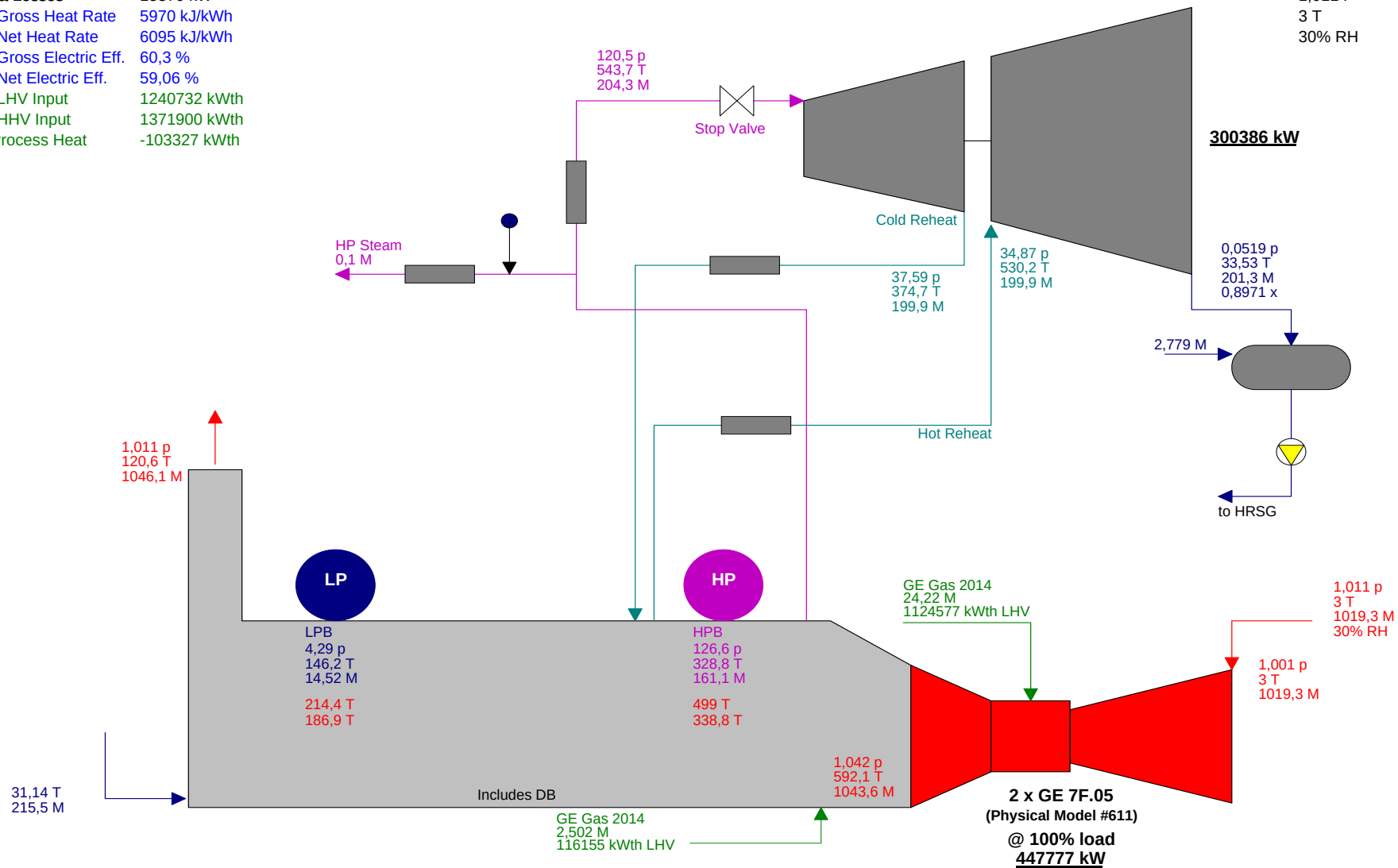


GT PRO 27.0 Tractebel Engineering

Gross Power	748162 kW
Net Power	732792 kW
Aux. & Losses	15370 kW
LHV Gross Heat Rate	5970 kJ/kWh
LHV Net Heat Rate	6095 kJ/kWh
LHV Gross Electric Eff.	60,3 %
LHV Net Electric Eff.	59,06 %
Fuel LHV Input	1240732 kWth
Fuel HHV Input	1371900 kWth
Net Process Heat	-103327 kWth

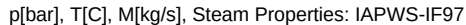
Ambient
1,011 P
3 T
30% RH



p [bar] T [C] M [kg/s], Steam Properties: IAPWS-IF97

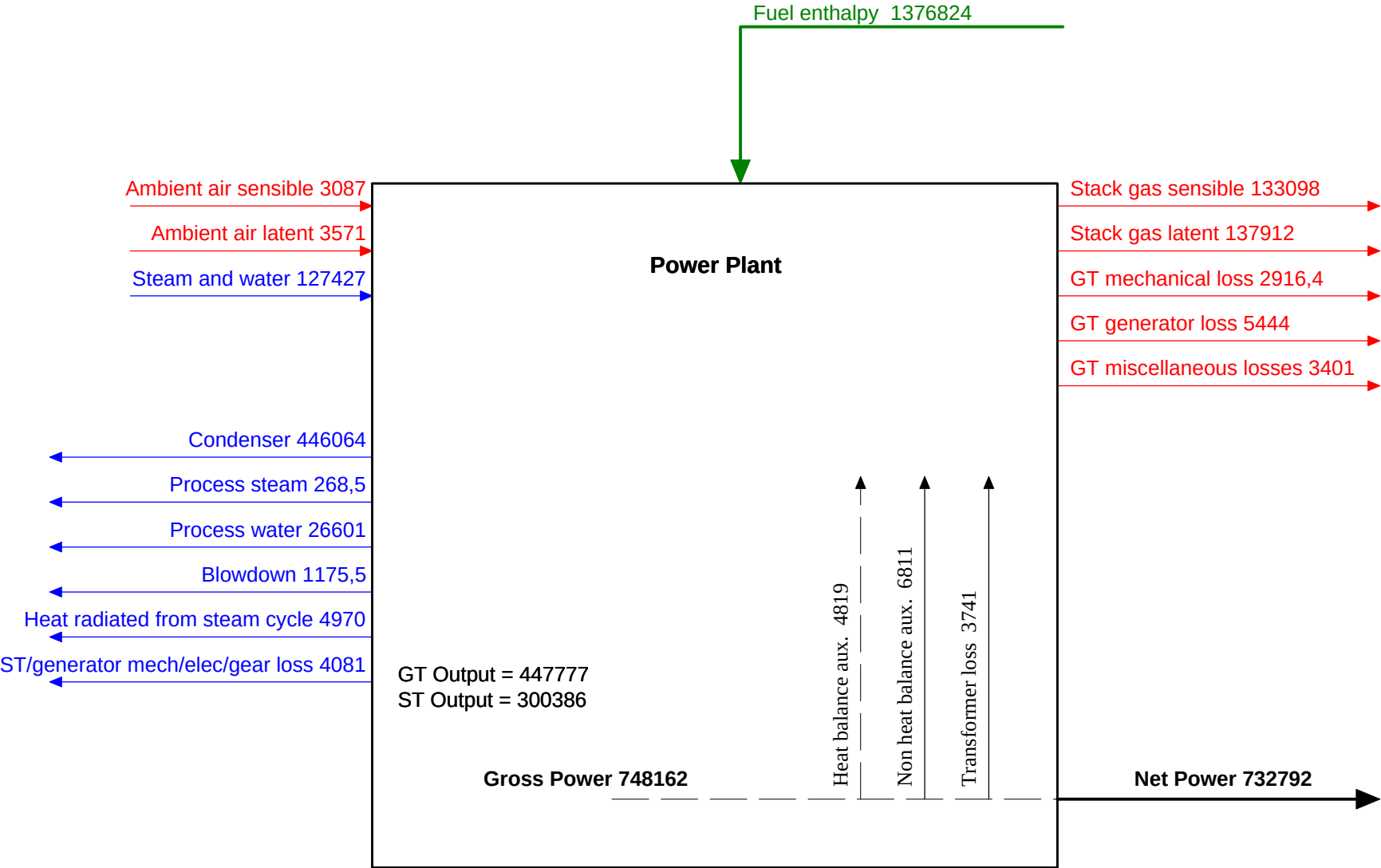
9501 05-30-2018 09:31:20 file=C:\Users\IEJ351\Documents\Duba\Duba2.gtp

GT PRO 27.0 Tractebel Engineering



Fuel chemical LHV input = 1240732 kW
Fuel chemical HHV input = 1371900 kW

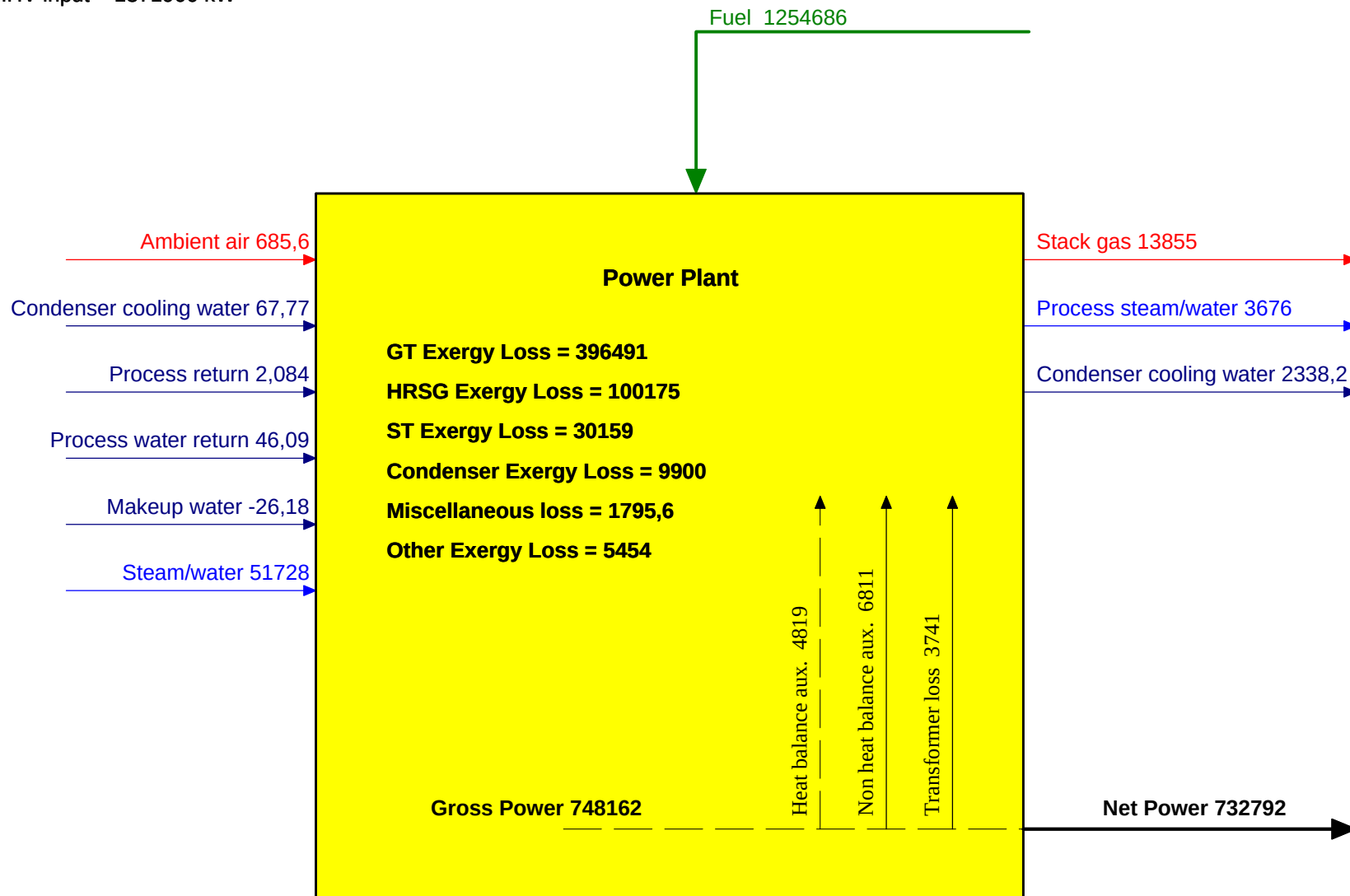
Power Plant Energy Flow Schematic [kW]



Zero enthalpy: dry gases & liquid water @ 32 F (273.15 K)

Fuel exergy input = 1254686 kW
Fuel chemical LHV input = 1240732 kW
Fuel chemical HHV input = 1371900 kW

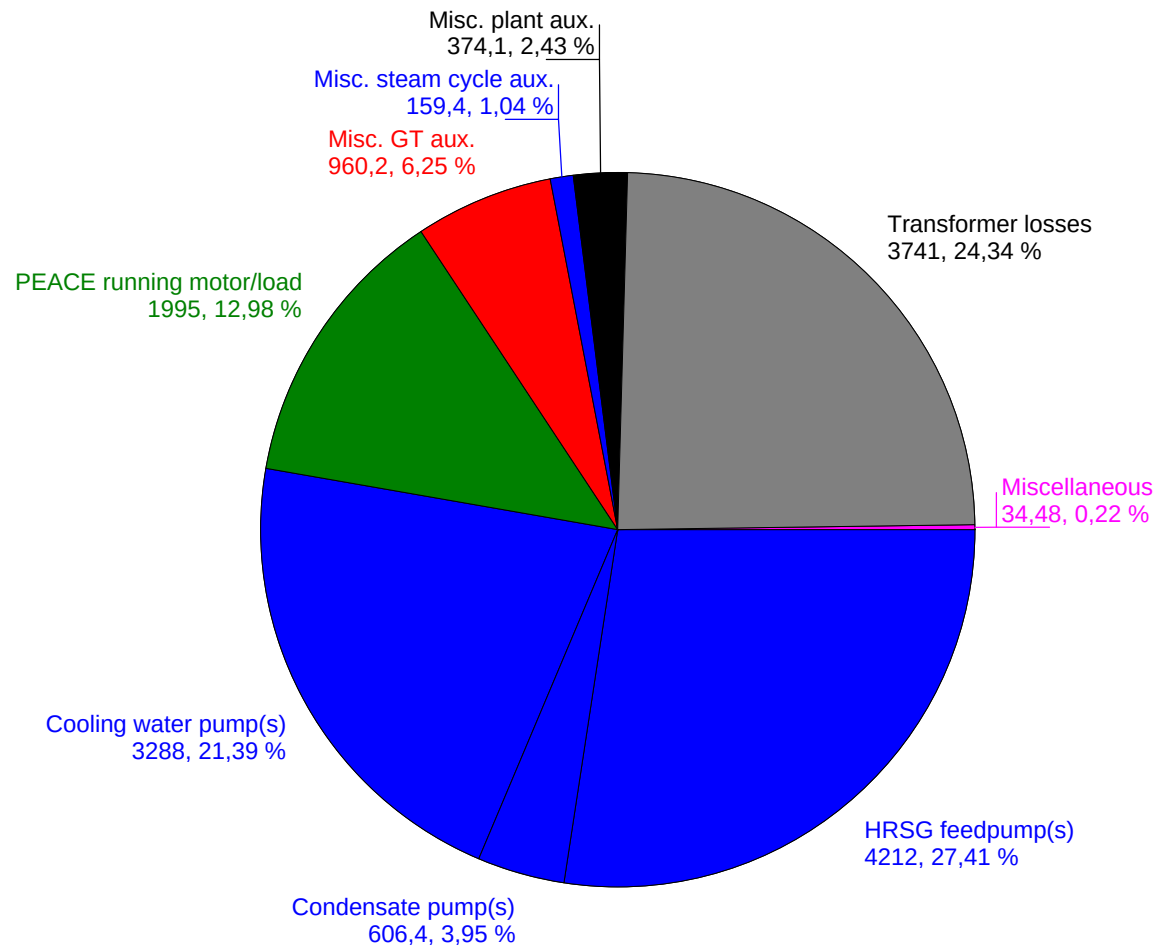
Power Plant Exergy Flow Schematic [kW]



Reference: 1.013 bar, 25 C, water as vapor.

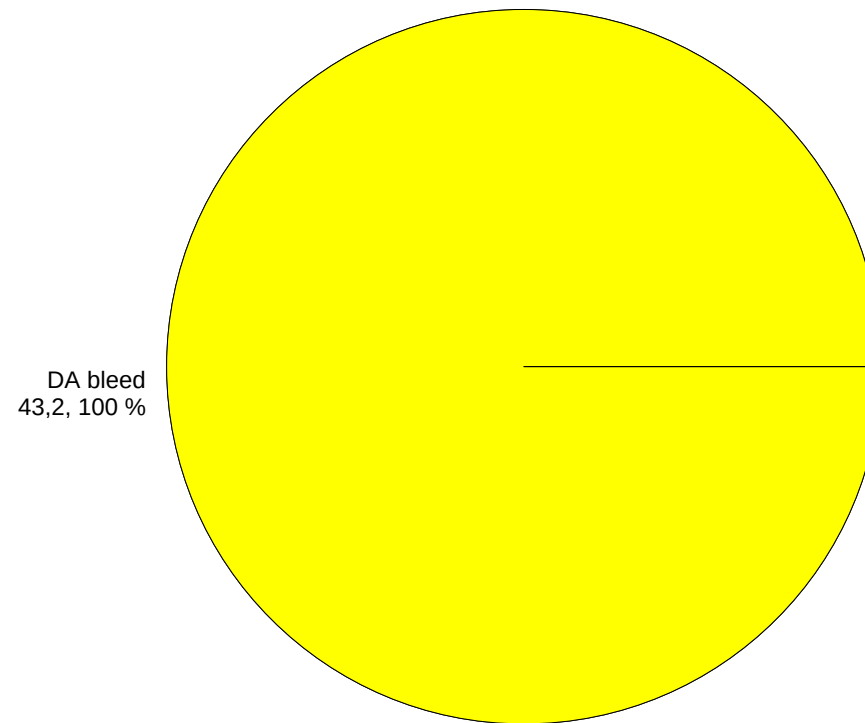
Auxiliaries & Losses [kW]

Total auxiliaries & transformer losses = 15370 kW

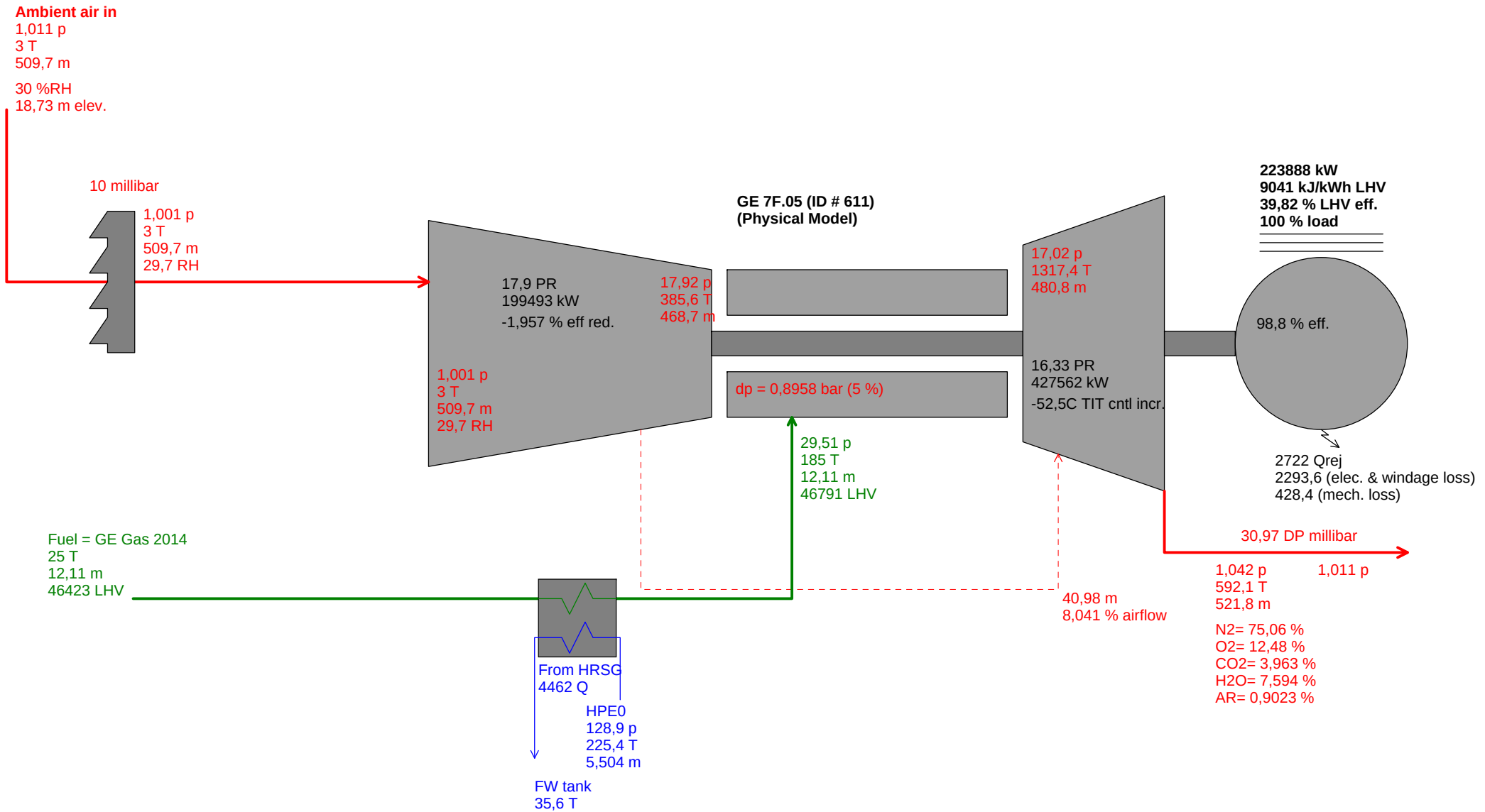


Plant Water Consumption [kg/s]

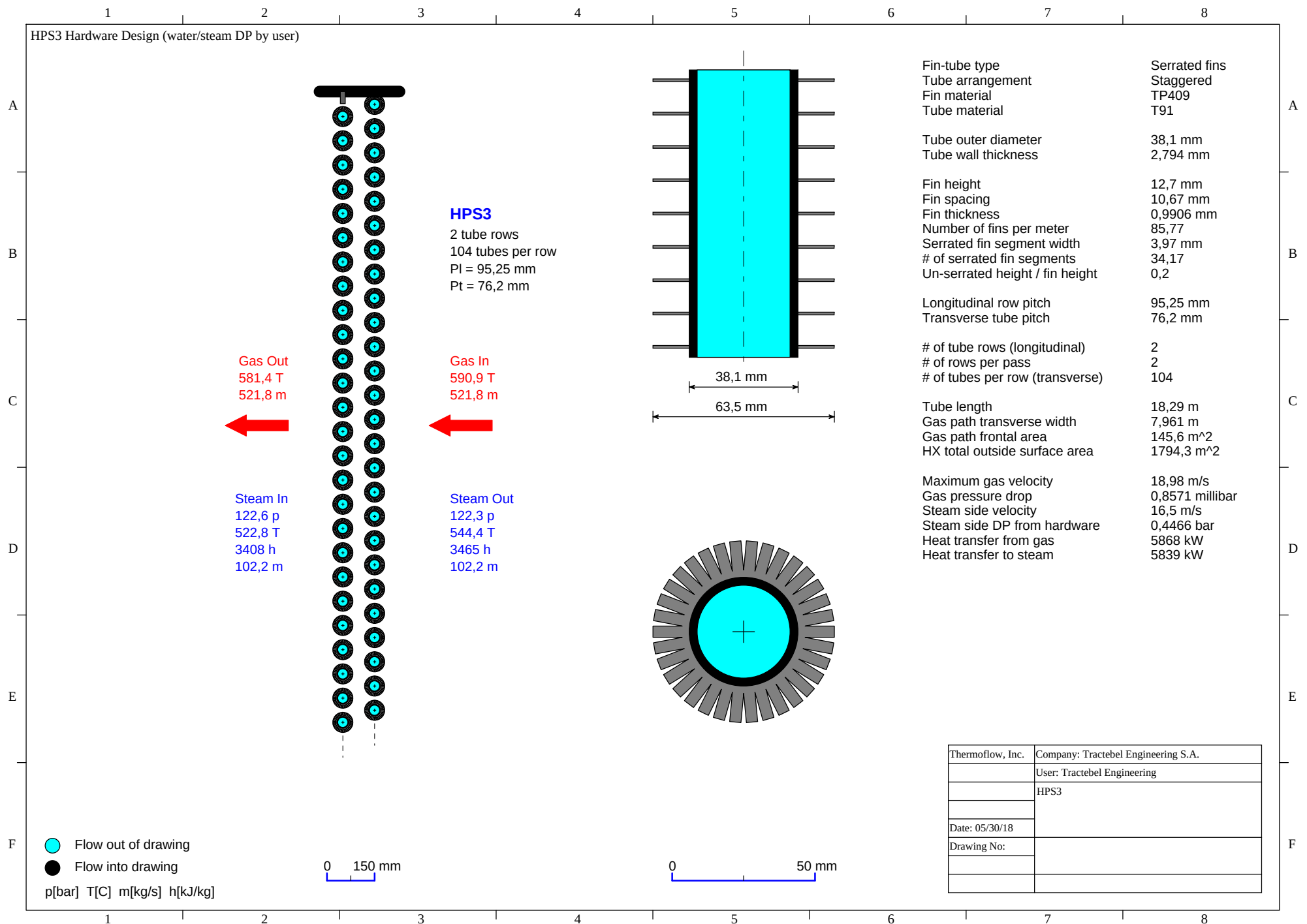
Plant water consumption = -42,85 kg/s

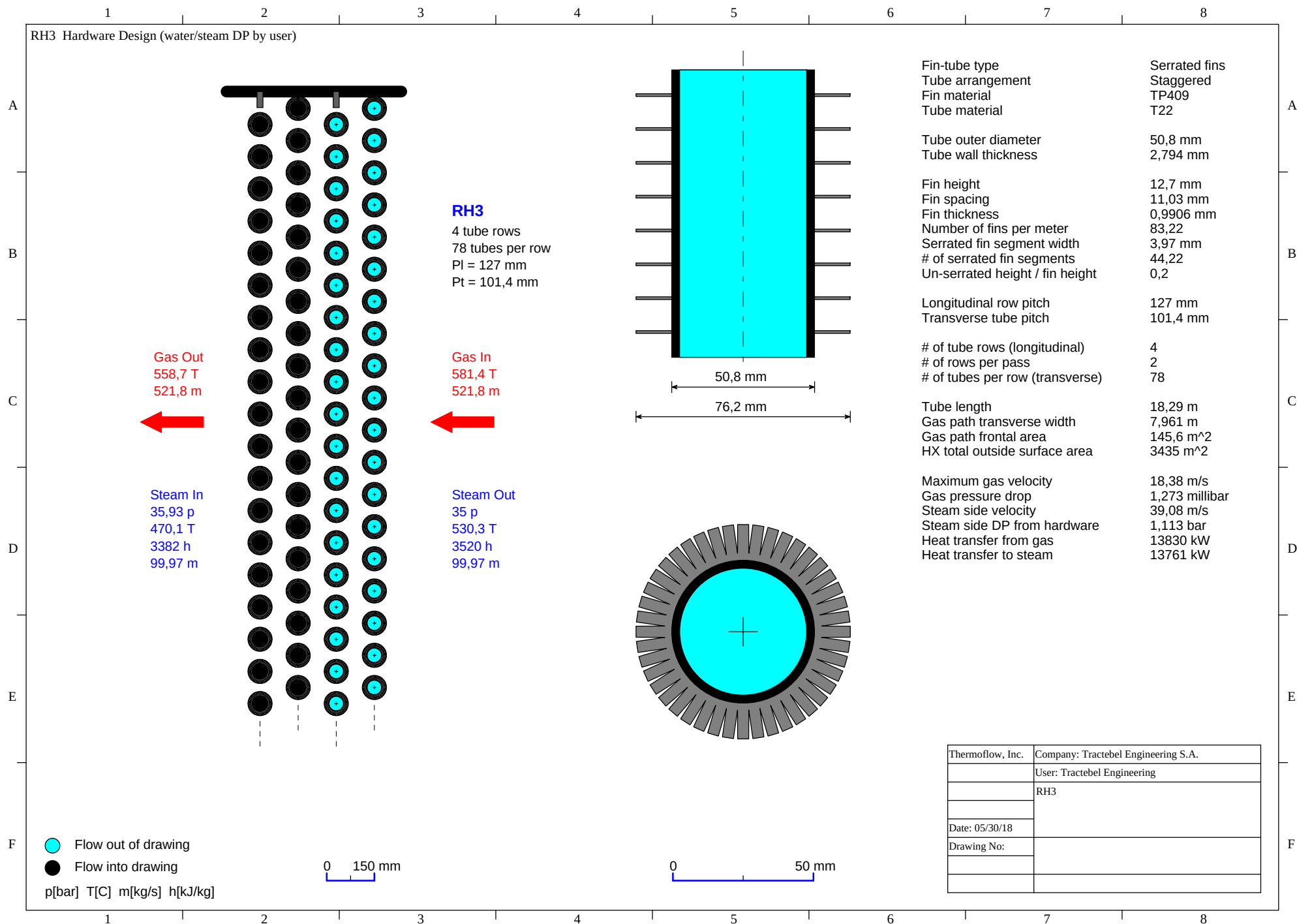


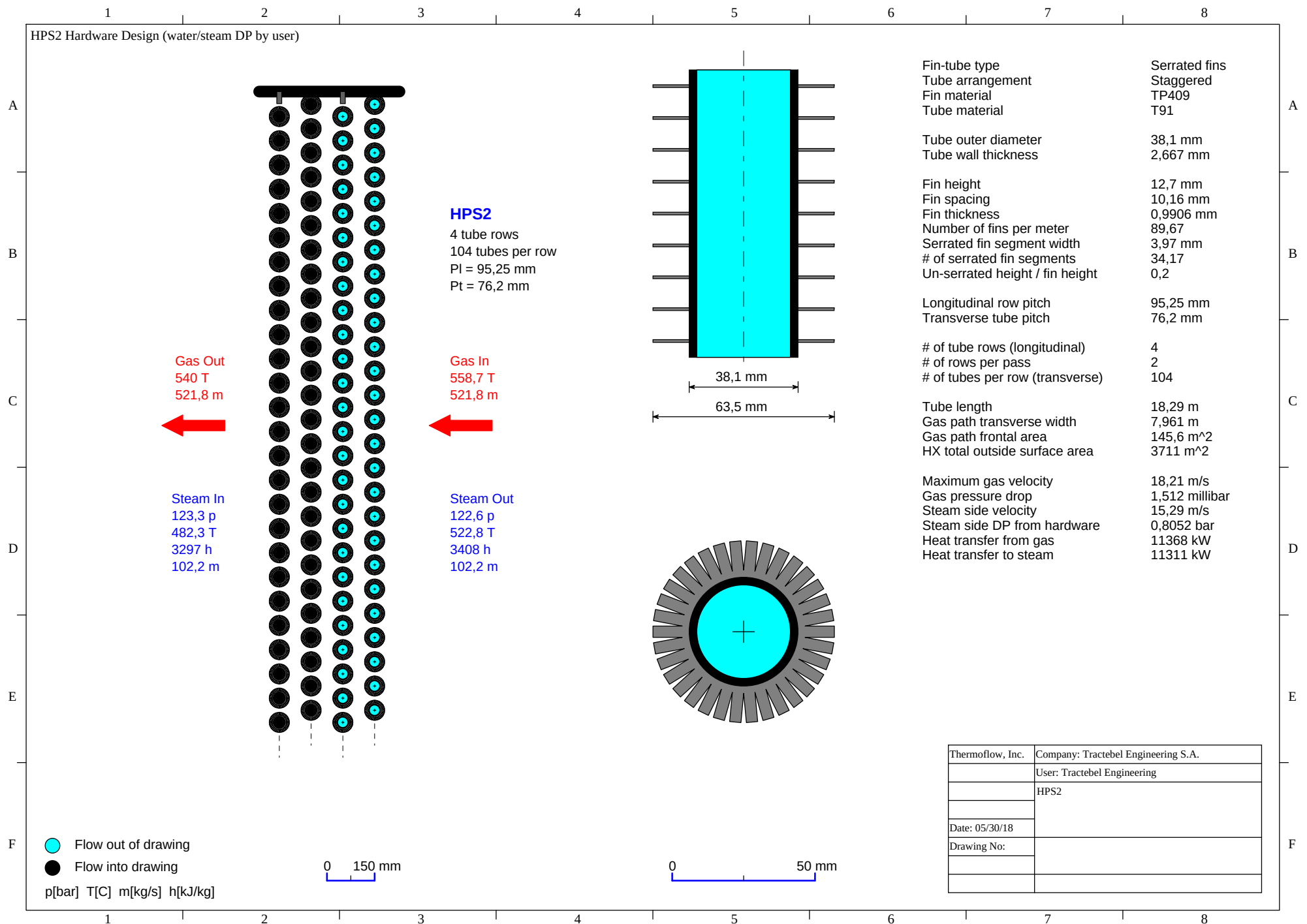
GT generator power = 223888 kW
 GT Heat Rate @ gen term = 9041 kJ/kWh
 GT efficiency @ gen term = 36,01% HHV = 39,82% LHV
 GT @ 100 % rating, inferred TIT control model, CC limit

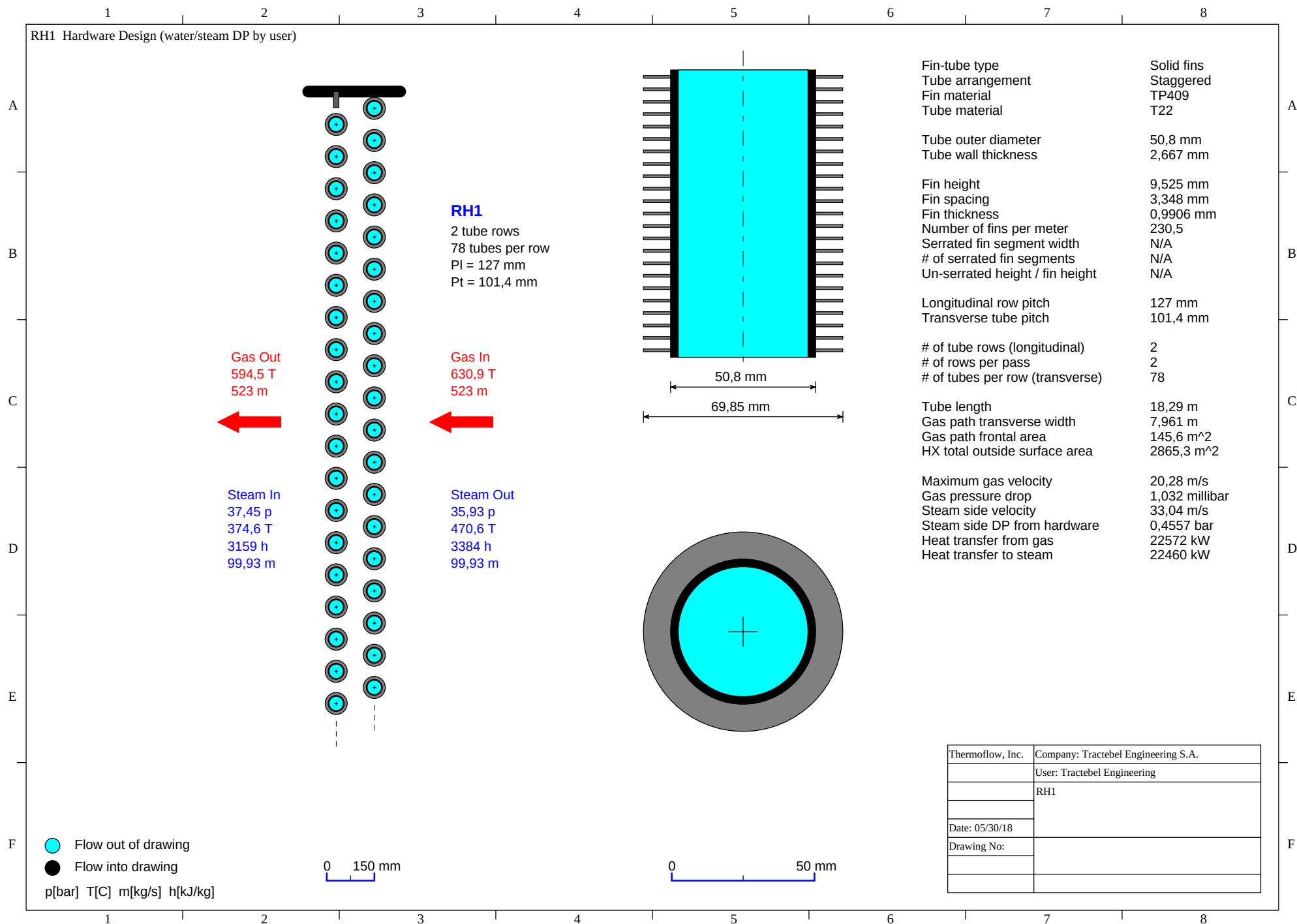


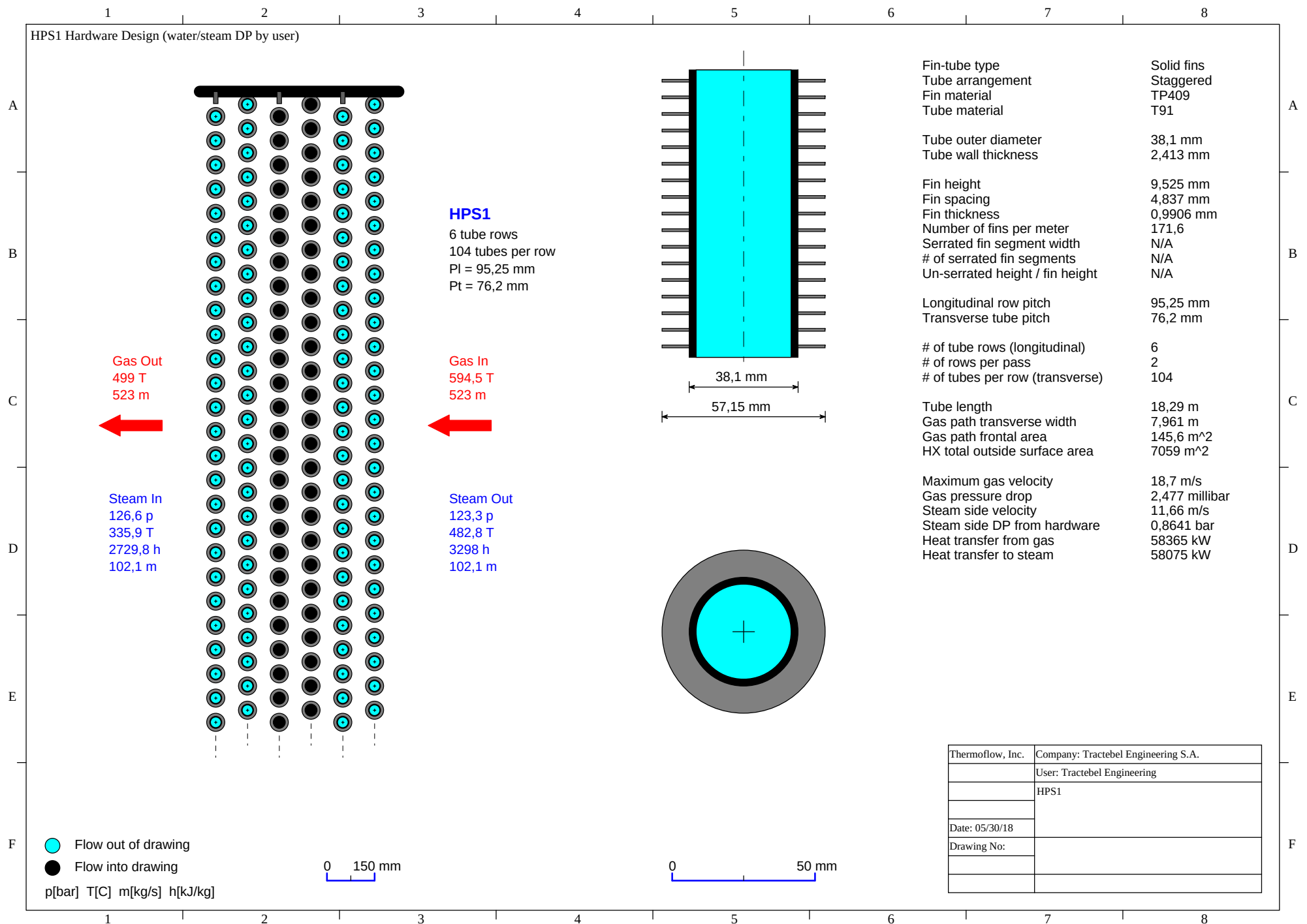
p[bar], T[C], M[kg/s], Q[kW], Steam Properties: IAPWS-IF97

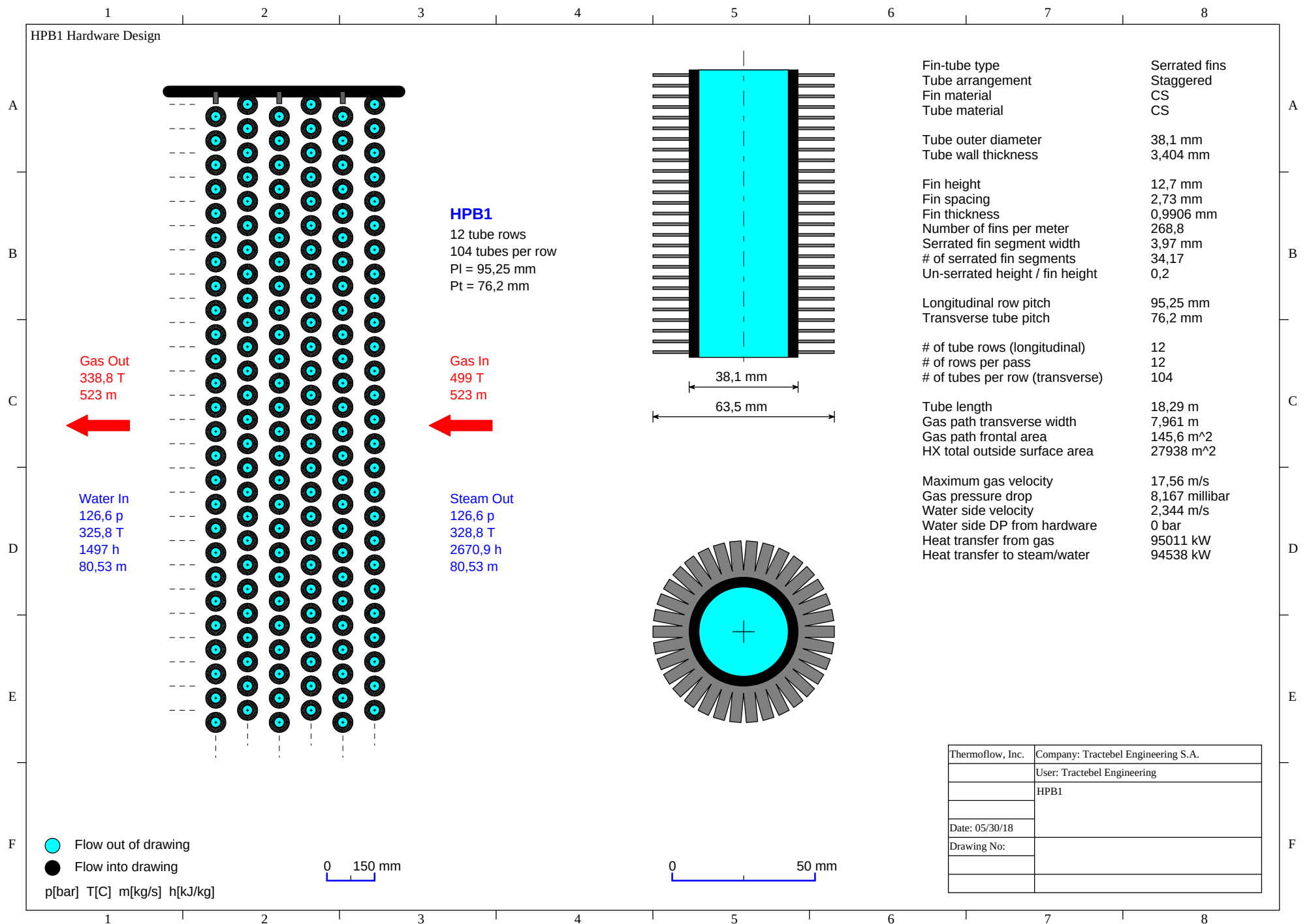


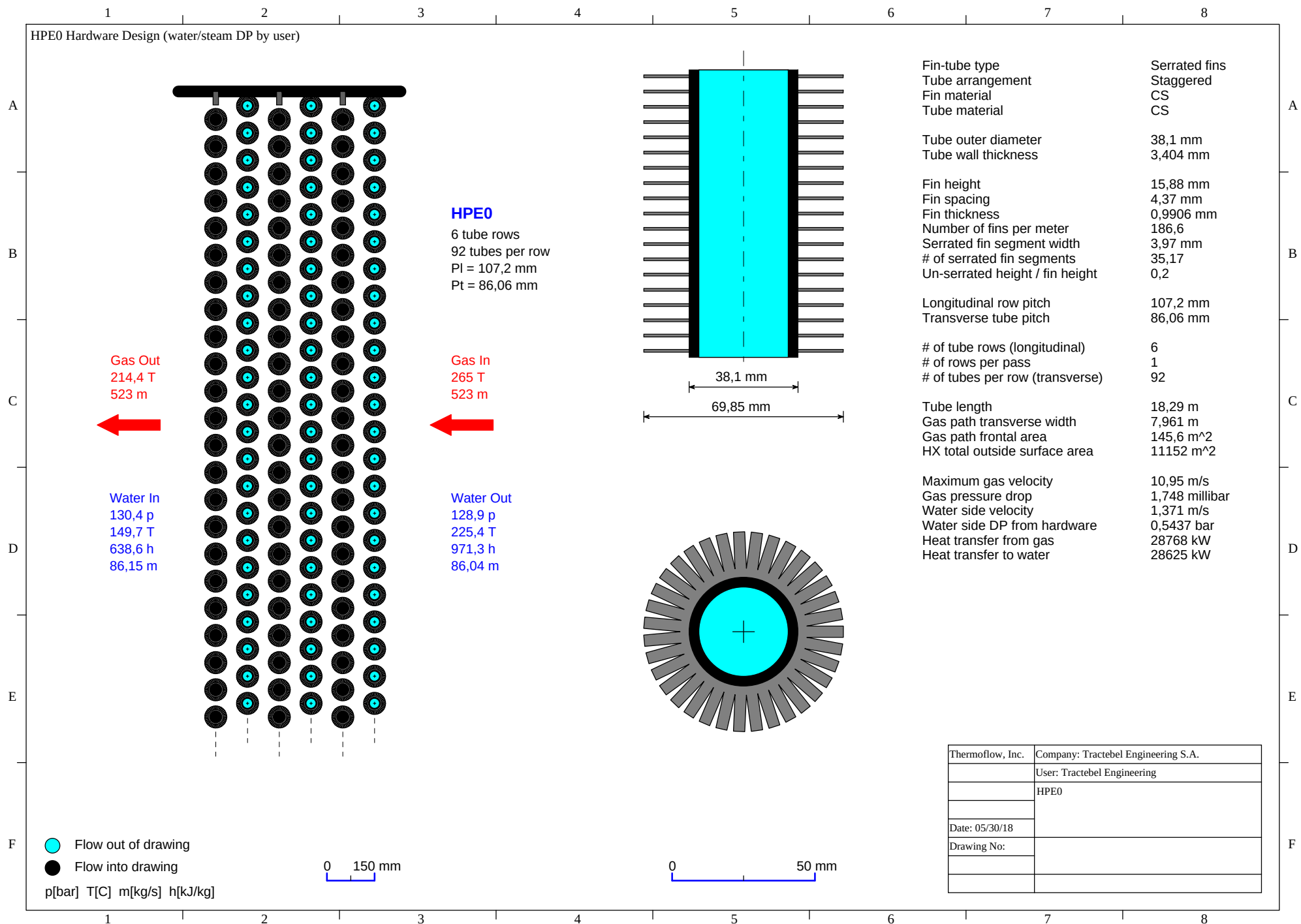




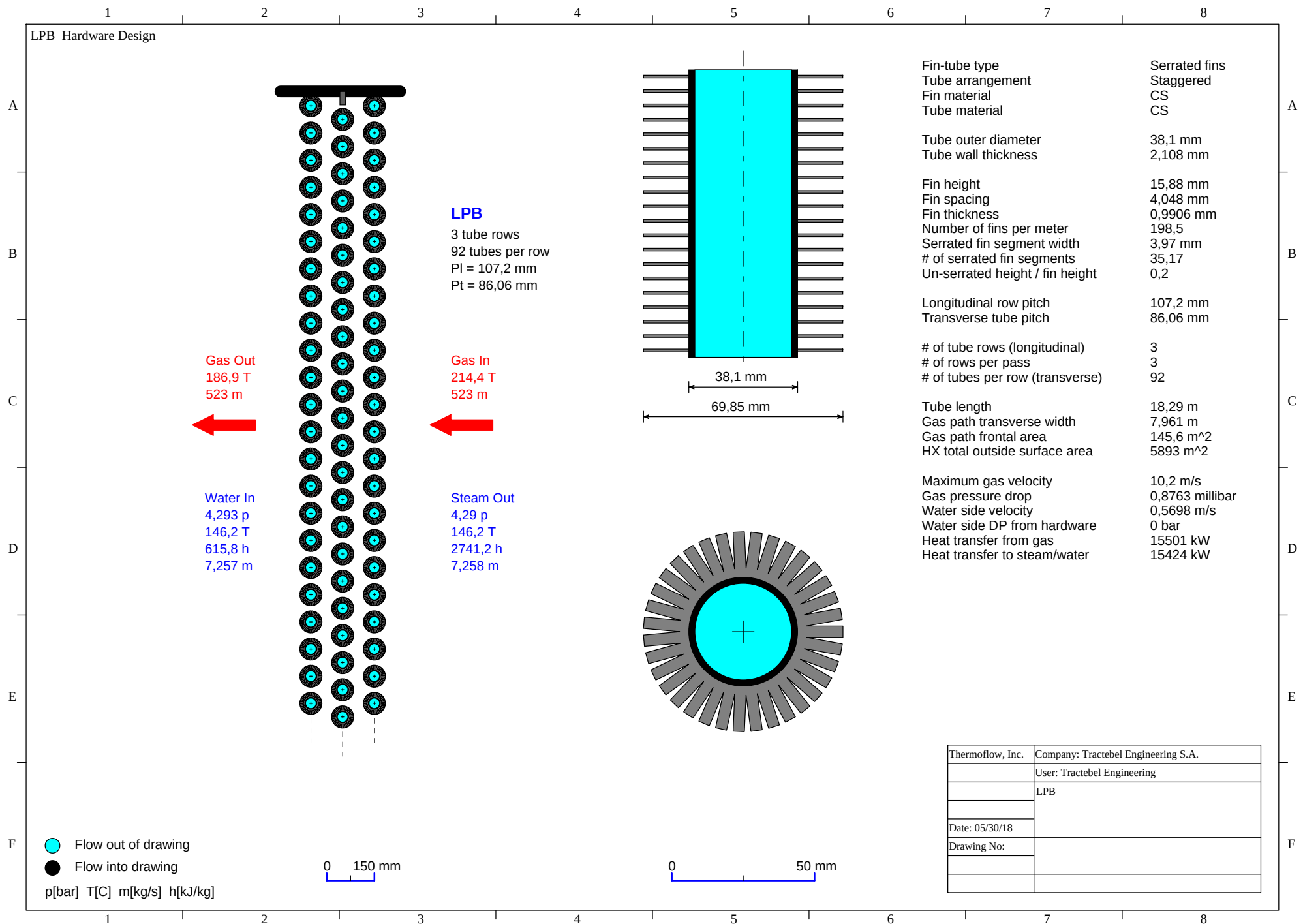


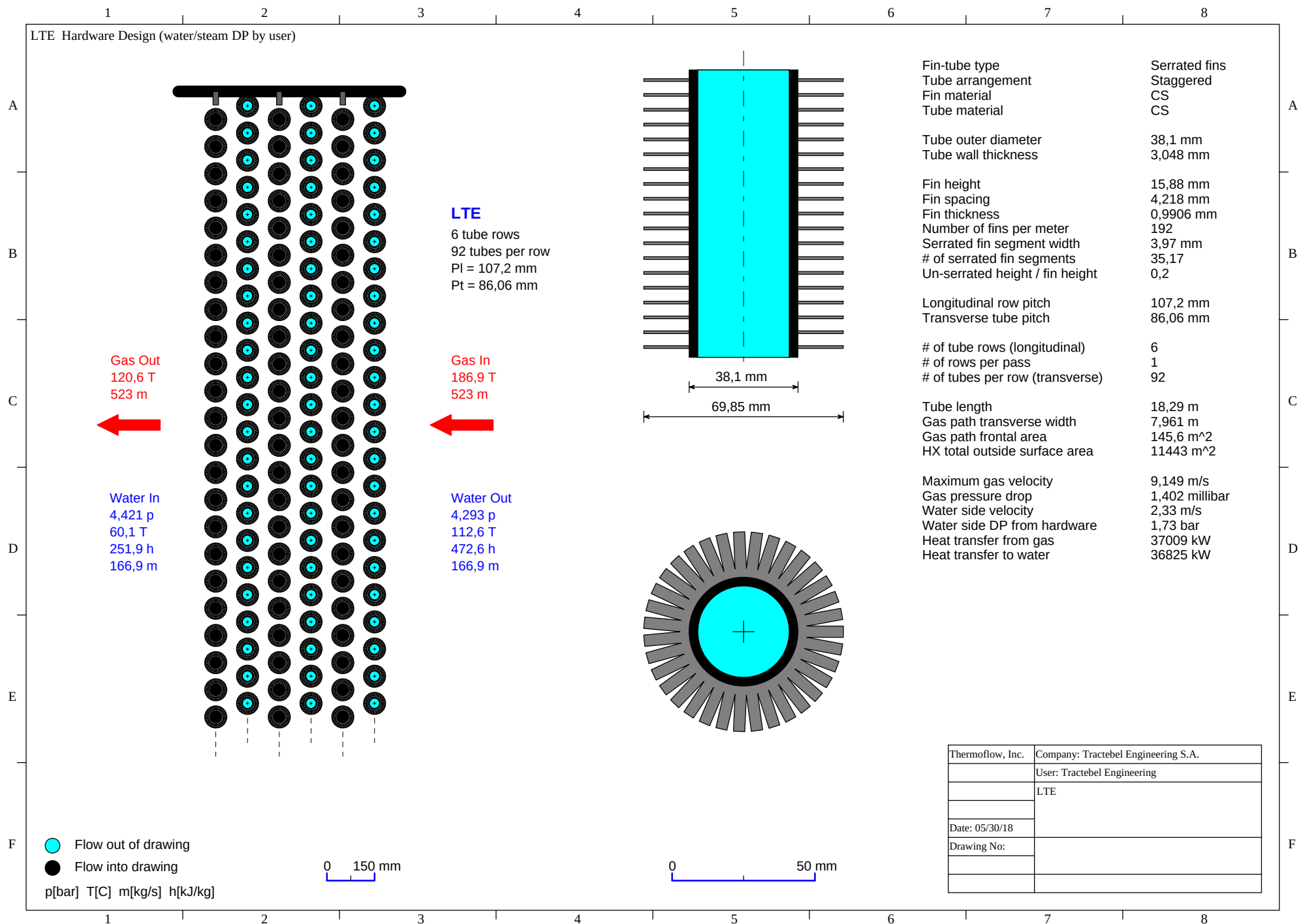


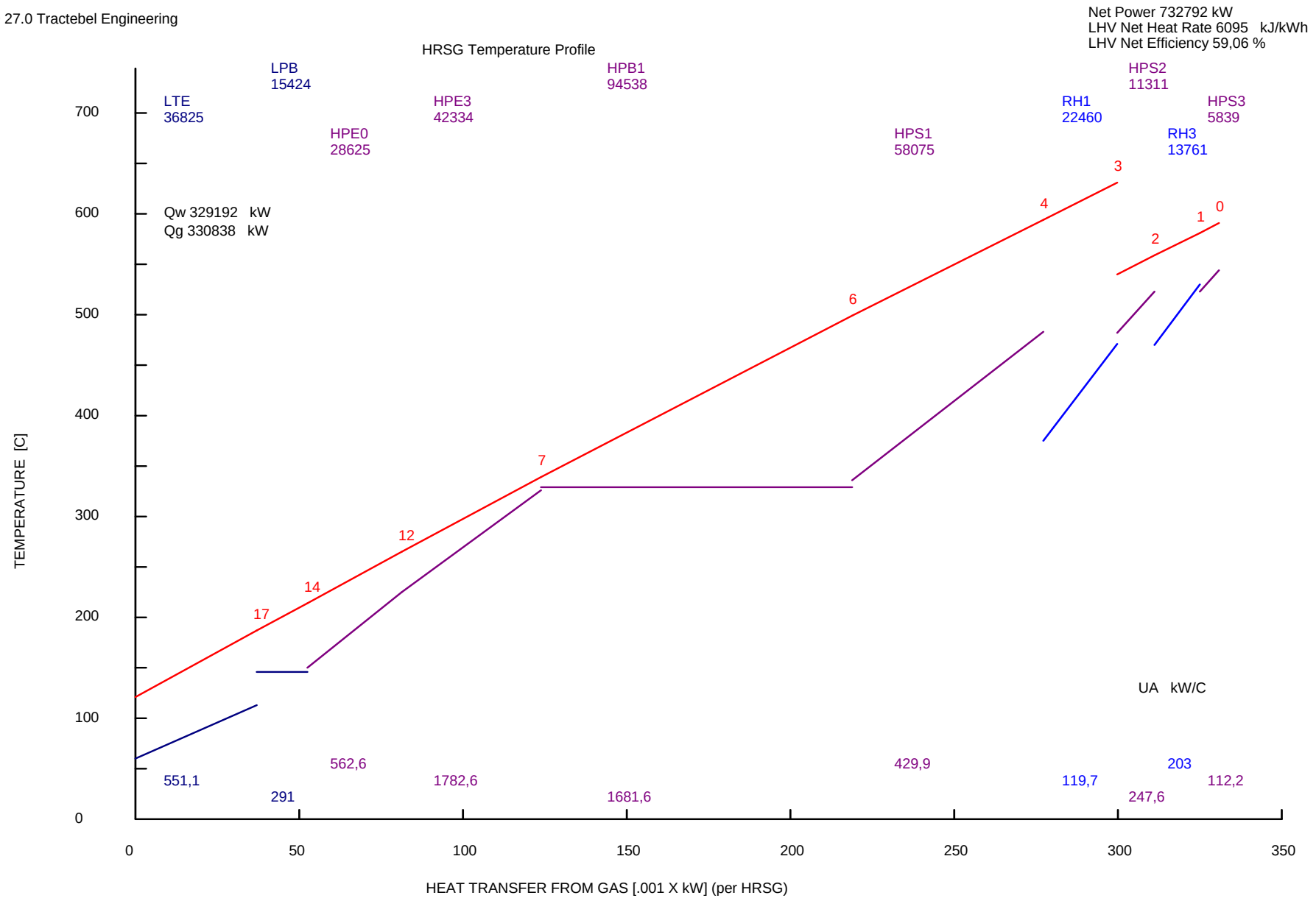




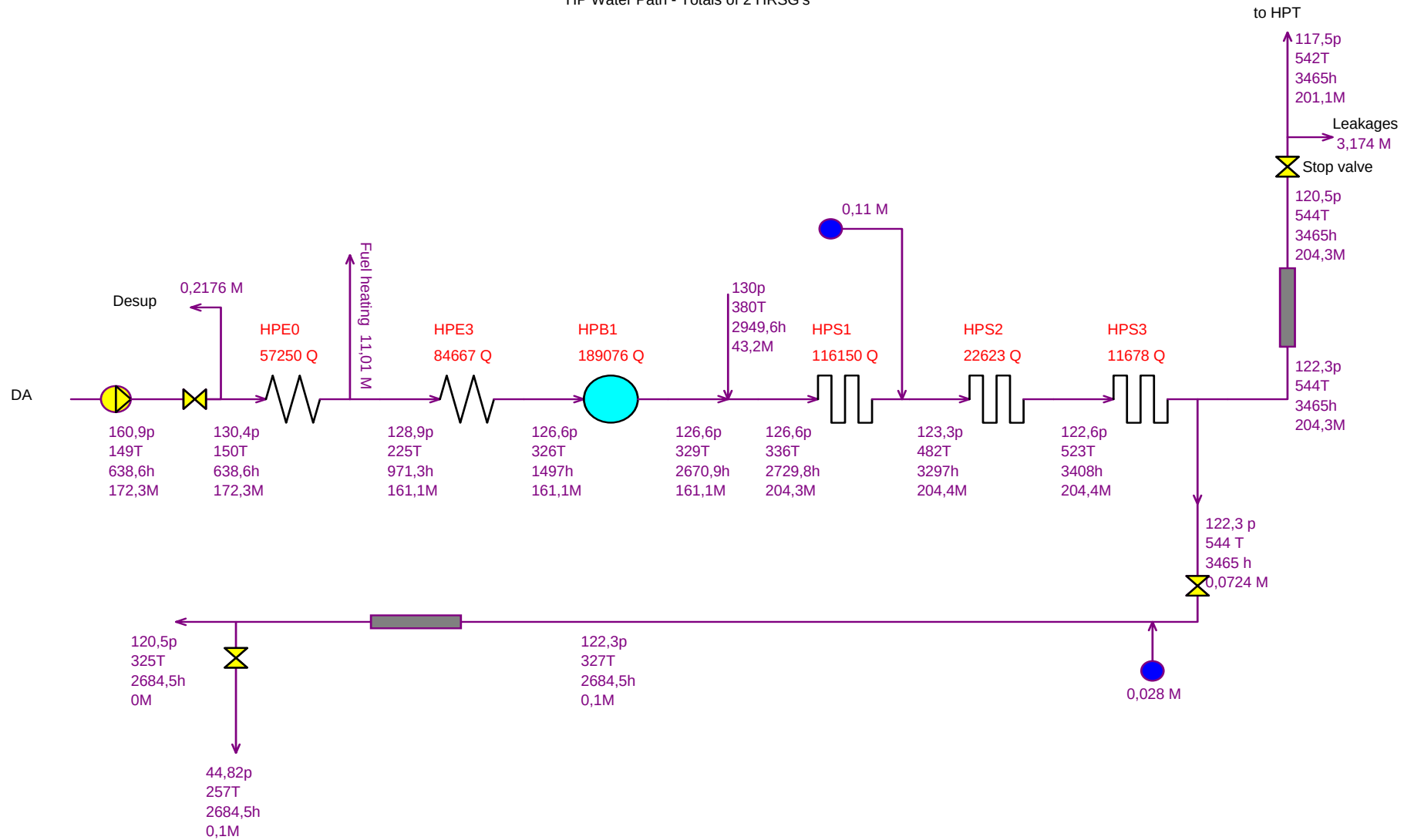
ThermoFlow, Inc.	Company: Tractebel Engineering S.A.
	User: Tractebel Engineering
	HPE0
Date: 05/30/18	
Drawing No:	



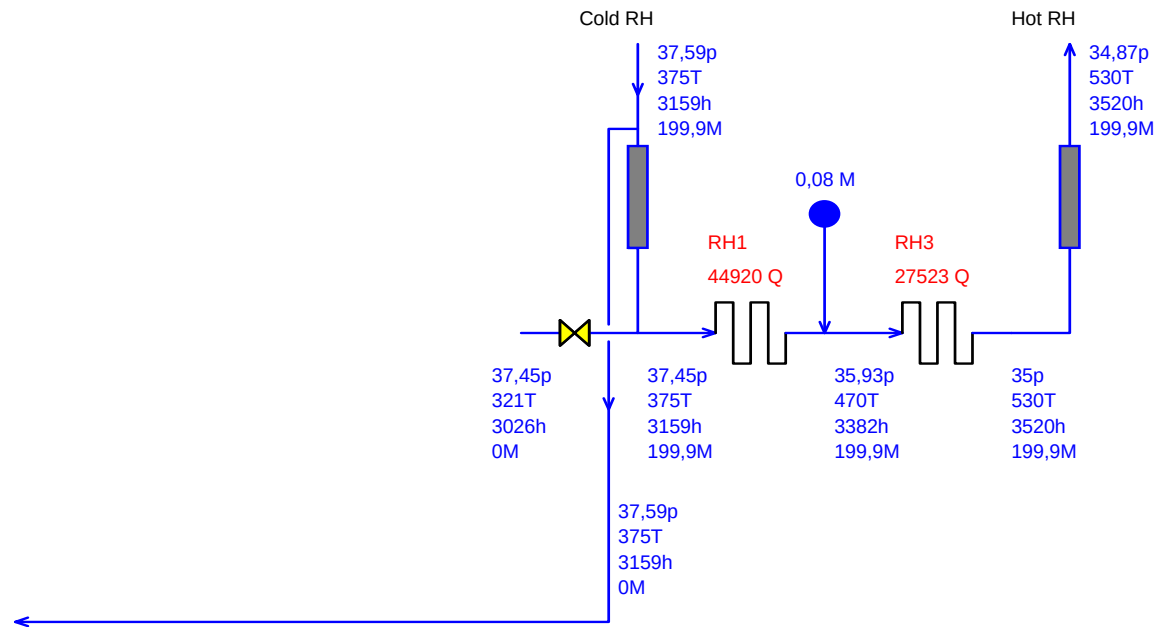




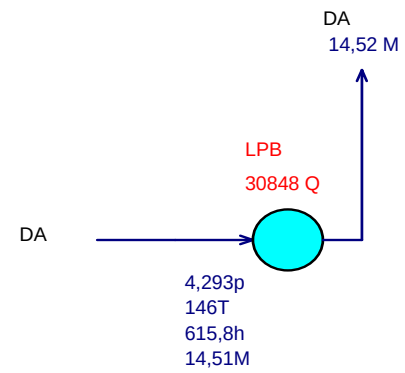
HP Water Path - Totals of 2 HRSG's



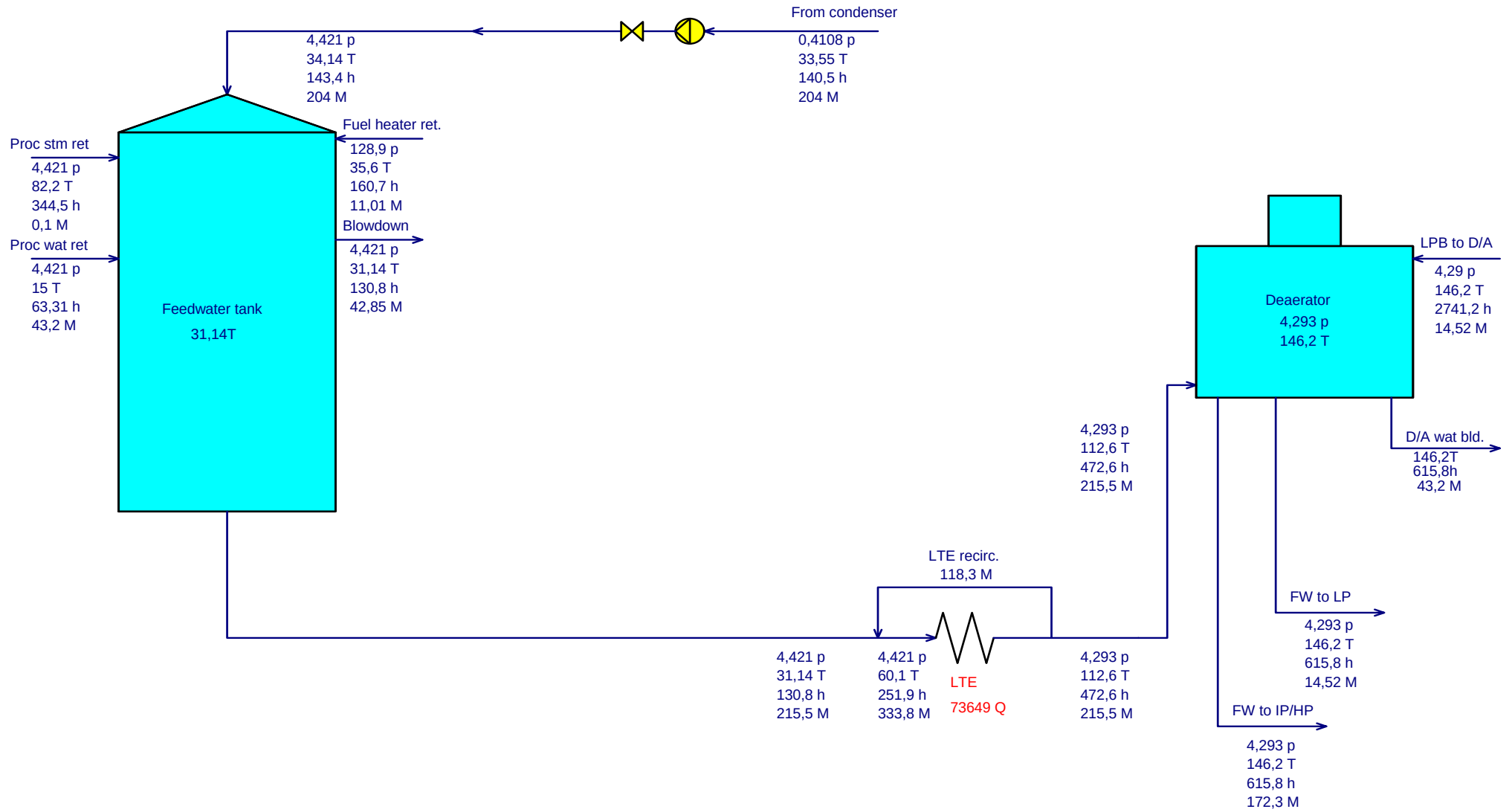
IP & Reheat Water Path - Totals of 2 HRSG's



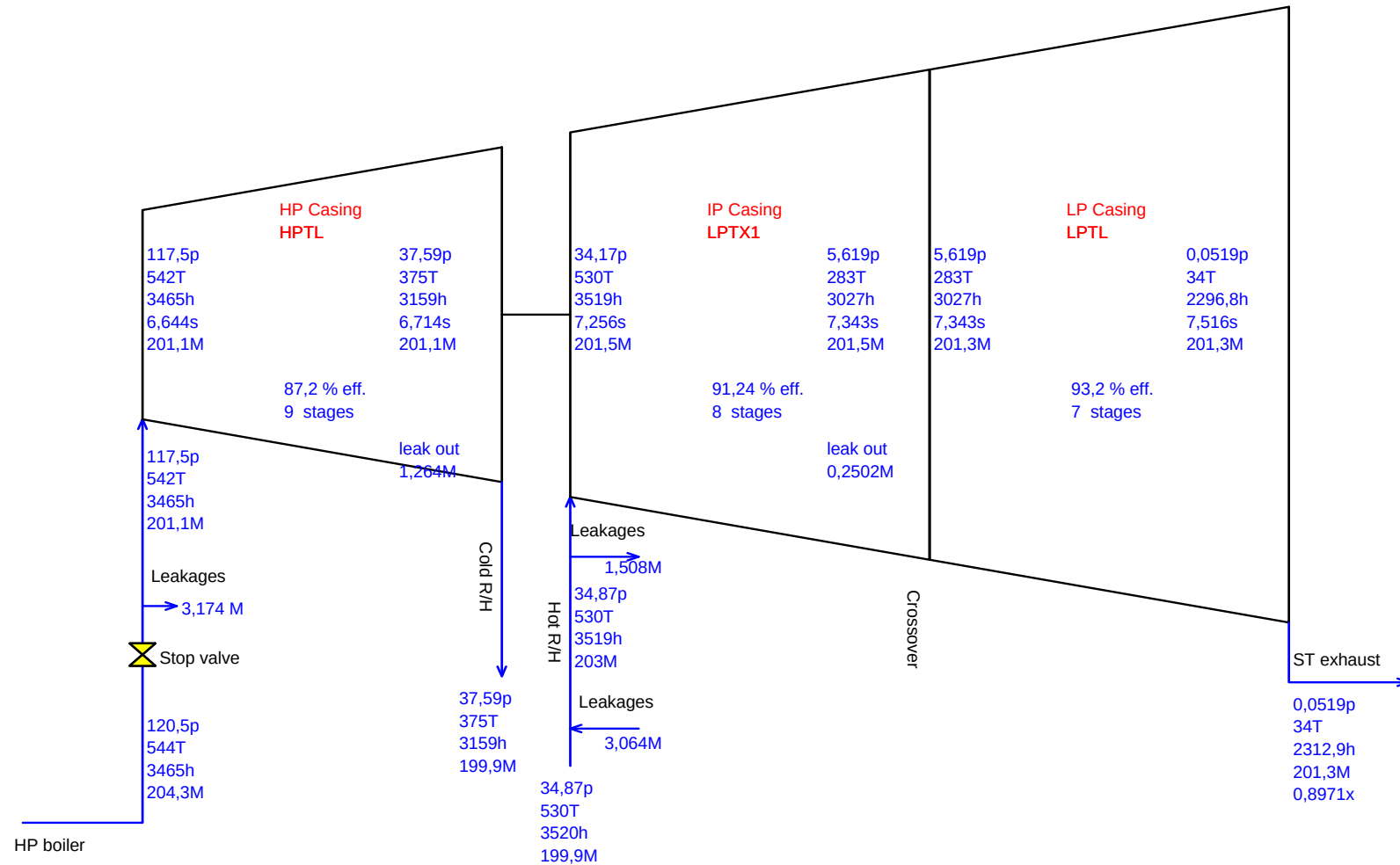
LP Water Path - Totals of 2 HRSG's

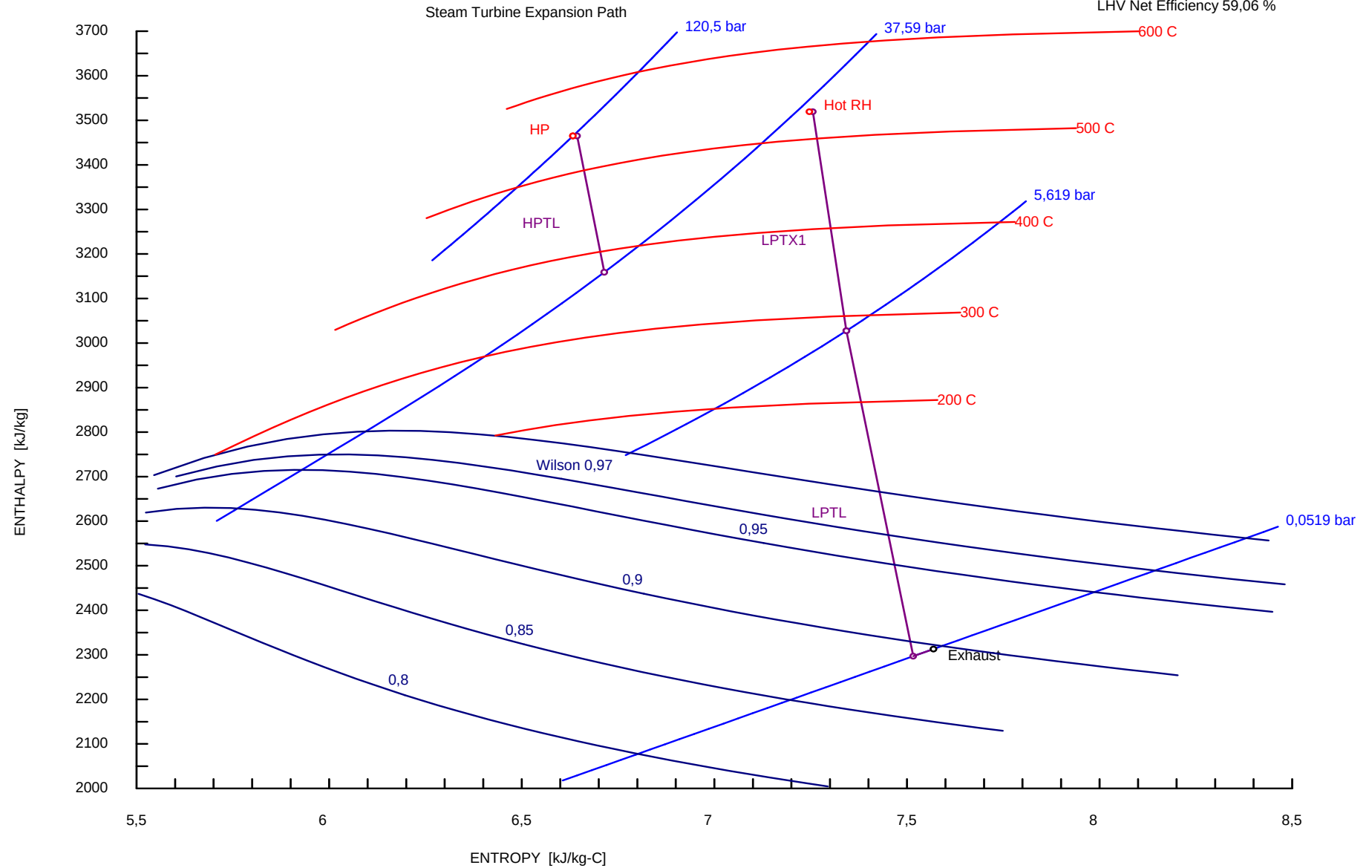


Feedwater Path - Totals of 2 HRSG's

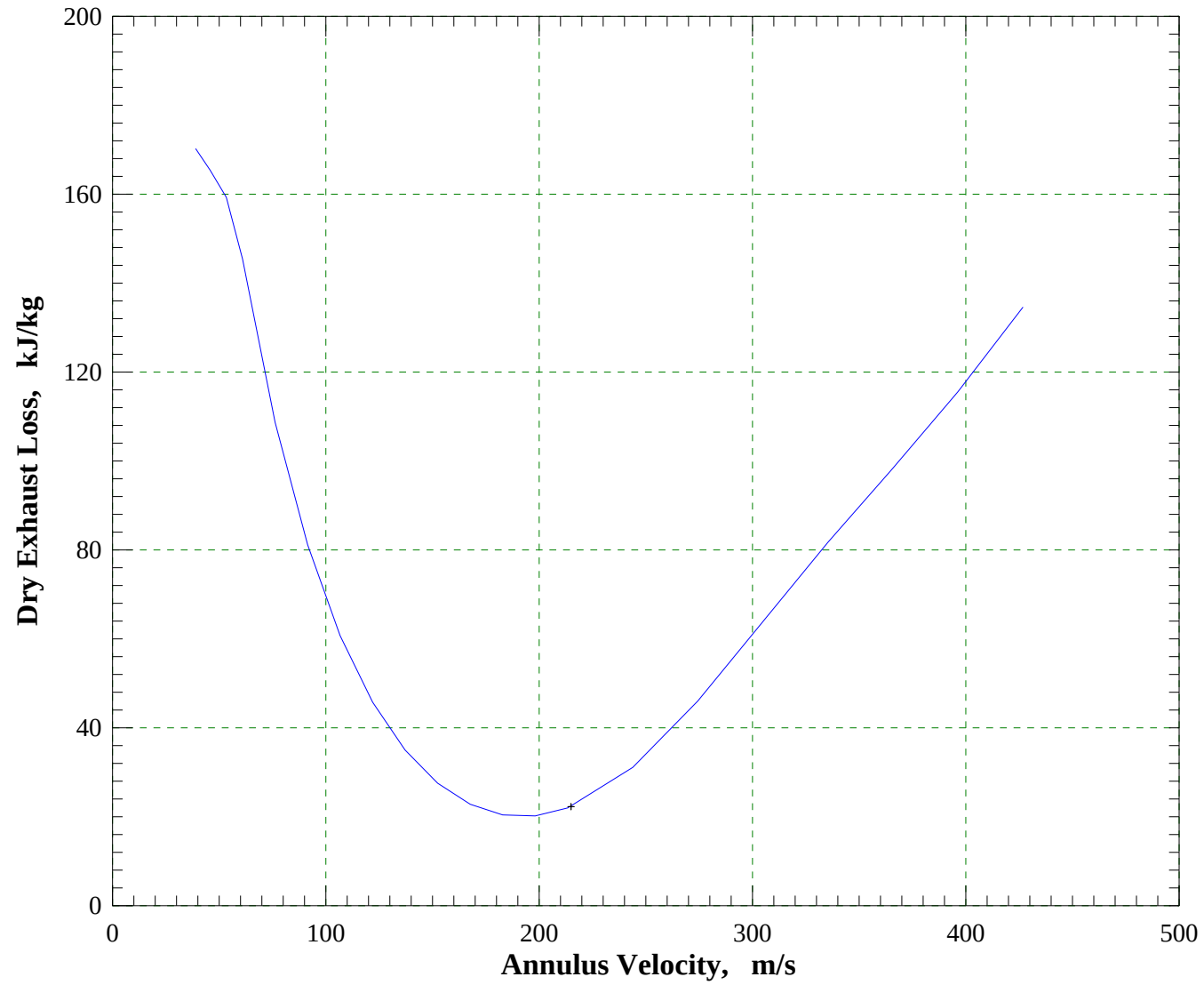


Steam Turbine Group Data

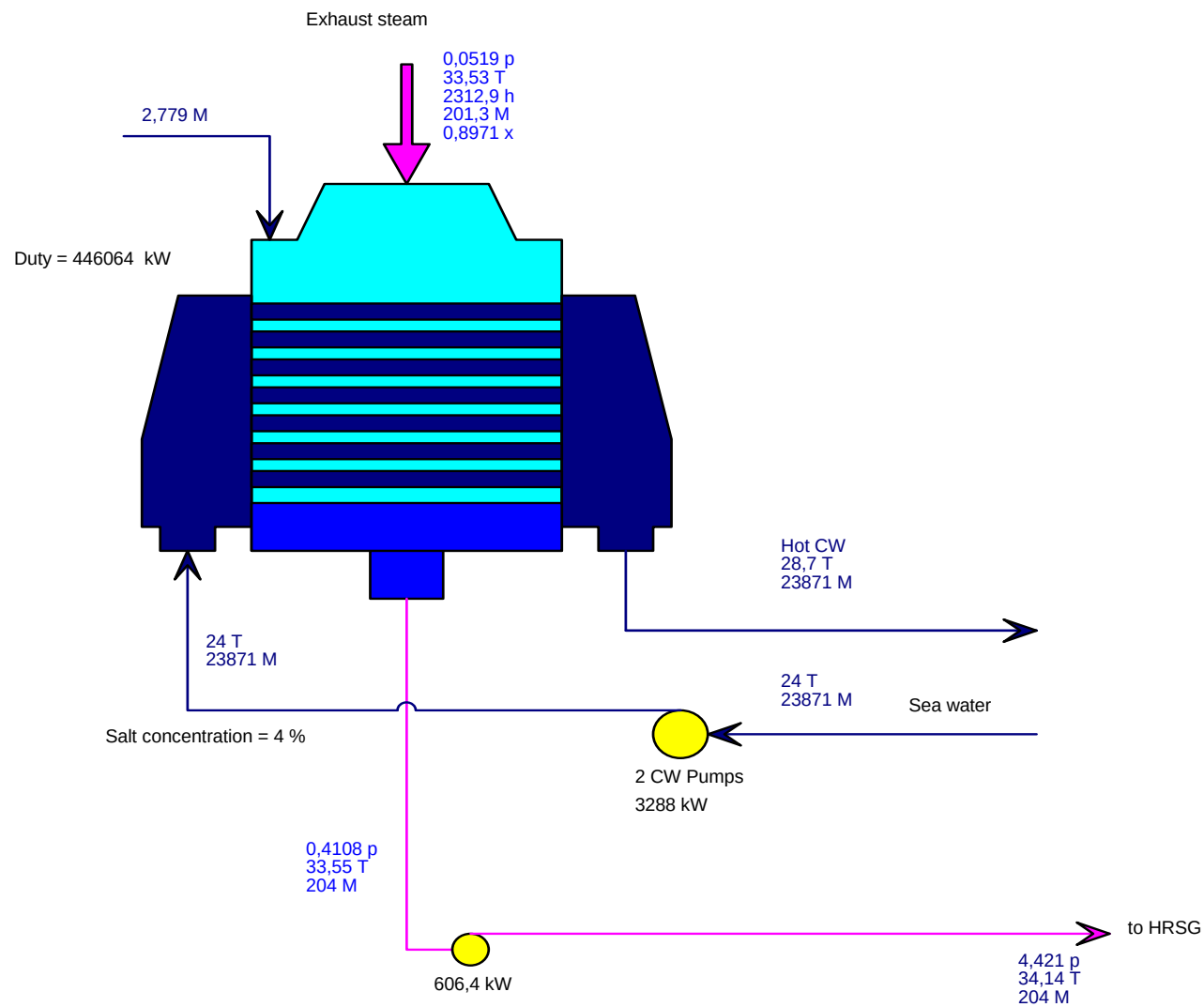


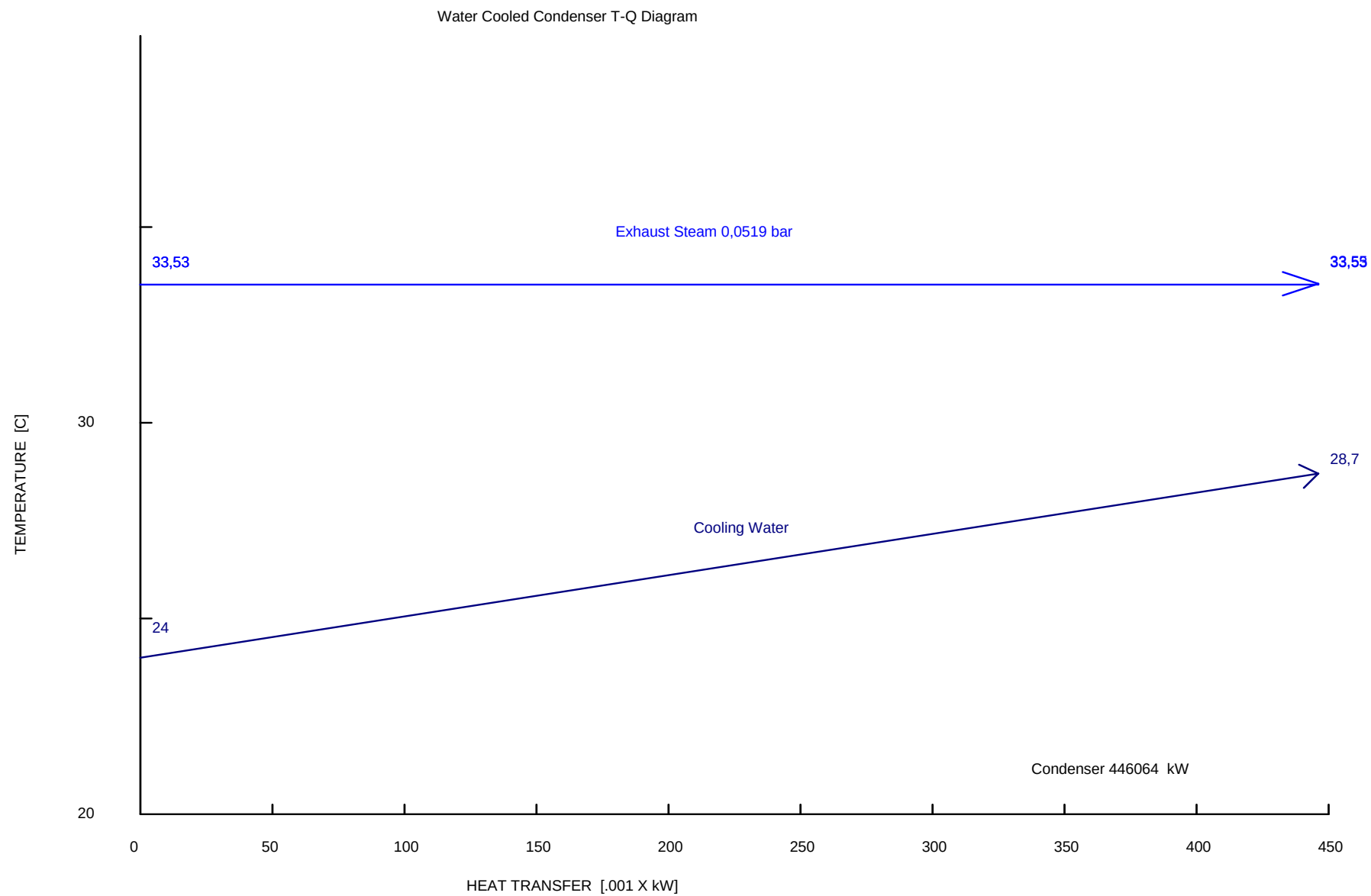


Steam Turbine Exhaust Loss



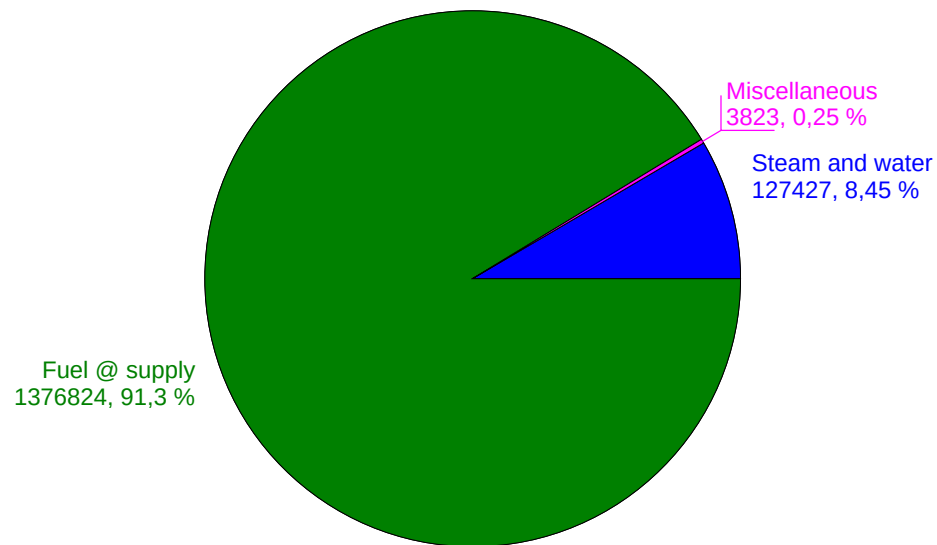
Cooling System





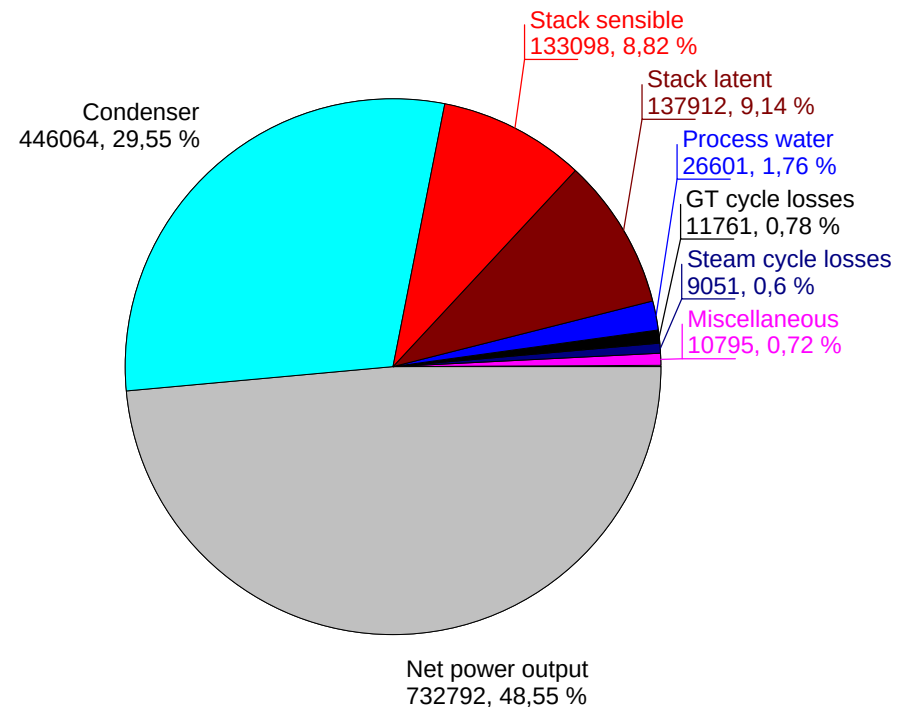
Plant Energy In [kW]

Plant energy in = 1508074 kW
 Plant fuel chemical LHV input = 1240732 kW, HHV = 1371900 kW
 Plant net LHV elec. eff. = 59,06 % (100% * 732792 / 1240732), Net HHV elec. eff. = 53,41 %



Plant Energy Out [kW]

Plant energy out = 1509275 kW



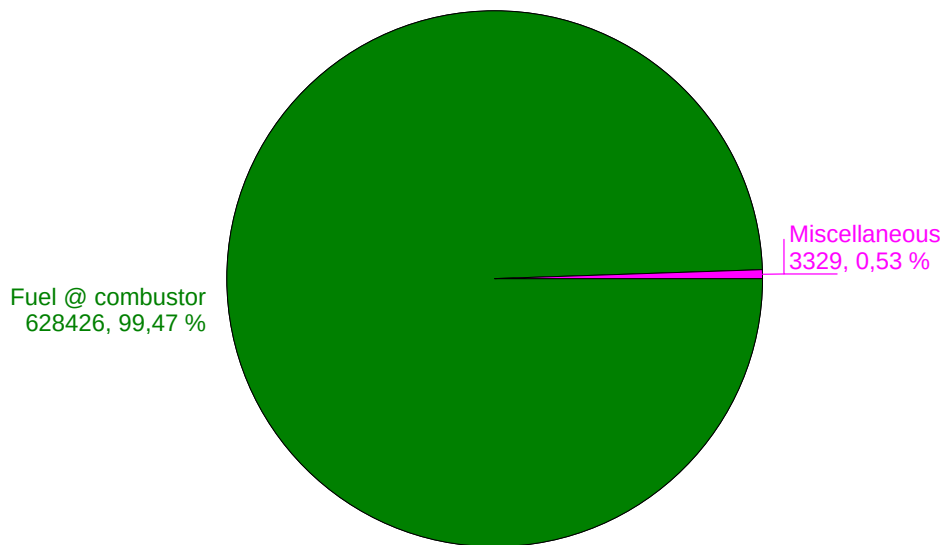
Zero enthalpy: dry gases & liquid water @ 32 F (273.15 K)



GT Cycle Energy In [kW] - per unit

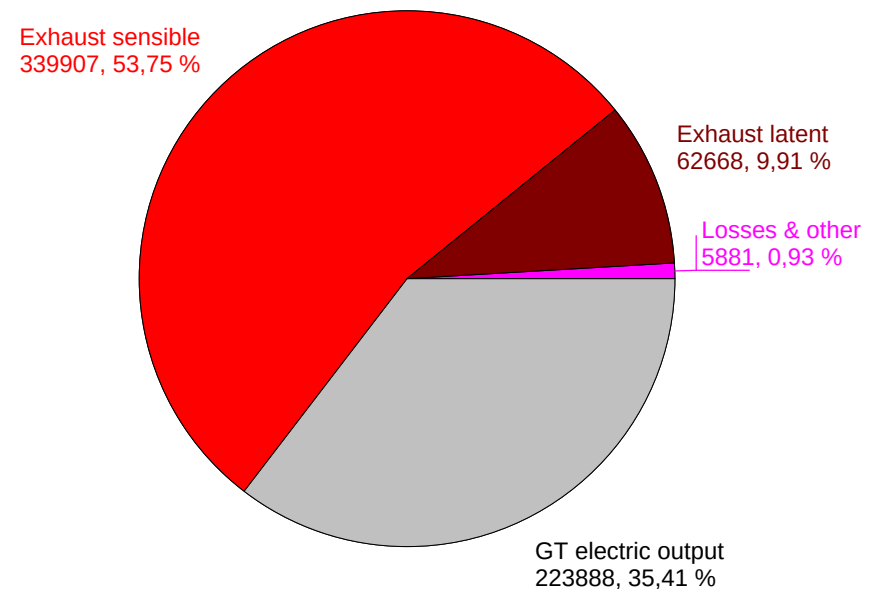
GT cycle energy in = 631755 kW

GT fuel chemical LHV input = 562288 kW, HHV = 621733 kW



GT Cycle Energy Out [kW] - per unit

GT cycle energy out = 632344 kW

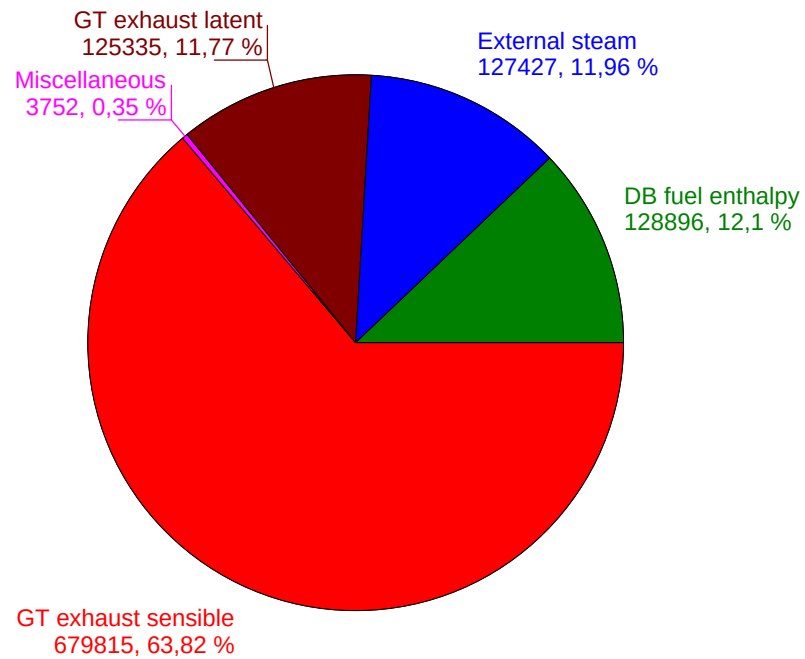


Zero enthalpy: dry gases & liquid water @ 32 F (273.15 K)



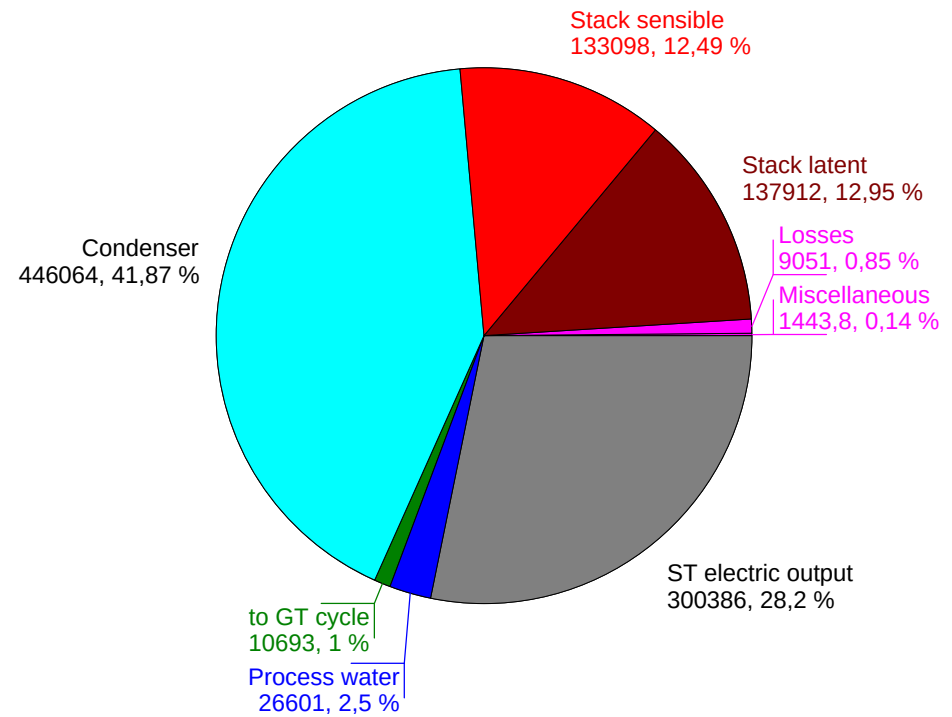
Steam Cycle Energy In [kW]

Steam cycle energy in = 1065225 kW



Steam Cycle Energy Out [kW]

Steam cycle energy out = 1065249 kW



Zero enthalpy: dry gases & liquid water @ 32 F (273.15 K)

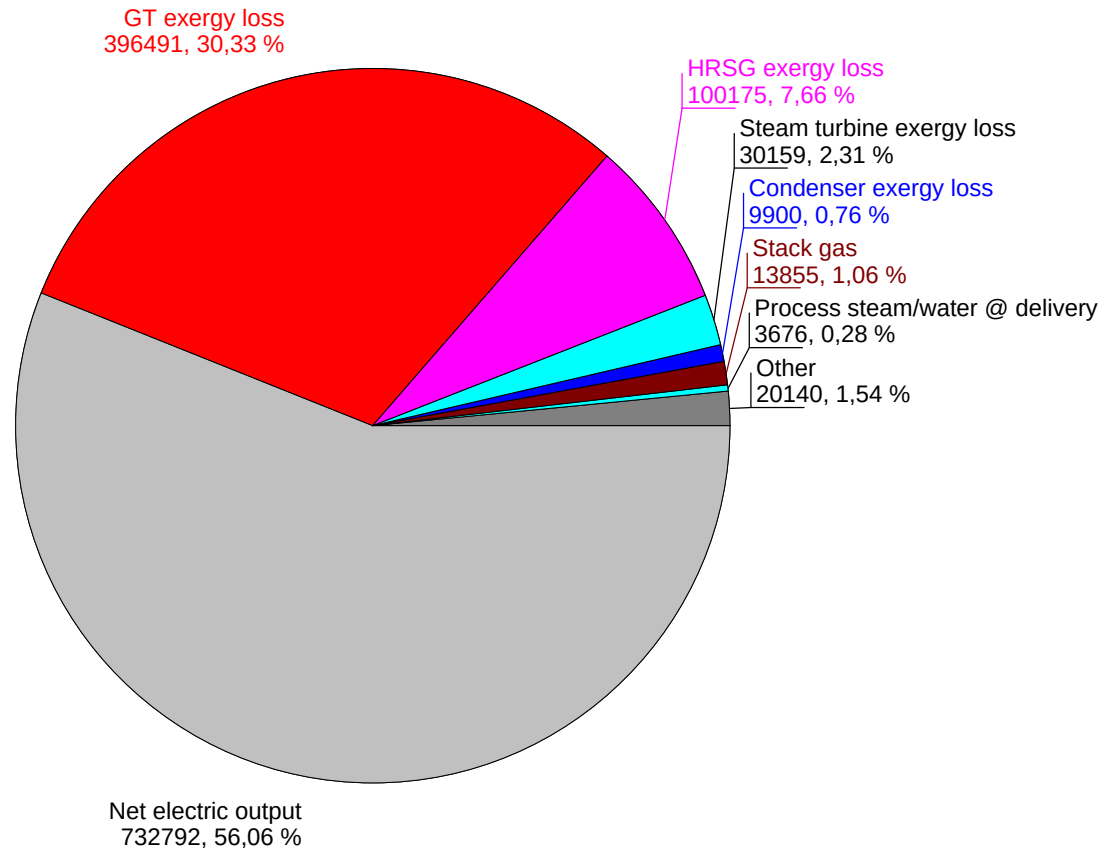


Plant Exergy Analysis [kW]

Plant exergy input = 1307189 kW

Fuel exergy input = 1254686 kW

Plant fuel chemical LHV input = 1240732 kW, HHV = 1371900 kW



Reference: 1.013 bar, 25 C, water as vapor.

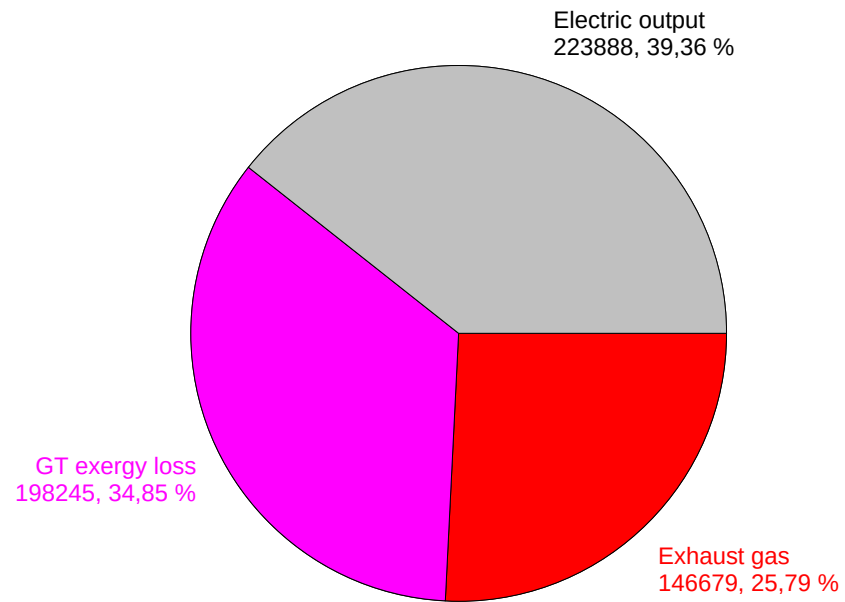


GT PRO 27.0 Tractebel Engineering

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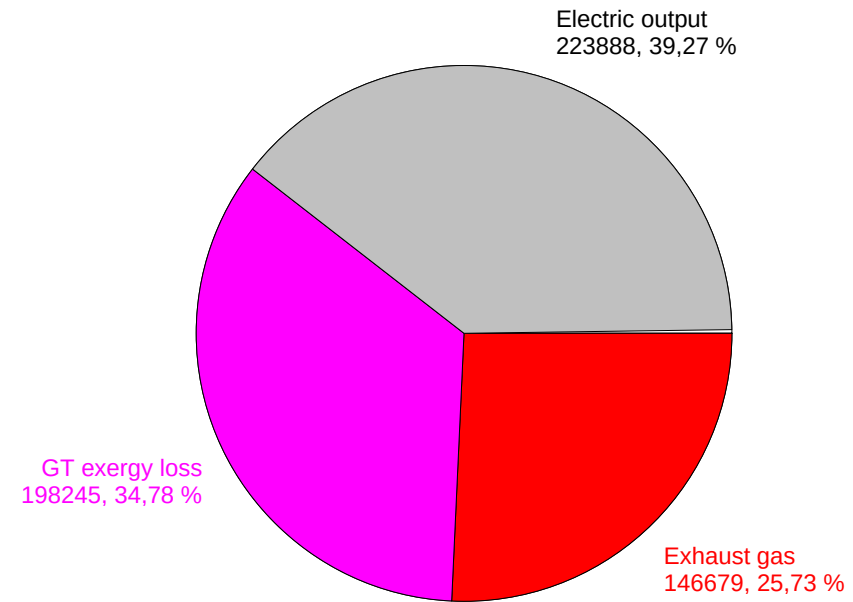
GT Exergy Analysis [kW]

GT exergy in = 568813 kW



GT & Peripheral Exergy Analysis [kW]

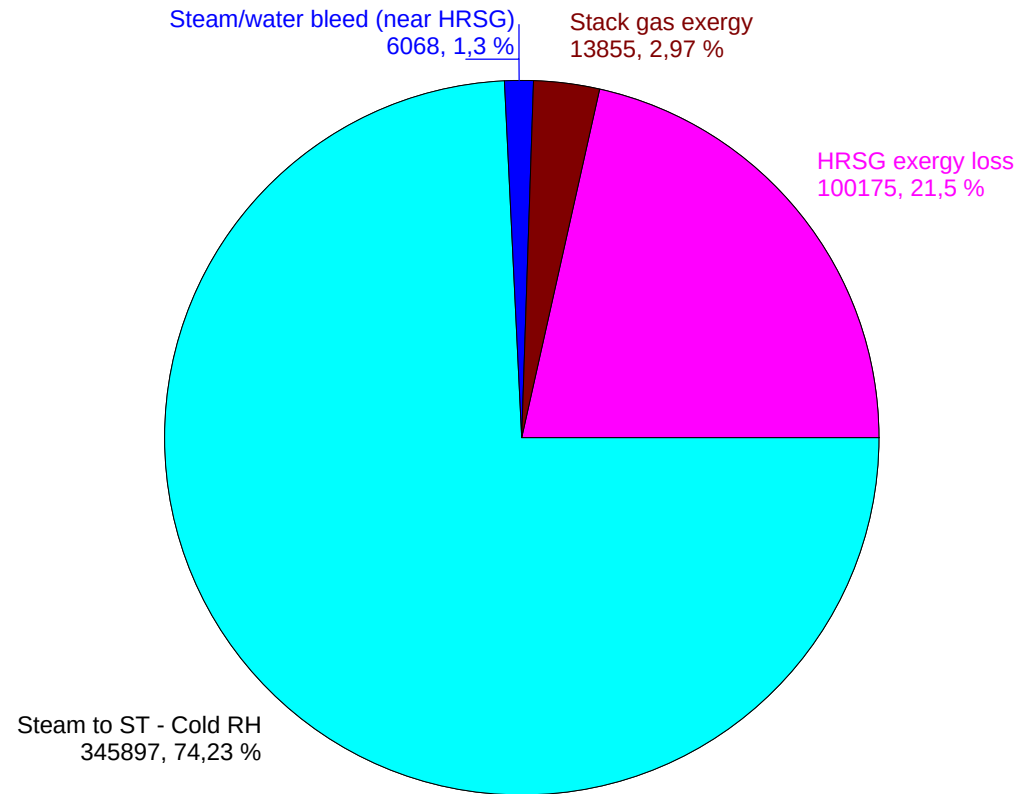
GT & peripheral exergy in = 570070 kW



Reference: 1.013 bar, 25 C, water as vapor.

HRSG Exergy Analysis [kW]

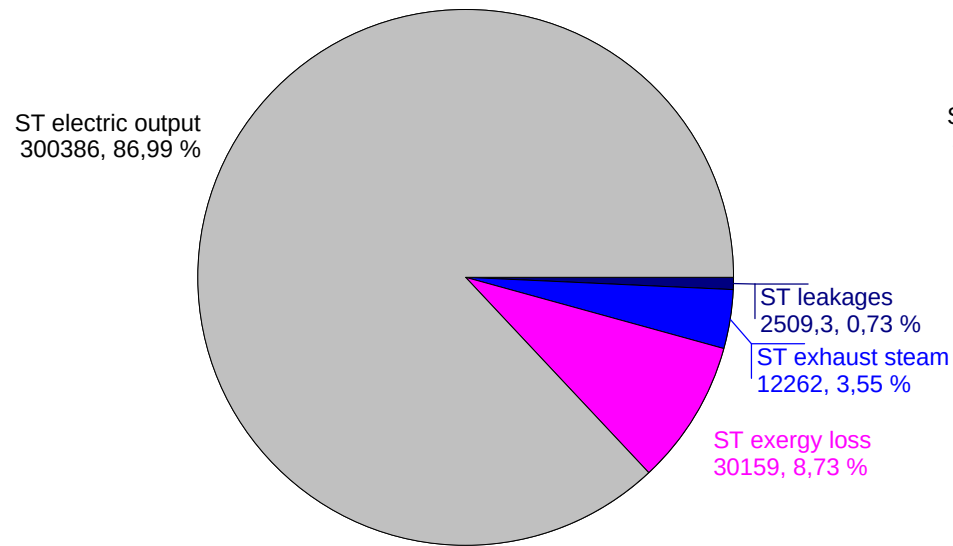
HRSG exergy in = 465999 kW



Reference: 1.013 bar, 25 C, water as vapor.

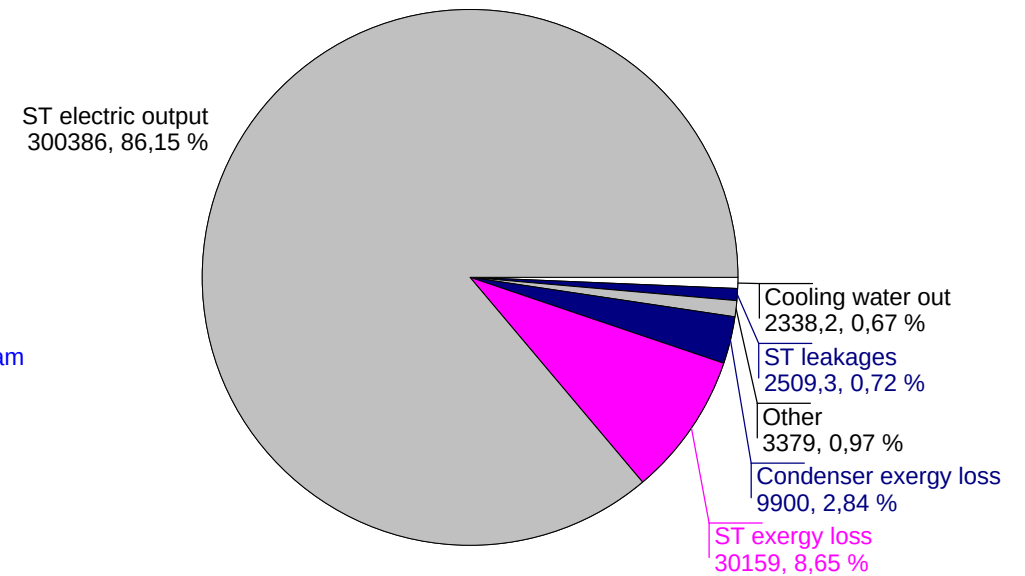
ST Exergy Analysis [kW]

ST exergy in = 345316 kW

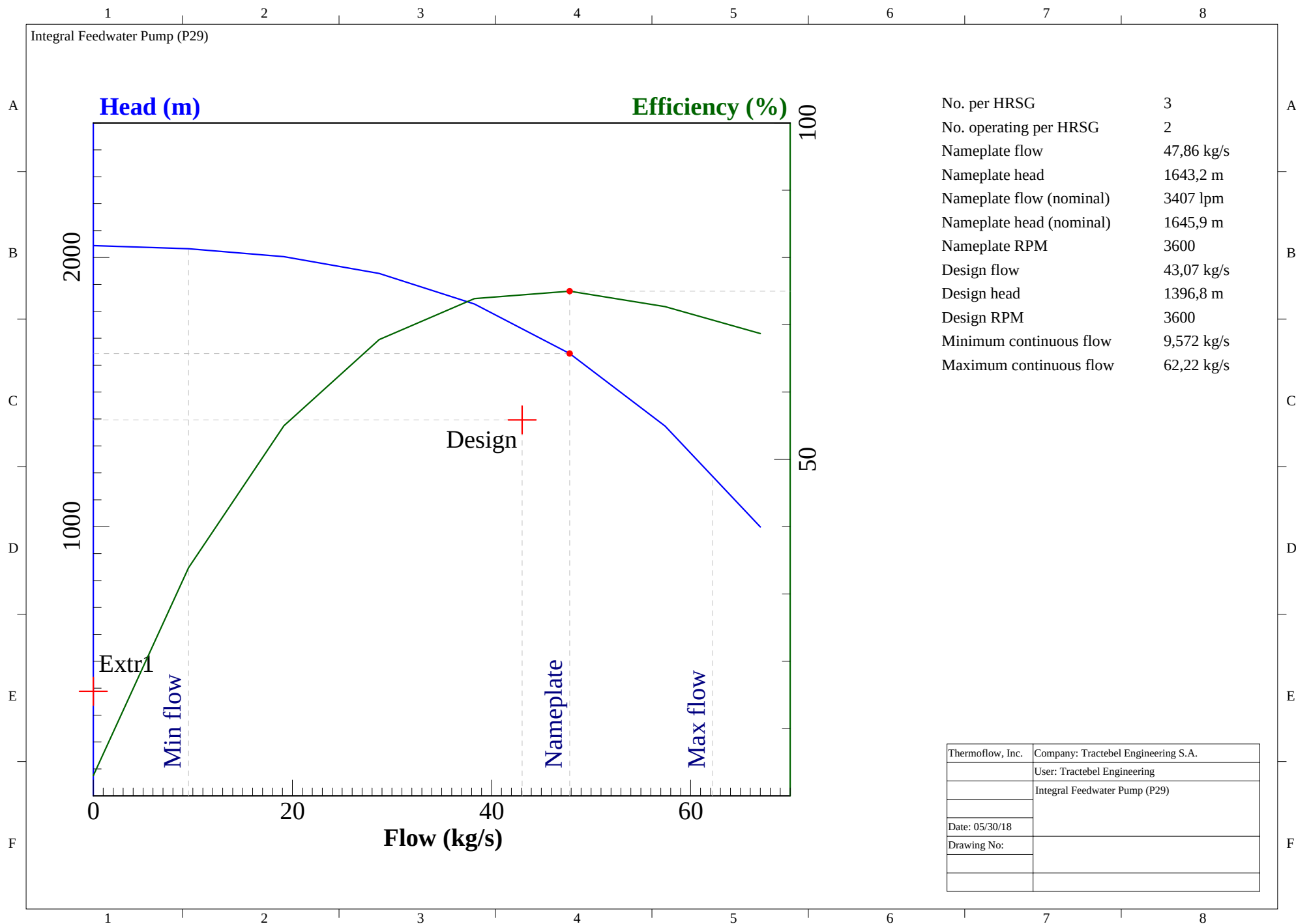


ST & Condenser Exergy Analysis [kW]

ST & condenser exergy in = 348672 kW



Reference: 1.013 bar, 25 C, water as vapor.



Thermoflow, Inc.	Company: Tractebel Engineering S.A.
	User: Tractebel Engineering
	Integral Feedwater Pump (P29)
Date: 05/30/18	
Drawing No:	

