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### Energy, Economic and Environmental analysis of Methyl Acetate Process

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**Abstract:**In this work, energy-economic and pollution analysis studies were conducted for methyl acetate production process. Methyl acetate production process was designed using ASPEN PLUS V8.8 simulating tool. Energy analysis using ASPEN ENERGY ANALYZER suggested 33.5 % of energy saving potential of the designed process. Retrofit studies for the base case HEN (Heat Exchanger Network) saved 16.9% of the total energy for the addition of one new heat exchanger. Payback period reported as 0.8515 years. Economic analysis using ASPEN ECONOMIC ANALYZER suggested that there is a possibility of reducing 38% of utility cost. Environmental analysis using WAR (Waste Reduction Algorithm) reported decrease in pollution levels by modifying the existing process.

**Key words:**ASPEN PLUS V8.8, Economic Analysis, Energy Analysis, HEN.

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