



**Turbulent Technologies**  
Ltd

Oil and water don't mix, but they don't separate easily either.

Turbulent Technologies is an Israeli high-tech company, offering proven "Dynamic Coalescence" mixing and separation technology for applications in the treatment of produced water from oil production, desalting of crude oil, hydrometallurgy and other industrial processes involving organic in aqueous and aqueous in organic emulsions, even in the presence of suspended solids.

Our technology is already operational at large scale (20,000 gpm), providing operational and capital cost savings for customers in the Copper Mining Solvent Extraction industry. Our designs have been tested using crude oil, bitumen and many types of process water. Dynamic Coalescence is efficient even in the presence of suspended solids.

Process water from many industrial plants and produced water from oil production contains small quantities of oil or other organic liquids, in the form of tiny droplets, that are difficult to remove to meet the required standards for re-use, repurposing or discharge.

Small droplets are an obstacle for all methods of separation, including settling, centrifugal separation, electrostatic-separation, sieve and filter separation, hydrocyclones etc.

Our well known applied mixing science team has developed a novel practical method for forcing coalescence of small droplets onto the surface of large droplets without further formation of small droplets, by Turbulent Mixing and Dynamic Coalescence. (Patented and patent pending). Our technology has been tested in the presence of fine suspended solids and has been shown to be robust across a wide range of operating conditions. This robustness is unique for three phase separation problems.

By adding a compact TT Dynamic Coalescence unit in front of the existing separation equipment of all types, significant improvements in separation performance and speed are achieved. Some customers use our equipment to increase flow rates in existing plants. No additional chemicals are required, and typically no changes are made to the existing process, our equipment just coalesces the smaller droplets resulting in a modified drop size distribution of the emulsion.



Our equipment offers OPEX savings and CAPEX reduction – call to discuss your application.

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