

Electrochemical emulsion breaker equipment for waste water treatment

The offering client is a Hungarian SME. The profile of the company: research and development in the fields of industrial waste management, environmental protection, electrochemistry, chemistry.

The offer of our partner provides a new electrochemical process for the treatment of waters/sludges polluted with oil derivatives.

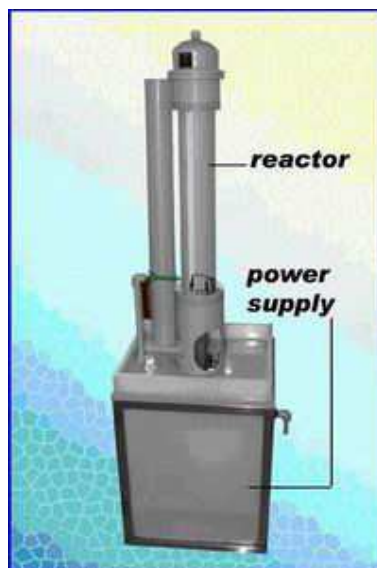
Oil emulsions are produced in large quantities throughout in the industry. Car wash stations, cutting workshops, oil refineries and technologies using lubricants produce large amounts of waste waters that contain colloid oil. Breaking of oil emulsions and cleaning such polluted waters is a difficult task though it is enforced by environmental regulations.

Using the new automated electrochemical apparatus, waters polluted with oil can be cleaned very efficiently, at low energy costs. Oil content of waste waters can be easily decreased under 5 ppm, which is the current environmental limit in the EU. Having a low chemical oxygen demand, the treated water can be recycled or let into the sewage system. The apparatus can be manufactured in variable sizes, scaling-up of the technology is not problematic. We offer small mobile apparatuses just as big reactors for the industry. The equipment can be produced in different sizes, and can be tailored to specific industrial needs.

Dual benefit is achieved through the operation of the new device: on one hand the ecological burden posed by the pollution is decreased, on the other hand water consumption can be significantly reduced by means of recycling of the regenerated industrial water. Using the new technology, the chemical oxygen demand (COD) and floating solid content of the water can be decreased to acceptable levels. Another advantage of the technology is that the hardness of technological waters drops to normal level (post-process average: 15 German hardness), which brings the well-known advantages to all equipment involved.

Sludge processing, processed water recycling

Pollution separated from the wastewater is collected in a tray located at the bottom of the equipment, from where it is drained into a storage tank. Due to the cleaning technology, usually about 95% of the processed water is suitable for recycling (e.g. in case of washing, pre-cleaning). By means of cleaning and recycling the annual water and sewage fees can be reduced by about 85 – 90%, in case of many water intensive technologies. Cleaning the oil-contaminated wastewaters on-site eliminates waste transportation costs as well.



Main advantages:

- The ecological effects of oily waste waters can be decreased by using the technology
- Freshwater consumption of industrial technologies can be significantly reduced by using the technology, which enables re-using or recycling of the water
- Due to the treatment, the hardness of technological waters drops to normal level
- Considerable water and sewage fees and ecological fines are savable
- Approximately 85% of the processed water is suitable for recycling

Potential areas of use:

- Water cleaning at machine shops / manufacturing sites
- Water cleaning in the automobile industry
- Water cleaning at car wash stations
- Waste water treatment in the oil industry
- Remediation of polluted environs of oil storage tanks
- Cleaning of rubbish-heap leechate
- Breaking of oil and water emulsions in general
- Cleaning of seawater from oil spills

Intellectual property status:

Patented, patents pending

Inventor and owner of the intellectual property rights:

G.I.C. Industrial Servicing and Trading Ltd.

Tűzkő utca 7. fsz. 4.

1118 Budapest, Hungary

Phone/Fax: +36 1 319 1146

E-mail: gic@starkingnet.hu

Web: <http://www.gic.co.hu>

Type of collaboration: The client is interested in selling the license (license agreement) and the Know How of the technology

For further information please contact:

Dr. Peter Mogyorosi,

Director

Laser Consult Ltd.

Address: H-6723 Szeged, József A. sgt. 130.

Post address: H-6701 Szeged, Pf. 1191

Phone: +36-62/562-782, Fax: +36-62/562-783

E-mail: laserconsult@t-online.hu

Web: <http://www.laserconsult.hu>