# EMULSION EXTRACTION AND PROCESSING FROM AN OIL/WATER SEPARATOR

## CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the priority benefit of both United States patent application numbers 62/041,509 filed August 25, 2014 entitled EMULSION EXTRACTION AND PROCESSING FROM AN OIL/WATER SEPARATOR, and 62/171,122 filed June 4, 2015 entitled EMULSION EXTRACTION AND PROCESSING FROM AN OIL/WATER SEPARATOR, the entirety of which is incorporated by reference herein.

## BACKGROUND

[0002] Demand for oil and gas reserves has increased over the past several decades due to steady population growth and the industrialization of new markets. At the same time, conventional fields are maturing and experiencing a decrease in oil and gas production as reservoir pressures drop and/or water production increases. These economic factors, which effect the oil and gas industry, have led to recent developments and advances in exploration, drilling, and production technologies as companies try to either increase production from mature fields or bring new opportunities on-line. One technology area that has seen increased interest from oil and gas producers and vendors alike is subsea processing.

[0003] Subsea processing is not a new concept in the oil and gas industry; however, recent economic factors have led to far more applications ranging from simple single-phase or multiphase boosting and subsea separation and boosting to future gas compression projects. Vendors are trying to establish technologies that can meet the unique challenges of subsea processing, and producers are trying to stay ahead of the competition by developing, qualifying, and applying these new technologies.

[0004] Subsea processing may include subsea separation, which can be segregated into two-phase, gas-liquid separation and three-phase, gas-oil-water separation. Overall, subsea two-phase separation presents the following benefits: reduced back-pressure acting on the well leading to higher production rates (accelerated revenue) and recoverable reserves (total revenue); the ability to overcome long step-out distances between field and host facility (fewer boosting stations required to reach host facility); reduced topsides infrastructure; the ability to absorb transient flow conditions such that gas-liquid slugs do not affect performance of downstream equipment (e.g., pumps and/or wet-gas compressor); lower

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