

Simulation Report

DWSIM v.8.8

Details

Title: MySimulation_13

Comments:

Object: Inlet Stream

Type: Material Stream

Property	Value	
Temperature	25	C
Pressure	1.01325	bar
Mass Flow	1800	kg/h
Molar Flow	78.2177	kmol/h
Volumetric Flow	988.358	m3/h
Density (Mixture)	1.8212	kg/m3
Molecular Weight (Mixture)	23.0127	kg/kmol
Specific Enthalpy (Mixture)	-924.555	kJ/kg
Specific Entropy (Mixture)	-3.06416	kJ/[kg.K]
Molar Enthalpy (Mixture)	-21276.5	kJ/kmol
Molar Entropy (Mixture)	-70.5146	kJ/[kmol.K]
Thermal Conductivity (Mixture)	0.308013	W/[m.K]

Object: Vapour Product

Type: Material Stream

Property	Value	
Temperature	225	C
Pressure	1.01325	bar
Mass Flow	1800	kg/h
Molar Flow	78.2177	kmol/h
Volumetric Flow	3197.12	m3/h
Density (Mixture)	0.563007	kg/m3
Molecular Weight (Mixture)	23.0127	kg/kmol
Specific Enthalpy (Mixture)	302.625	kJ/kg
Specific Entropy (Mixture)	2.40756	kJ/[kg.K]
Molar Enthalpy (Mixture)	6964.21	kJ/kmol
Molar Entropy (Mixture)	55.4043	kJ/[kmol.K]
Thermal Conductivity (Mixture)	0.140236	W/[m.K]

Object: Liquid Product

Type: Material Stream

Property	Value	

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Comments:

Temperature	225	C
Pressure	1.01325	bar
Mass Flow	0	kg/h
Molar Flow	0	kmol/h
Volumetric Flow	0	m ³ /h
Density (Mixture)	∞	kg/m ³
Molecular Weight (Mixture)	0	kg/kmol
Specific Enthalpy (Mixture)	0	kJ/kg
Specific Entropy (Mixture)	0	kJ/[kg.K]
Molar Enthalpy (Mixture)	0	kJ/kmol
Molar Entropy (Mixture)	0	kJ/[kmol.K]
Thermal Conductivity (Mixture)	0	W/[m.K]

Object: Energy

Type: Energy Stream

Property	Value
Energy Flow	200.911 kW

Object: Equilibrium Reactor

Type: Equilibrium Reactor

Property	Value
Pressure Drop	0 bar
Outlet Temperature	225 C
Calculation Mode	G6
Initial Gibbs Energy	-3978.73 kW
Final Gibbs Energy	-4763.13 kW
Carbon monoxide: Conversion	92.2785 %
Carbon dioxide: Conversion	∞ %
Water: Conversion	92.2785 %
Hydrogen: Conversion	∞ %
Water Gas Shift Reaction: Extent	36.0891 kmol/h