

Design Calculation of Three Phase Separator

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Abstract: *This research paper investigates the intricacies of design calculations involved in the development of three-phase separators in the oil and gas industry. Efficiently separating oil, water, and gas mixtures is crucial for maximizing production and ensuring compliance with environmental regulations. The paper explores the fundamental principles and equations used in the design of three-phase separators, including determining vessel dimensions, retention times, residence times, and separation efficiencies. Various factors influencing the design calculations, such as fluid properties, flow rates, pressure drops, and temperature gradients, are thoroughly analyzed. Additionally, the paper explores the importance of computational tools and simulation techniques in optimizing the design process and predicting separator performance under different operating conditions. Practical examples and case studies are provided to illustrate the application of design calculations in the successful implementation of three-phase separators in the oil and gas industry.*

Keywords: Optimization, Three Phase Separator, Design Calculations, Three Phase Separator design.