Customer Success Story

Location: Africa

AMI ROWPU offer innovative design, rapid deployment, and flexibility to operate in different environments

Remote regions and areas affected by crises and natural disasters face significant challenge of access to clean and safe drinking water.

Challenge

Fast response times during humanitarian efforts are critical. However, many regions around the world lack stable electricity supply, infrastructure, and access to clean water.

The U.S. military approached Applied Membranes to design and build self-contained, portable Reverse Osmosis Military Water Purification Units (ROWPU) for deployment in various regions worldwide.

The ROWPU would be critical to ensure the availability of pure drinking water, aid in disaster relief efforts, and prevent waterborne diseases.

Each ROWPU needed to produce at least 950 gallons (3,596 liters) of potable water per hour from diverse sources including seawater source with up to 60,000 ppm TDS.

The ROWPU needed to:

- Be capable of rapid setup and immediate operation
- Be easily transportable to remote locations
- Withstand harsh environmental conditions and extreme temperatures
- Treat various water sources worldwide under different operational scenarios

The U.S. military provided specific delivery dates to ensure timely installation in various regions.

Solution

Applied Membranes custom-engineered and built several state-of-the-art, highly complex yet easy to operate **30 GPM (7 m3/h) desalination ROWPU**.

AMI ROWPU are designed to treat a variety of source waters around the world up to 60,000 ppm. These units produce high-quality potable water and remove cyanide, lewisite, arsenic, and radioactive iodine from contaminated source waters.

Each ROWPU is trailer-mounted with complete seawater intake systems, pretreatment, SWRO desalination, post treatment, and a diesel generator.

AMI ROWPU frame design allows clear access to operate the system. Its durable construction protects the system from corrosion and rusting and can withstand harsh environments. The frame is covered during normal operations with a custom canvas cover.

Each unit includes a flatbed cargo trailer to provide a mobile platform for easy operation and transportation.

Key Features:

- Trailer for easy transportation
- Diesel generator
- Multimedia filter
- Calcite filters
- Chemical injection system
- Canvas cover for protection
- Programmable Logic Controller (PLC)

Results

AMI ROWPU serves as emergency water treatment solutions for timely provision of clean drinking water.

Engineering expertise: AMI ROWPU offer highly flexible installation to meet varied operating requirements. The robust, reliable, easy-to-operate units are ideal for quick deployment and setup.

Design excellence: Each AMI ROWPU is trailer-mounted, enabling easy transportation and rapid deployment in various regions. It can be operated on or off the supplied trailer, based on the specific application.

Support and training: AMI provided documentation in several languages, in addition to commissioning, start-up, and comprehensive training at specific locations.

AMI's collaboration with the military highlights its commitment to providing innovative solutions for critical water treatment needs.

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