

Desuperheater Type 3

1	Customer:		ARTES-ref.-no.:	5504246
2	Plant:		Pos.:	7
3	Location:	Desuperheater 2	Qty.:	1
4	TAG No.:	1 LAE12 AA001	S/N:	3168069.1

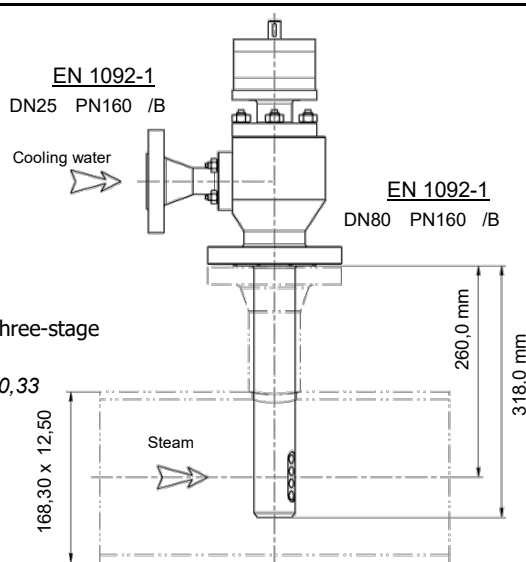
5 Pipedesign				
6	Steam Pipe	Ø D [mm] x s [mm]	168,30	x 12,50
7	Thermoshock Pipe	Ø D [mm] x s [mm]		x
8	Cooling Water Pipe	Ø D [mm] x s [mm]	33,70	x 3,20

9 Valve Design			position of cooling water connection		A
			steamside	waterside	
			EN 1092-1/B	EN 1092-1/B	
12	Nominal Size	DN DN	80	25	
13	Nominal Pressure	PN PN	160	160	
14	Pressure	[bar(g)]	102	136	
15	Temperature	[°C]	495	125	

17 Operation Data		Loading Case 1		Loading Case 2		Loading Case 3		Loading Case 4		Loading Case 5		Loading Case 6	
18	Medium:	steam	water	steam	water	steam	water	steam	water	steam	water	steam	water
19	Flow Rate	[t/h]	40,00	0,27	40,00	0,52	40,00	0,87	40,00	1,10			
20	Temp. Inlet	[°C]	447,00	115,00	463,00	115,00	476,00	115,00	489,00	115,00			
21	Temp. Outlet	[°C]	440,00		449,30		452,70		459,00				
22	Pressure	[bar(a)]	87,80	123,00	87,80	120,00	87,80	120,00	87,80	105,00			
23	Flow Speed	[m/s]	23,42	0,14	24,02	0,26	24,39	0,43	24,84	0,55			
24	K _v - Value	[m³/h]		0,05		0,09		0,16		0,27			

25 Type Of Valve Desuperheater metallic sealing

27 Material		
28	Body:	1.7380 (10CrMo9-10)
29	Cooling Water Flange:	1.7380 (10CrMo9-10)
30	Stem:	1.4122 (X39CrMo17-1), hardened
31	Nozzle Stem:	1.4301 (X5CrNi18-10), hardened
32	Seating:	1.4122 (X39CrMo17-1), hardened
33	Nozzle:	1.4122 (X39CrMo17-1), hardened
34	Seal:	Graphite



36 Valveparameter		
37	Seat Diameter:	[mm] 25
38	Pressure Reduction Steps:	● single-stage ○ double-stage ○ three-stage
39	Number Of Nozzles:	6
40	K _{vs} Valve / Stage2 / Stage3 / Nozzles:	[m³/h] 0,33 -- -- 0,33
41	Characteristic Curve:	equal %
42	x-Length:	[mm] 260,0
43	Offset Δx:	[mm] 0,0
44	LL-Length:	[mm] 318,0
45	max. Δp for actuator:	[bar] 136,0
46	Lance Diameter:	[mm] 71

47	Inspection acc. to	--	Final Inspection	3.1
48	Requirements acc. to:	EN 12952	Confirmation Acc. To DIN	
49	Leakage Rate:	0,01% of K _{vs} -Value	EN 10204	

50	Mounting Instruction	Length of straight outflow pipe	6,0 m
51		Min-Distance to the temperature sensor	12,0 m

52	Actuator	pneumatic	3168049
53	Type:	ProtACT PR263S.10.090.14S36.PRH, single-acting, spring closes	
54		Positioner: Siemens Sipart PS2 - 6DR5011-0NG21-0AA1, incl. ly-Module for position feedback (4 ... 20mA)	
55		Type: 6DR4004-8J; incl. limit transmitter SIA-Module; inductive limit switches; incl.gauge block made of plastic	
56		aluminium block, filter regulator SMC AW30-F02G-B 1/4" incl. pressure gauge	
57		completely piped in stainless steel, air supply: 5,0 bar(g)	

58 Remarks

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62 We recommend the use of a thermoshock pipe.

63	Revision	0	1	2	3	4	5	6
64	Date:	11.06.2021	16.07.2021	11.10.2021				
65	Prepared:	F. Lange	H. Jäkel	P. Schüler				
66	Checked:	H. Jäkel	P. Schüler	R. Feldmann				