In[•]:=
```
P = 4.76; Tw = 160;
```

In[•]:=
```
Tsat = ThermodynamicData["Water", "LiquidVaporPhaseBoundary",
       {"Pressure" → Quantity[P, "bar"]}][[1]] - 273.15;
μl = ThermodynamicData["Water", "Viscosity",
     {"Temperature" → Quantity[Tsat, "DegreesCelsius"]}][[1]];
hf =
  ThermodynamicData["Water", "Enthalpy", {"Pressure" → Quantity[P, "bar"]}][[1]];
hg = ThermodynamicData["Water", "Enthalpy",
     {"Pressure" → Quantity[P, "bar"], "Quality" → 1}][[1]];
hfg = hg - hf;
vf = ThermodynamicData["Water",
     "SpecificVolume", {"Pressure" → Quantity[P, "bar"]}][[1]];
vg = ThermodynamicData["Water", "SpecificVolume",
     {"Pressure" → Quantity[P, "bar"], "Quality" → 1}][[1]];
ρl = 1/vf;  ρv = 1/vg;
cpl = ThermodynamicData["Water",
     "IsobaricHeatCapacity", {"Pressure" → Quantity[P, "bar"]}][[1]];
κl = ThermodynamicData["Water", "ThermalConductivity",
     {"Pressure" → Quantity[P, "bar"], "Quality" → 1}][[1]];
Prl = μl cpl/κl;
ΔTe = Tw - Tsat;
csf = 0.0128;
```

In[•]:=
```
qs = μl hfg (g (ρl - ρv)/σ)^(1/2) (cpl ΔTe/(csf hfg Prl^n))^3 /. {g → 9.81, σ → 0.0482, n → 1}
```

Out[•]=
```
4210.45
```

In[•]:=
```
Q = qs π D^2/4 /. {D → 0.2}
```

Out[•]=
```
132.275
```

In[•]:=
```
qsMax = 0.149 hfg ρv (σ g (ρl - ρv)/ρv^2)^(1/4) /. {g → 9.81, σ → 0.0482}
```

Out[•]=
```
2.94837 × 10^6
```