

BRINE SOLUTION HEAT EXCHANGE ANALYSIS

Project ID: BR:2514

REQUIREMENTS

Building Type: Apartment

Number of rooms: 3

Area: 223.0773

Temperature: 24.0

Water Body: Lake

Distance To Waterbody: 50.0

Water Body Temperature: 25.0

Building Material: Concrete

PIPE TRANSFER ANALYZE

Material: stainless steel

Diameter (mm): 300.0

Length (m): 111.53865

Insulation Thickness (mm): 30.0

Pressure (Pa): 1500.0

Heat Transfer Coefficient ($\text{W/m}^2\text{K}$): 250.0

HEAT EXCHANGE ANALYZE

Q Primary: 746700.0

Q Secondary: 497800.0

BRINE INTAKE ANALYZE

Brine Solution: Magnesium Chloride

Thermal Conductivity ($\text{W/(m}\cdot\text{K)}$): 0.5

Density (kg/m^3): 1150.0

HEAT TESTING ANALYZE

Final Temperature: 363.0