

Production of Ammonia

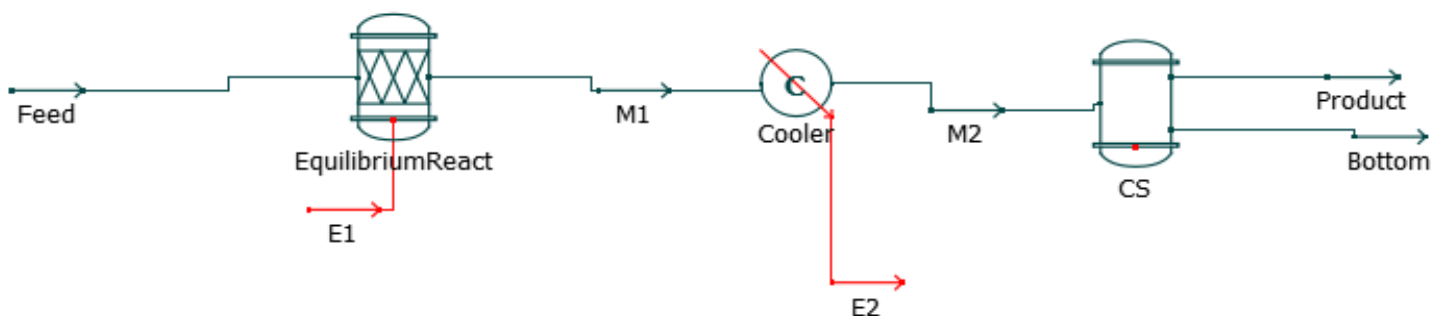
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Background & Description:

Ammonia is one of the most important chemicals used in industries for the commercial production of fertilizers and many other uses. It contributes significantly to the nutritional needs of terrestrial organisms by serving as precursor to food and fertilizers. The global production for ammonia was 176 million tonnes in 2014. Ammonia can be obtained by dry distillation of nitrogenous vegetable and animal waste products it can also be produced by the distillation of coal, but the most important process is Haber's process being used worldwide for the production of ammonia.

Flowsheet:



Results:

DWSIM-Molar Flow Rate(mol/s)

	feed	Bottom	Product
Hydrogen	211.525	163.051415	0
Nitrogen	70.5083	54.350472	0
Ammonia	0	0.0055	32.31

OpenModallica-Molar Flow Rate(mol/s)

	Feed	Bottom	Product
Hydrogen	211.525	152.712	0
Nitrogen	70.5083	50.9041	0
Ammonia	0	0.008386	39.2