Feedwater Heater Extraction Steam Flow

11/10/2026

Project: feedwater-heater-extraction

Input Parameters

Feedwater flow	216,000 kg/h
Feedwater pressure (absolute)	180.00 bar
Feedwater inlet temperature	200.00 °C
Feedwater outlet temperature	240.00 °C
Extraction steam pressure at the heater (absolute)	40.000 bar
Extraction steam condition	Superheated at the temperature below
Extraction steam temperature (superheated only)	350.00 °C
Drain leaving the heater	Sub-cooled by a drain cooler (DCA)
Drain cooler approach	5.6000 K

Calculated Results

Extraction steam flow	17,579 kg/h
Extraction per kg of feedwater	8.1382 %
Heat duty	10,815 kW
Shell saturation temperature	250.36 °C
Terminal temperature difference	10.358 K
Drain temperature	205.60 °C
Feedwater inlet enthalpy	859.47 kJ/kg
Feedwater outlet enthalpy	1,039.7 kJ/kg
Extraction steam enthalpy	3,093.3 kJ/kg
Drain enthalpy	878.56 kJ/kg