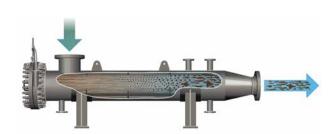


Cost effective performance enhancement of deoiling technologies

Removal of dispersed oil with treatment technologies such as settlers, deoiling hydrocyclones, and flotation tanks can be enhanced by applying NOV's Mare's Tail® coalescer. This unique technology can be used to increase the droplet size distribution without the use of production chemicals, reversing the detrimental effects of choke, valve, or even pump shear. The pre-coalescer is unlike any other device in the market as it delivers a balance between droplet coalescing ability and tolerance to reservoir solids. Most typically, the unit is applied upstream of deoiling hydrocyclones where improvements of up to 50-70% have been observed.

Benefits:

- Chemical free oil droplet coalescence
- OSPAR best available technology; environmentally friendly
- Optimizes downstream produced water treatment equipment, both modern and obsolete designs
- Pre-filtration not required, the unit is tolerant to solids such as sands and reservoir debris
- Simple design, no moving parts
- Built to piping specifications and easily retrofittable to existing facilities
- Test skids available for demonstration at site or in NOV's Flotta test centre



Design specifications

Parameter	Value (per unit)
Operating ranges	1-400 m³/h
Maximum typical inlet OiW concentration (deoiling/polishing)	2000 ppmv / 50 ppmv
Typical inlet droplet size (dv50)	5-10 micron
Operating pressure range	Any
Differential pressure	0.1-1.0 bar
Tolerance to gas	Yes, velocity dependent
Associated products	NOV Inline Bubble Generator, NOV deoiling hydrocyclones, NOV flotation products