POTENTIAL ENGINEERING

Global Leader and Your Partner in
Water Pollutant Removal Systems

MECHANIZED OIL WATER SEPARATOR

An Oil water Separator System

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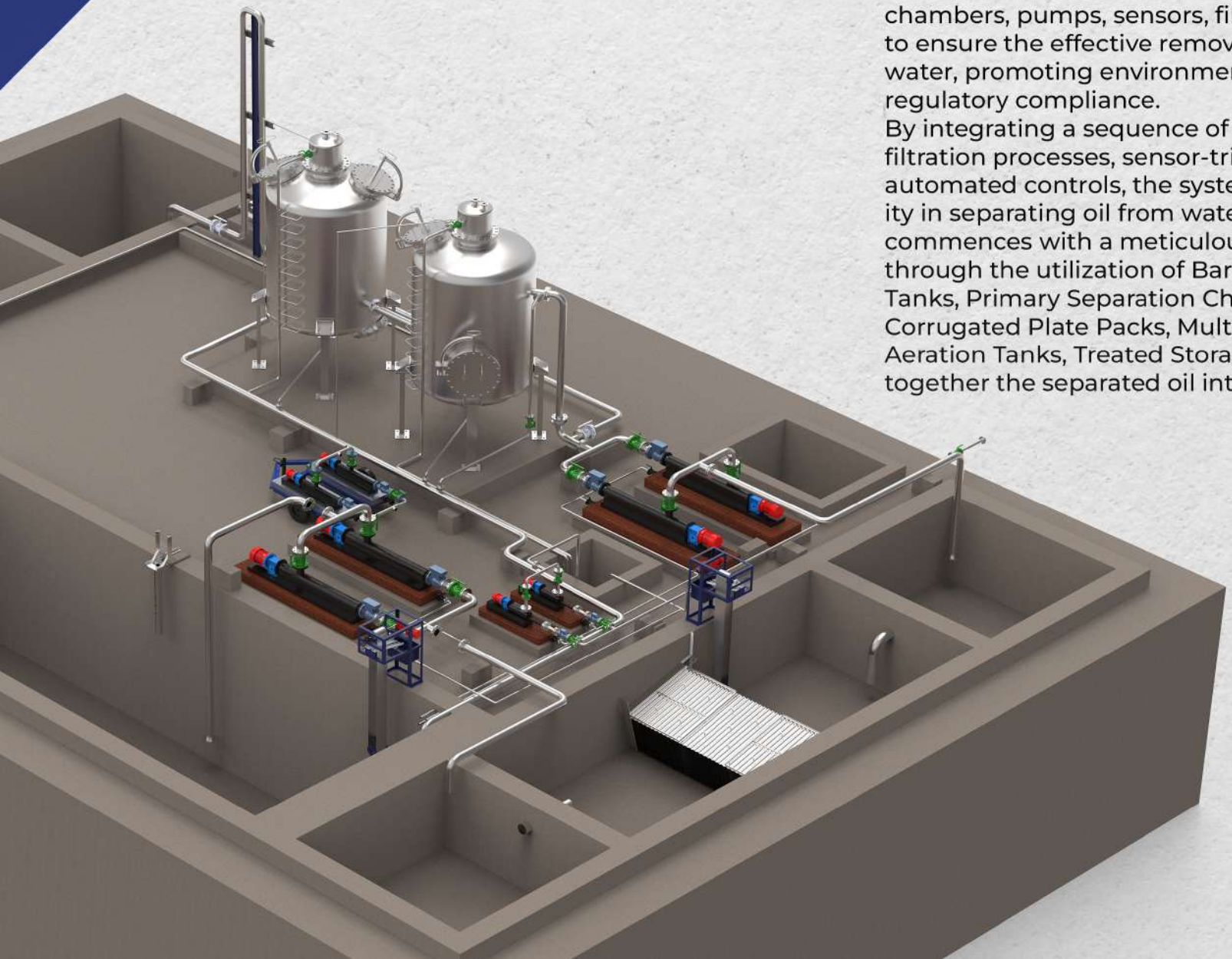
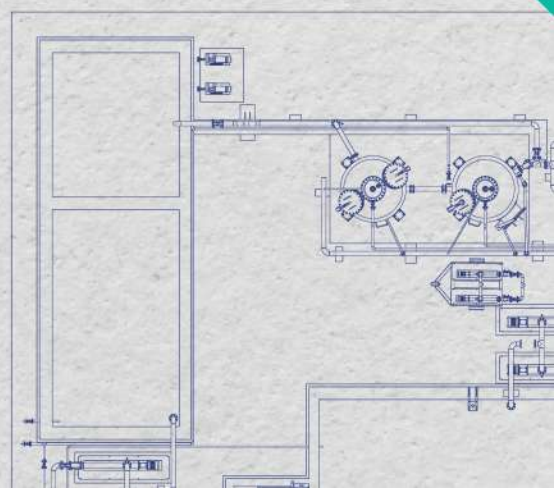
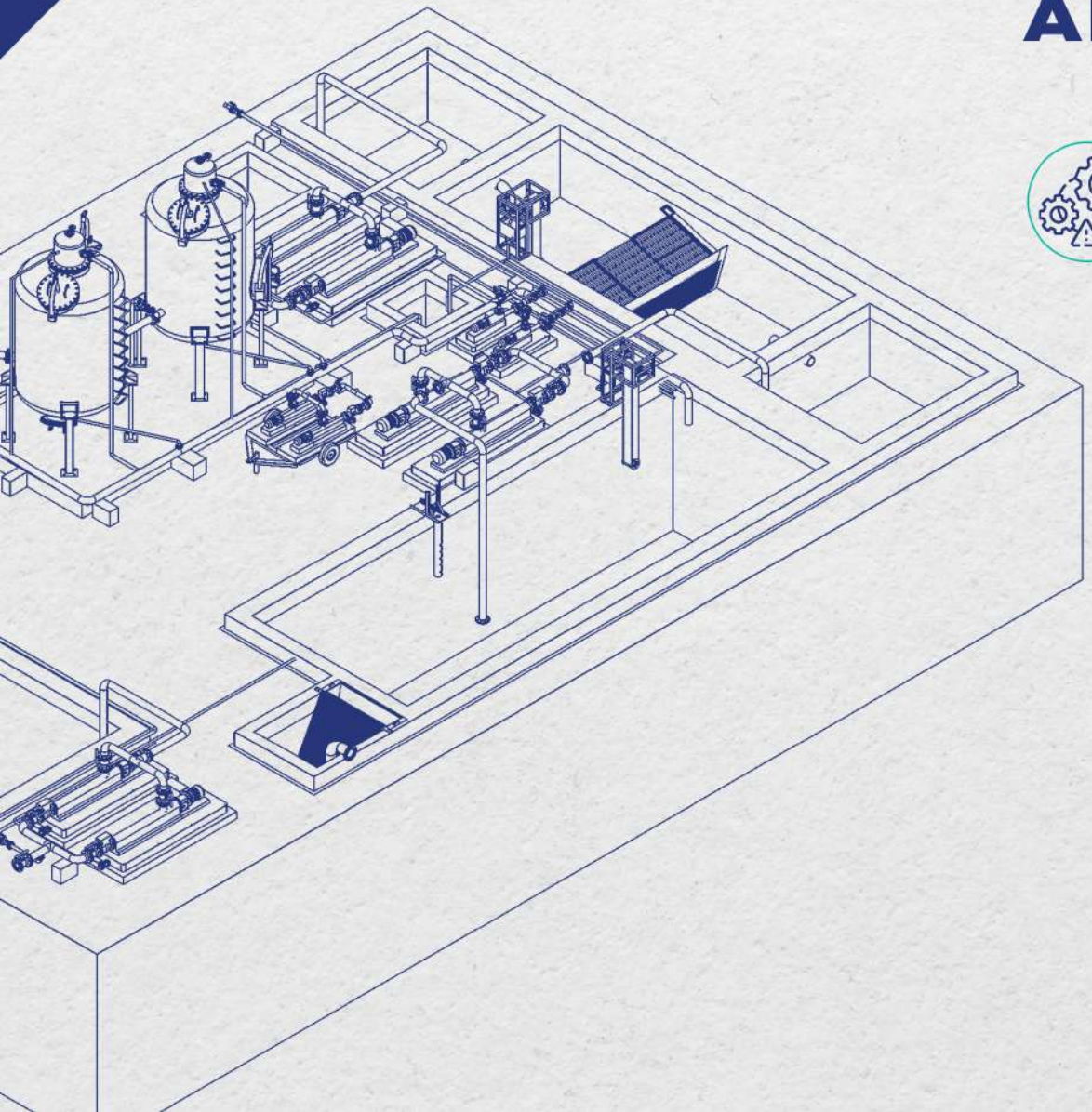
The Mechanized Oil Water Separator System employs various chambers, pumps, sensors, filters, and control mechanisms to ensure the effective removal and collection of oil from water, promoting environmental sustainability and regulatory compliance.

By integrating a sequence of operations involving pumps, filtration processes, sensor-triggered mechanisms, and automated controls, the system ensures optimal functionality in separating oil from water at different stages. It commences with a meticulous startup process, progresses through the utilization of Bar Screens, Underground Holding Tanks, Primary Separation Chambers equipped with Corrugated Plate Packs, Multimedia Filters, Coalescer Filters, Aeration Tanks, Treated Storage Tanks. It ends with bringing together the separated oil into the Oil Collection Tank.







ABOUT PROBLEM

Inefficiency of Traditional OWS

Traditional methods of separating oil from water in industrial processes are often inadequate, resulting in environmental pollution and regulatory non-compliance due to ineffective oil-water separation. Current systems lack efficient mechanisms to manage oil-water mixtures, leading to discharge of untreated or inadequately treated water, which can pose ecological and regulatory risks. This highlights the necessity for an advanced and reliable Mechanized Oil Water Separator system. Such a system is essential to effectively segregate oil from water, ensuring compliance with environmental standards and enabling industries to responsibly manage their wastewater discharges. The system should feature robust equipment, precise instrumentation, and an automated operation process to efficiently treat and separate oil from water, reducing environmental impact and meeting stringent regulatory requirements.

Therefore, the need for a sophisticated Mechanized Oil Water Separator arises from the inefficiency of existing methods in treating oil-water mixtures, demanding a technologically advanced solution to achieve efficient and compliant separation of these substances.

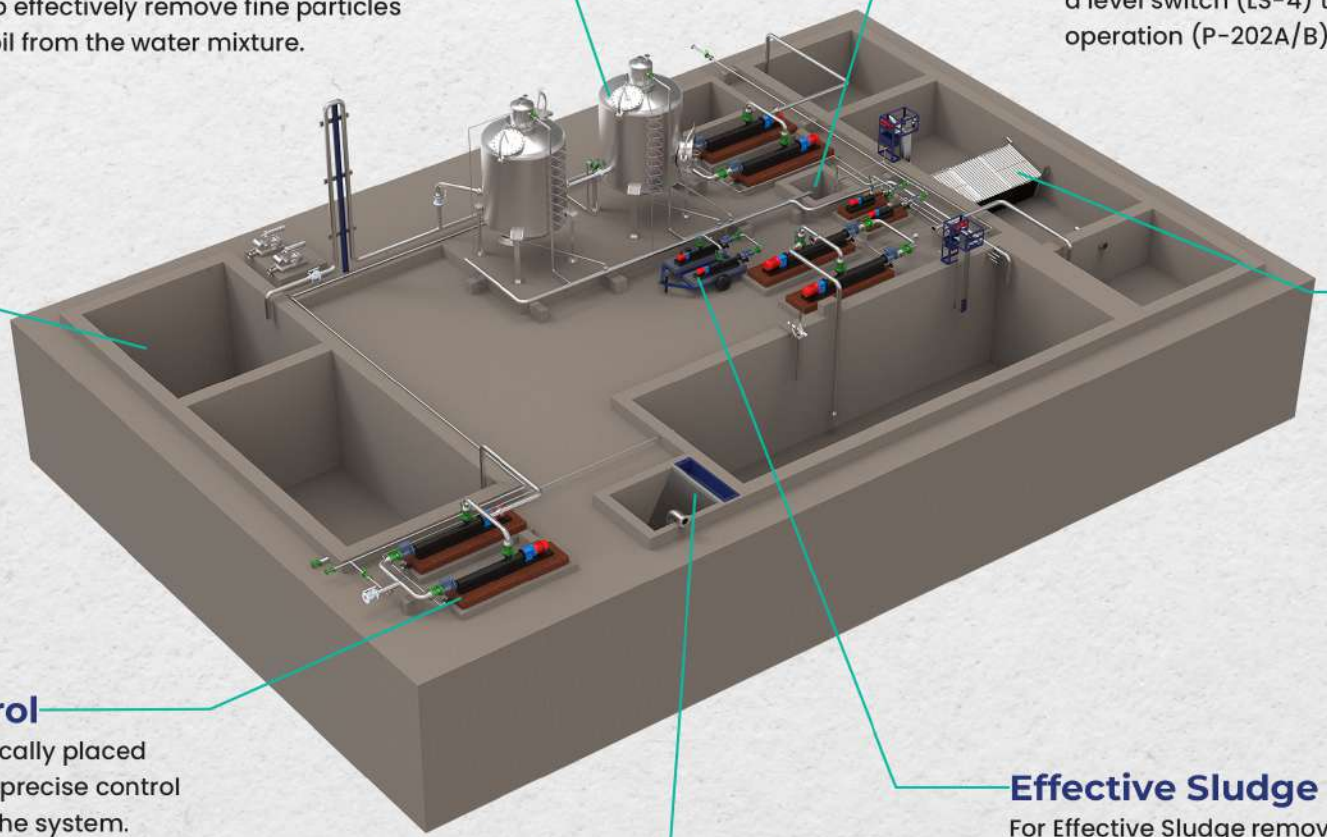
OUR SOLUTION

Fine Particle Removal

The Multimedia Filters and Coalescer Filters work in tandem with associated valves and sensors (OS-3, OS-4) to effectively remove fine particles and separate oil from the water mixture.

Oil Collection Management

The Oil Collection Tank (T-202) gathers separated oil from different sections of the separator, featuring a level switch (LS-4) to regulate pump operation (P-202A/B).



Water Quality Enhancement

The Aeration Tank (T-203) utilizes an air diffusing system to increase dissolved oxygen levels, reducing BOD and COD levels for improved water quality.

Optimized Oil-Water Separation

The Primary Separation Chamber, featuring the Tilted Corrugated Plate Pack (TCP-201), Sensors (OS-1), and Skimmers (BS-02), facilitates effective oil separation from water, enhancing overall system efficiency.

Efficient Fluid Control

Pumps and Valves are strategically placed to manage fluid flow, ensuring precise control and direction of liquids within the system.

Proper Particle Separation

The Bar Screen (BS-201) filters particles by size, preventing larger debris from disrupting downstream processes and ensuring smoother operation.

Effective Sludge Removal

For Effective Sludge removal , progressive cavity type of pumps are used such as the Low Shear Pump which produces little or no turbulence through the action of its pump and prevents the emulsification of the fluid.