



Harnessing breakout gas to deliver an additional stage of deoiling

Traditionally, produced water degassers were designed to remove flashed gasses (mostly methane) from oilfield waters before discharge, often using very high-turbulence internals intended to deliver a rapid and cost-effective degassing solution. This approach succeeded in this main purpose; however, generation of extreme turbulence did not provide good conditions for oil droplet separation. Droplet shattered and a suboptimal quiescent zone definition meant that little to no deoiling removal was typically observed. NOV's ADEG design was created to deliver this degassing requirement, but also enhance conditions for oil droplet separation such that an initial stage of deoiling treatment could be delivered as a bonus. The ADEG solution has been proven to deliver robust deoiling performance often rivalling and exceeding what can be achieved with some purpose-built floatation machines.

Benefits:

- Field proven for over 24 years
- True high performance internals design
- Does not rely on fouling components such as matrix-, or structured coalescing packs
- Suitable for operation on floating facilities
- Robust design without small gas injection orifices or complex internals; proven to perform well in heavily fouling conditions
- Performance improves with turndown
- Performance can be augmented either via NOV's unique Inline Bubble Generator or our Mare's Tail® pre-coalescer technology
- Performance well described by NOV modelling capabilities
- ADEG forms the basis for NOV's Advanced Horizontal Induced Gas Flotation (AHIGF) unit

Design specifications

Parameter	Value (per unit)
Operating ranges	<10-1500 m ³ /h
Maximum typical inlet OiW concentration (deoiling/polishing)	1000 ppmv / 30 ppmv
Typical outlet concentration (deoiling/polishing)	100-200 ppmv / <10ppmv
Lowest achievable outlet concentration	<10 ppmv
Operating pressure range	0-2 barg typical, can operate at any pressure depending on degassing requirement
Skim rate	1-3 v%
Associated products	NOV Inline Bubble Generator, ADOHC, ACFU, Mare's Tail® Coalescer



Ask us how we can retrofit your conventional degasser to maximize its deoiling performance