

Smart flash for crude distillation unit and its preheat train

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A typical case is the oil refinery plant where an intensive usage of energy takes place and is a promising case for the application of energy saving solutions. In this work we focused our attention to an industrial crude oil distillation unit, evaluating the possibility to modify the feed conditions by installing a preflash drum. This report represents a techno-economic analysis of build up a crude distillation unit with a nominal processing capacity of 20,000 ton/day from three crude oil resources. This main idea of this report is to utilize both the latent heat and sensible heat to achieve an optimal energy saving and to get more light components in the products. Aspen HYSYS v8.4 was used to predict the thermodynamic properties and perform the mass and energy balance.

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