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Comparison of the Distillation Curve Obtained Experimentally with the Curve Extrapolated by a Commercial Simulator

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Abstract : True Boiling Point distillation (TBP) is one of the most common experimental techniques for the determination of petroleum properties. This curve provides information about the performance of petroleum in terms of its cuts. The experiment is performed in a few days. Techniques are used to determine the properties faster with a software that calculates the distillation curve when a little information about crude oil is known. In order to evaluate the accuracy of distillation curve prediction, eight points of the TBP curve and specific gravity curve (348 K and 523 K) were inserted into the HYSYS Oil Manager, and the extended curve was evaluated up to 748 K. The methods were able to predict the curve with the accuracy of 0.6%-9.2% error (Software X ASTM), 0.2%-5.1% error (Software X Spaltrohr).

Keywords : distillation curve, petroleum distillation, simulation, true boiling point curve
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