Develop a Software to Hydraulic Redesign a Depropanizer Column to Minimize Energy Consumption

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Abstract : A depropanizer column of a particular refinery was redesigned in this work. That is, minimum reflux ratio, minimum number of trays, feed tray location and the hydraulic characteristics of the tower were calculated and compared with the actual values of the existing tower. To Design review of the tower, fundamental equations were used to develop software which its results were compared with two commercial software results. In each case PR EOS was used. Based on the total energy consumption in reboiler and condenser, feed tray location was also determined using case study definition for tower.