

v.1.5.6

SEnergie GmbH
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SWEP SSP CBE

HEAT EXCHANGER: B120Tx80H/1P

SINGLE PHASE - Neuauslegung

Customer: KA Eilendorf
Reference: G926 TI, 183kWth

Date: 14.07.2010
Our Ref.:

DUTY REQUIREMENTS

		SIDE 1	SIDE 2
Fluid Side 1	Wasser		
Fluid Side 2	Ethylenglykol - Wasser (34,0 %)		
Inlet temperature	°C	: 85,00	65,00
Outlet temperature	°C	: 70,00	80,00
Flow rate	kg/s	: 2,906	3,263
Max. pressure drop	kPa	: 20,0	20,0
Thermal length	NTU	: 3,00	3,00

PHYSICAL PROPERTIES

Reference temperature	°C	: 77,50	72,50
Dynamic viscosity	cP	: 0,366	0,804
Dynamic viscosity - wall	cP	: 0,375	0,771
Density	kg/m ³	: 973,3	1025
Specific heat capacity	kJ/kg, °C	: 4,198	3,738
Thermal conductivity	W/m, °C	: 0,6684	0,4761

PLATE HEAT EXCHANGER

Heat load	kW	:	183,0
Total heat transfer area	m ²	:	10,3
Heat flux	kW/m ²	:	17,77
Log mean temperature difference	K	:	5,00
Overall H.T.C. (available/required)	W/m ² , °C	:	4290/35 50
Pressure drops - total	kPa	:	13,2
- in ports	kPa	:	2,93
Port diameter	mm	:	39,0
Number of channels		:	39
Number of plates		:	80
Oversurfacing	%	:	21
Fouling factor	m ² , °C/kW	:	0,048

Note:

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