Companies are facing rising operating costs due to the increasing cost of water, escalating electricity costs and increasing costs to haul away waste. In addition, regulations are becoming more stringent. This is evident with tighter NPDES discharge limits. With LED evaporation technology, a high quality condensate provides options for recycling and reusing water, which reduces water consumption and disposal costs.

Evaporation and Crystallization – A Clean Solution

Historically, evaporation and crystallization has typically been an expensive method of treating water due to the low efficiency of direct heating methods used with atmospheric evaporators. LED technology makes evaporation affordable. With more efficient heating technology, such as heat pumps and Mechanical Vapor Recompression (MVR) options, this clean technology is being applied in more and more facilities.

For 30 years LED evaporators and crystallizers have provided wastewater treatment solutions throughout the world. From process water to wastewater, recovering clean water, reuse and recycled water applications include:

- Process water
- Rinse water
- Cooling tower make-up water
- Photo-chemicals
- Landfill leachate
- Zero liquid discharge

LED technology offers the highest quality products and material selection, with “fit for purpose” materials. Matching of the application and material is critical to reduce corrosion and protect your investment!

Heat Pump

A core unit design of the company, this technology has been refined over many years in terms of flexibility, low energy consumption and reliability. The current range consists of models with increasing capacity and meets the separation requirements of many wastewaters. All units are skid mounted for simple installation, controlled by a PLC and designed for continuous operation 24/7.

E Series Evaporators

- Reduced fouling and scaling with forced circulation – low maintenance
- Operate under a vacuum to recover thermal energy and reduce the boiling point – saving valuable energy dollars
- Designed for continuous operation 24/7
- Capacities 0.3 – 7 gpm - able to handle small and medium size process streams
- General purpose evaporator for a variety of process waters

EKT Series Evaporators

- Specially designed for concentrated acids and extremely corrosive solutions
- Specific ceramic and plastic material is used to stand up to the aggressive environment
- Capacities 0.3 – 7 gpm - able to handle small and medium size process streams
- The perfect solution for:
  - Liquids that cannot be neutralized due to precipitation of metals
  - Acids solutions and other substances that would cause pitting and corrosion of the equipment
  - A waste stream with a product that needs to be recovered and reused (i.e. chromic acid rinses or pickling rinses)

R Series Evaporators

- Low flow applications with high solids content
- A scraper design to increase the final dry weight of the concentrate

MVR – Mechanical Vapor Recompression

Where large volumes and high temperatures are combined, this is the technology of choice. The low running cost due to minimal electrical energy consumption, enable installation in a plant with a return on investment that can often be measured in months.

TC Series Evaporators

- Flow capacity from 1.8 to 22 gpm in a single unit
- Reduces the capital cost of an evaporator system by providing skid mounted, modular, standard units ready to order
- The system operational utilities include a compressed air supply and electrical connection

MVR Series Evaporators

The MVR 250 is a high capacity mechanical vapor recompression (MVR) evaporator with treatment capacity to 44 gpm. The unit is designed as a two stage system: falling film technology followed by forced circulation. Each stage has an independent mechanical vapor recompression system. The first stage is designed to pre-concentrate the solution, while the second stage provides further concentration.

Very low specific energy consumption of only 0.11 kWh/gallon

Every LED evaporator operates as a closed loop system under vacuum. Atmospheric evaporators lose valuable energy through air emissions and may require an air permit or waiver for compliant operation. An LED evaporator has an efficient design with one (1) inlet and two (2) discharge streams – concentrate and distillate.

LED Evaporation Technology – No Air Emissions Ever!

Reliable and easy to use, this equipment is designed to take advantage of excess hot water or steam readily available from cogeneration or cooling plants. Use of the existing heating and cooling water provides a cost effective solution by reducing the operating cost.

EW Series Evaporators

- Designed to operate at a lower boiling point (104 °F) to reduce operating cost
- Reduced fouling and scaling with forced circulation – low maintenance
- A general purpose evaporator able to handle a variety of process waters

RW Series Evaporators

- Designed to treat a high concentration of solids
- These units often follow a primary evaporator in series to provide further concentration or crystallization of the concentrate
- Can work in either a continuous or batch process mode

Hot Water/Cold Water – External Shell and Tube Heat Exchanger – Vacuum Evaporator

Current range has been refined over many years in terms of flexibility, low energy consumption and reliability. The current range consists of models with increasing capacity and meets the separation requirements of many wastewaters. All units are skid mounted for simple installation, controlled by a PLC and designed for continuous operation 24/7.

- The first stage is designed to pre-concentrate the solution, while the second stage provides further concentration
- Very low specific energy consumption of only 0.11 kWh/gallon

A Clean Solution

Crystallization –

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