

Oil/water emulsion is found in the wastewater effluent streams coming from various sources, such as the petroleum refineries, the discharge of bilge and ballast water, workshops, petrol stations, rolling mills and from edible oil and soap factories.



The oil recovery process adopted will depend on how the oil is present in the water stream. Oil can be found as free floating oil, as an unstable oil/water emulsion and also as a highly stable oil/water emulsion. Free oil in wastewater is readily removed by gravimetric separators, while unstable oil/water emulsions can be mechanically or chemically separated.



API, CPI, pre-coagulation + DAF + nutshell filters are the most popular and most efficient treatment methods. As USSU, we generally use full line of the US-OILY system.

Dissolved air flotation (DAF) for the removal of emulsified oils from oily wastewater is the best solution. A dissolved air flotation unit has been designed for this purpose and the ultimate goal is to explore the technical viability of this technique.

The performance of the DAF system has been investigated using synthetic oil emulsions and true wastewater where three different types of oil have been managed.



The various operating conditions have been tested to define the most appropriate conditions for processing oil/water emulsions. The effect of coagulant addition on the oil separation in the presence of an emulsifying agent is investigated.

Capacity of US-OILY wastewater treatment systems starts from 5 m³/h upto 50 m³/h as one line. For higher capacities, we can design parallel lines or we can make a design as a concrete system instead of a package system.

For more info, please contact us from info@ussumuhendislik.com