes are in charge of separation and/or transport, which means that the solvent is transported through the “leak-proof” membrane by means of solution-diffusion processes. Reverse osmosis (RO) is a membrane process for separating solutes (salts, macromolecules) from a liquid. In reverse osmosis, the osmosis principle is reversed.

Applications:

- Treatment of drinking water
- Treatment of surface water & karst water
- Treatment of water from self cleaning filters
- Separation of bacteria from wastewater at sewage treatment plants
- Treatment of oily water bilge water from ships
- Separation of phosphates from wastewater at sewage treatment plants
- Upgrading of juices
- Concentration of oil/water-emulsions
- Treatment of soak cleaning stations
- Cleaning of antibiotics
- Concentration, separation & cleaning of serums & enzyme
- Cleaning & Concentration of protein & gelatine
- Concentration of water-based varnish from spray booth
- Filtration of whine



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