Middletown Energy Center CCPP 475MW Released Work May Proceed - Proiect V17494 G-G 1:6 & Kings Moutain Energy Center [8.27] 209.9 VOGT POWER INTERNATIONAL Ansicht in Durchflussrichtung! - Project V17495 V17494-CIXD-6006-03 View in flow-direction! [10.02 +2.00] 12-Apr-2016 [5.01 ±0.10] +50.90 254.51 -25.45 127.25 ±2.55 SCALE 1:6 TDC 0° MEC/KMEC Flow direction Ø<u>---</u>
b1 10" Flow Element 1CD-FE3001 (LPFW Condensate - Flow Nozzle) 3,2 [0.16] E ID 4 270° $\begin{bmatrix} 0.02 \\ 54.51 \end{bmatrix}^*$ 10.75 -0.01 [10.75 -Rali 6, ا ... \wedge \Box Ra 3,6 [0.16] 180° ID 4 Stamping Stamping (+)"Taps A" Taps A" [2.36] 2.36 [13.64] Inside machining Inside machining 60 60 on whole lenght on whole lenght **DETAIL A DETAIL Y DETAIL E** - BW ENDING OF PIPE 40.16 - NOZZLE ENDING 1:12 1020 =L2 1:2 [40.45] [20.3] 1027.5 [61.02 ±0.16] **DETAIL G** BW in accordance DFTAIL D with ASME B16.25 - DETAIL OF IMPULSE - TAP DETAIL Intolerierte Maße nach/ Fig. 2a, Sch. 40 Intolarate Dimensions acc CONNECTION **DETAIL C DETAIL B** DIN 7168-mittel 1:2 - PLUGGED TAP 0.16 - NOZZLE DETAIL max. misalignment acc. Fig. 127.3 max. 2mm ±0,1 max. thickness of reinforcement acc. Table 127.4. 4mm 0.84 D über/over D ±0,2 QD 21.3 No SILICA used on pressure parts. bis/to Construction Code: ASME Section I, Ed. 2013 Clasification: NBEP über/over 30 ±0,3 Modification of diameter d20. 13.04.16 LB 100 Supporting Code: ASME B31.1 Edition 2014 + 2012 bis/to 8.65 (mwt=0,55) über/over 100 07.04.16 С Modification of pressure class. LB ±0,5 Stamping: N.A. (not required by customer) bis/to 300 mplementation of customer 03.02.16 LB über/over 300 NB Registration: N.A. (not required by customer) comments ±0,8 [0.02] 0.5 1000 bis/to Α 02.01.15 LB appl. Code cases: None For release über/over 1000 Datum Name ±1,2 [0.87] ndex Änderungshinweis / Details of bis/to 2000 Medium: Water 0.16 Date 1.05 Untolerierte Maße nach/ 4.9 (mwt=0,91) PWHT: NO Revisions Untolarate Dimensions acc EN ISO 13920- class/Klasse E 3/4"SW CL. 3000 2016 **SEIKO** Baujahr/Year built: Inspector: 3/4"SW CL. 3000 1/2" NPT(F) in accordance ±1 in accordance ~232 lb / 105 kg | Einbaulage/mounting pos.: Pos. 6 TAG-Plate with ASME B16.11 Gew./Weight: (kg) horizontal 1.09 with ASME B16.11 mounted with lacing cord ID 27.6 = 3/4'SV ±2 Abmessungen./Dimensions: (mm) Druckentnahmestutzen/taps: 1 pair 120 CLASS 3000 100 W: 346 mm L: 1550 mm H: 310 mm Remosil 120 Corrosion protection: 61,02 in 12,19 in ±2 [1.47] 400 P\$ (max. Pressure): 650Psia/ 4482kPa /44,8 bar(a SA2.5 O SEIKO FLOWCONTROL Oberflächenbeh./Surface treatment: OD 37.4 400 ±3 1000 TS (max. Temp.): 494°F/ 257 KKS-Nr./TAG-No.: Fabr. Nr./Serial No.: TAG no.: see table Ye Serial no.: see table We DN/Vol(I).: 10" TS PS: 650 Psig / 4482 kPa PT: Inline! 972 Psig / 6700 kPa Year built: 2016 Weight: ** (kg) TS: 494°F / 257°C TAG plate 100 x 50 x min.1.5) SA-240 304 ±4 [3,94x1,97xmin.0,06in] PT (Testpressure): Inline! 972Psig/ 6700kPa/ 67 bar(g) 1CD-FE3001 SEI15_2821 2000 Plug OD26,7x28,6 [OD1,05x1,13in] SA-105 3.1 2000 Isolierstärke/Insulation thickness 0 mm ±6 Pressure tap OD37,4x80 [OD1,47x3,15in] bis/to 4000 2 SA-105 3.1 Corrosion allowance: 0 mm 0 4000 ±8 Downstream pipeOD273,1x9,27x515,5 8000 SA-106 Gr. B Benennung/Title: Kunde/Customer: 10" Sch. 40 3.1 OD10,75x0,365x20,3in *dimension will be change über/over 8000 CI. 300/C Upstream pipe OD273,1x9,27x1027,5 [OD10,75x0,365x40,45in] Flow device with lolg radius nozzle ±10 SA-106 Gr. B 12000 3.1 **Coot** Power ASME PTC 19.5-2004 LP Condensate Feedwater Inlet Flow Element F über/over bis/to 12000 Nozzle OD254,51x209,9 ±12 SA-105 3.1 16000 254.508 0.764 Projekt/Project.: Zeichnungs-Nr./Drawing-No.: Target mm V17494 - Middletown Energy Center & V17495 -Kings 16000 ID Di: 10.020 0.030 in in ± ±14 Werkst Schmelze FLOWCONTROL Seiko: A16020088-150712/07 Zeugnis/ EN10204 **HVLD** 20000 Benennung/Denomination MA/ Norm / Pos. Part Moutain Energy Center Target 124.322 mm ± 0.062 mm Nr./ Nr. / pcs Standard Material Charge 20000 ±16 4.895 1/2 ID d20: 0.0024 PO: V0009647 Item #7 | HO: A16020088-150712 Kunde: Vogt Power International (VPI) in ± in 2 3 5 4 6 8

BETA

RATIO

1

Single 90° bend

ortee

2B

(a) Values expressed are expressed in INCHES.

2A

GENERAL NOTES:

Several 90°

bends, same

plane

3B

3A

0.488 | 140.32 | 70.16 | 200.45 | 100.23 | 400.90 | 200.45

Several 90°

bends,

different planes

(c) Column A for each fitting gives lengths corresponding to "zero additional uncertainty" values. (d) Column B for each fitting gives lengths corresponding to "0.5% additional uncertainty" values.

Reducer 2D to

D over length

of 1.5D to 3 D

5B

50.11

5A

60.14

(b) The pipe roughness shall not exceed that of a smooth, commercially available pipe approximately k/D < 10-3.

	bis/to	6	±0,1			
טן	über/over bis/to	6 30	±0,2			
	über/over bis/to	30 100	±0,3			
	über/over bis/to	100 300	±0,5			
	über/over bis/to	300 1000	±0,8			
	über/over bis/to	1000	±1,2			
	Untolerierte Maße nach/ Untolarate Dimensions acc EN ISO 13920- class/Klasse E					
	über/over bis/to	2 30	±1			
E	über/over bis/to	30 120	±2			
F	über/over bis/to	120 400	±2			
	über/over bis/to	400 1000	±3			
	über/over bis/to	1000 2000	±4			
	über/over bis/to	2000 4000	±6			
	über/over bis/to	4000 8000	±8			
	über/over bis/to	8000 12000	±10			
	über/over bis/to	12000 16000	±12			
	über/over	16000	±14			

С											С
D	Untolerierte Maße nach/ Untolerierte Maße nach/ Untolerate Dimensions acc. DIN 7168-mittel bis/to 6 ±0,1 über/over 6 bis/to 30 ±0,2 über/over 30 ±0,3 über/over 30 ±0,3					Construction Code: ASME Social Classification: NBEP Supporting Code: ASME B3	•	D Modification of diame		16 LB	
 	Über/over 100 ±0,5 bis/to 300 ±0,5 Über/over 300 ±0,8						. (not required by customer) . (not required by customer)	C Modification of pressu Implementation of customments			
	über/over 1000					appl. Code cases:	None	A For release	02.01.1		Г
l 1	bis/to 2000 ±1,2 Untolerierte Maße nach/					Medium:	Water	Index rev. Anderungshinweis revision	Details of Datun Date	Name	
u	Untolarate Dimensions acc. EN ISO 13920- class/Klasse B		PWHT: NO		1.0 1.0.01.0			ļ			
-	übar/ayar 2					Baujahr/Year built:		Inspector:		SEIKO	
	bis/to 30 III							kg Einbaulage/mounting pos.: h		rizontal	1
	über/over 30 bis/to 120 ±2					Abmessungen./Dimensions: (mm) L: 1550 mm W: 346 mm H: 310 mm		Druckentnahmestutzen/taps:		1 pair	ΙE
	über/over 120 bis/to 400 ±2					61,02 in 13,64 in	n H: 310 mm n 12,19 in	Corrosion protection:	Remosil		
ük	über/over 400							Oberflächenbeh./Surface trea		SA2,5	1
	bis/to 1000 ±3 über/over 1000					TS (max. Temp.):	494°F/ 257 °C	KKS-Nr./TAG-No.:	Fabr. Nr./Serial No.:		l
	bis/fo 2000 ±4						972Psig/ 6700kPa/ 67 bar(g)	1CD-FE3001	SEI15_282	21	l
F	über/over 2000 bis/to 4000 ±6					Isolierstärke/ Insulation thic	ckness 0 mm				
	über/over 4000 bis/to 2000 ±8					Corrosion allowance:	0 mm				1
	bis/fo 8000 über/over 8000 bis/fo 12000 ±10 über/over 12000 ±10					Kunde/Customer:	SEIKO	Benennung/Title: Flow device with lolg ra LP Condensate Feedwa		300/C	F
	bis/to 16000 -12 über/over 16000					Projekt/Project.: V17494 - Middletown Energy Center & V17495 -Kings		Zeichnungs-Nr./Drawing-No.:	Type:		
	bis/to 20000 ±14					Center & V17495 -Kings Moutain Energy Center	FLOWCONTROL	Seiko: A 1 60 200 88 - 1 50		/LD	l
	über/over 20000 ±16					PO: V0009647 Item #7	HO: A16020088-150712	Kunde: Vogt Power Interna	tional (VPI) 2/	/2	j
	1	2	3	4	5	6		7	8		

EXCERPT FROM ASME PTC 19.5-2004, TABLE 7-1.2-1 REQUIRED STRAIGHT LENGTHS FOR ORIFICE PLATES AND NOZZLES

Gate Valve

Fully Open

60.14

8A

Globe Valve

Fully Open

7A

180.41 90.20 220.50 110.25 120.27

7B

Abrupt

diameter

reduction

300.68 150.34

9A

Thermometer-

pocket, Ø ≤ 0,03

10B

30.07

10A

50.11

Thermometer-

pocket, $\emptyset > 0.03$

Di

11B

100.23

11A

200.45

Downstream

(Outlet) section

12B

60.14

12A

60.14

Expander 0.5D

length of D to

2D

6B

6A

to Dover