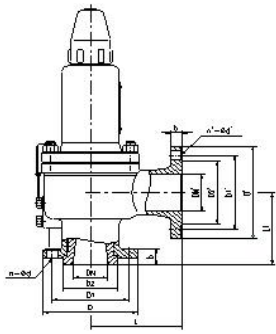
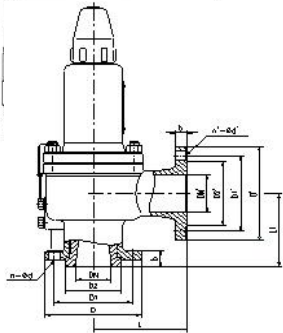


		安全阀口径计算书									
		Pressure Relief Valve Sizing and Calculation Report									
项目PROJECT:											
一般事项GENERAL											
1	工位号TAG NO.	PSV-208/210			6	阀盖形式BONNET TYPE	封闭				
2	台数QUANTIY	4			7	密封面形式SEAT TYPE	堆焊Stellite合金				
3	阀门形式VALVE TYPE	波纹管式			8	保温夹套WITH JACKED	无				
4	规范、标准CODE	API 520			9	爆破片RUPTURE DISK	无				
5	超过压力百分率PERCENT OVER P.	10%			10	启闭压差 BLOWDOWN	ΔPbl	15%			
附件ACCESSORIES											
11	扳手LIFTING LEVER	无			12	试验杆 TEST GAG	无				
工艺参数 TECHNOLOGICAL PARAMETER											
13	介质FLUID	Liquid ammonia			19	绝热指数SPE. HEAT RATIO	k				
14	介质状态STATE	Liquid			20	压缩系数COMPRESS. FACTOR	Z				
15	摩尔质量MOL. WEIGHT	M		kg/kmol	21	黏度VISCOSITY	μ		(mPa. s)		
16	密度DESITY	ρ	696	kg/m ³	22	设计温度DESING T.			°C		
17	工作温度OPER. TEMP.		8	°C	23	排放温度RELIEV. TEMP.	T	281	K		
18	排放温度RELIEV. TEMP.	T	8	°C							
压力PRESSURE											
24	工作压力OPER. PRESSURE	P	14.022	MPa (G)	28	恒定背压CONC. SUPERIMPOSED			MPa (G)		
25	整定压力SET PRESSURE	Ps	17.28	MPa (G)	29	可变背压VAR. SUPERIMPOSED		0	MPa (G)		
26	额定排放压力RATED RELIEVING PRE.	Pdr	19.108	MPa (A)	30	排放背压BULIT-UP BP			MPa (G)		
27	冷态试验差压力COLD DIF. STET PRE.	Pc		MPa (G)	31	总背压TOTAL BP	Pb	0	MPa (G)		
计算和选择CALCULATION AND SELECTION											
32	计算面积CALCULATED AREA	Ac	209.81	mm ²	37	喉径代号DRIFICE DESIGN	F				
33	选择面积SELECTED AREA	A	226.87	mm ²	38	流道直径THROAT DIAMETER	17.0	mm			
34	需要排量REQUIRED CAPACITY	Wr	39308.00	kg/h	39	开启高度LIFT	4.25	mm			
35	额定排量RATED RELIEVING CAPACITY	Wdr	42503.65	kg/h	40						
36	型号MODEL NO.	WA42Y-1500RL 1½F2			41						
计算公式CALCULATION FORMULA											
42	$Ac = 11.78 \times Wr / (Kdr \times Kb \times Kp \times Kv \times Kc) \times (\rho / (1.25 \times Ps - Pb))^{1/2}$										
43	$Wdr = (A \times Kdr \times Kb \times Kp \times Kv \times Kc) / 11.78 \times ((1.25 \times Ps - Pb) / \rho)^{1/2}$										
44	额定排量系数RATED COEFF. OF DIS.	Kdr	0.5								
45	背压修正系数BACK PRE. CORR. FACTOR	Kb	1								
46	气体特性系数COEFF. DETERMINED BY k	C	0								
47	黏度修正系数VISCOSITY CORR. FACTOR	Kv	1.00								
48	过热修正系数SUPERHEAT CORR. FACTOR	Ksh	1								
49	超压修正系数OVERPRE. CORR. FACTOR	Kp	0.6								
50	爆破片修正系数CRRECTION FACTOR	Kc	1								
连接CONNECTION											
51	法兰标准FLANGED STANDARD	ASME B16.5			54	面心距CENTER TO FACE (L/L1) mm	140	150			
52	进口尺寸INLET	出口尺寸OUTLET		1½"	2"	55					
53	进口等级IN. RATING	出口等级IN. RATING		1500LB RTJ	300LB RF	56					
材料MATERIALS											
57	阀体/阀盖BODY/BONNET	CF3M			60	波纹管BELLOWS	316L				
58	阀座/阀瓣NOZZLE/DISC	316L+STL			61	垫片GASKETS	PTFE				
59	弹簧SPRING	304			62	“O”型圈“O”RING					
备注NOTES:											
设计PREPARED BY		校对CHECKED BY		批准APPROVED BY		版本REVISION					

		安全阀口径计算书									
		Pressure Relief Valve Sizing and Calculation Report									
项目PROJECT:											
一般事项GENERAL											
1	工位号TAG NO.	PSV-232/233			6	阀盖形式BONNET TYPE	封闭				
2	台数QUANTIY	4			7	密封面形式SEAT TYPE	堆焊Stellite合金				
3	阀门形式VALVE TYPE	波纹管式			8	保温夹套WITH JACKED	无				
4	规范、标准CODE	API 520			9	爆破片RUPTURE DISK	无				
5	超过压力百分率PERCENT OVER P.	10%			10	启闭压差 BLOWDOWN	ΔPbl	15%			
附件ACCESSORIES											
11	扳手LIFTING LEVER	无			12	试验杆 TEST GAG	无				
工艺参数 TECHNOLOGICAL PARAMETER											
13	介质FLUID	Two-phase mixture			19	绝热指数SPE. HEAT RATIO	k				
14	介质状态STATE	Liquid			20	压缩系数COMPRESS. FACTOR	Z				
15	摩尔质量MOL. WEIGHT	M	22.1/21.6	kg/kmol	21	黏度VISCOSITY	μ		(mPa. s)		
16	密度DESITY	ρ	1215	kg/m ³	22	设计温度DESING T.			°C		
17	工作温度OPER. TEMP.		73	°C	23	排放温度RELIEV. TEMP.	T	346	K		
18	排放温度RELIEV. TEMP.	T	73	°C							
压力PRESSURE											
24	工作压力OPER. PRESSURE	P	14.12	MPa (G)	28	恒定背压CONC. SUPERIMPOSED			MPa (G)		
25	整定压力SET PRESSURE	Ps	16.632	MPa (G)	29	可变背压VAR. SUPERIMPOSED		0	MPa (G)		
26	额定排放压力RATED RELIEVING PRE.	Pdr	18.3952	MPa (A)	30	排放背压BULIT-UP BP			MPa (G)		
27	冷态试验差压力COLD DIF. STET PRE.	Pc		MPa (G)	31	总背压TOTAL BP	Pb	0	MPa (G)		
计算和选择CALCULATION AND SELECTION											
32	计算面积CALCULATED AREA	Ac	224.77	mm ²	37	喉径代号DRIFICE DESIGN	E				
33	选择面积SELECTED AREA	A	226.87	mm ²	38	流道直径THROAT DIAMETER	17.0	mm			
34	需要排量REQUIRED CAPACITY	W _r	54585.00	kg/h	39	开启高度LIFT	4.25	mm			
35	额定排量RATED RELIEVING CAPACITY	W _{dr}	55094.73	kg/h	40						
36	型号MODEL NO.	WA42Y-1500LB 1E2			41						
计算公式CALCULATION FORMULA											
42	$Ac = 11.78 \times W_r / (K_{dr} \times K_b \times K_p \times K_v \times K_c) \times (\rho / (1.25 \times P_s - P_b))^{1/2}$										
43	$W_{dr} = (A \times K_{dr} \times K_b \times K_p \times K_v \times K_c) / 11.78 \times ((1.25 \times P_s - P_b) / \rho)^{1/2}$										
44	额定排量系数RATED COEFF. OF DIS.	K _{dr}	0.5								
45	背压修正系数BACK PRE. CORR. FACTOR	K _b	1								
46	气体特性系数COEFF. DETERMINED BY k	C	0								
47	黏度修正系数VISCOSITY CORR. FACTOR	K _v	1.00								
48	过热修正系数SUPERHEAT CORR. FACTOR	K _{sh}	1								
49	超压修正系数OVERPRE. CORR. FACTOR	K _p	0.6								
50	爆破片修正系数CRRECTION FACTOR	K _c	1								
连接CONNECTION											
51	法兰标准FLANGED STANDARD	ASME B16.5			54	面心距CENTER TO FACE (L/L1) m	140	170			
52	进口尺寸INLET	出口尺寸OUTLET		1"	2"	55					
53	进口等级IN. RATING	出口等级IN. RATING		1500LB RTJ	300LB RF	56					
材料MATERIALS											
57	阀体/阀盖BODY/BONNET	4A			60	波纹管BELLOWS	InconeI 625				
58	阀座/阀瓣NOZZLE/DISC	F51+STL			61	垫片GASKETS	PTFE				
59	弹簧SPRING	InconeI X-750			62	“O”型圈“O”RING					
备注NOTES:											
设计PREPARED BY		校对CHECKED BY		批准APPROVED BY		版本REVISION					

		安全阀口径计算书									
		Pressure Relief Valve Sizing and Calculation Report									
项目PROJECT:											
一般事项GENERAL											
1	工位号TAG NO.	PSV-1290			6	阀盖形式BONNET TYPE	封闭				
2	台数QUANTIY	4			7	密封面形式SEAT TYPE	PEEK				
3	阀门形式VALVE TYPE	普通式			8	保温夹套WITH JACKED	无				
4	规范、标准CODE	API 520			9	爆破片RUPTURE DISK	无				
5	超过压力百分率PERCENT OVER P.	10%			10	启闭压差 BLOWDOWN	Δ Pb	15%			
附件ACCESSORIES											
11	扳手LIFTING LEVER	无			12	试验杆 TEST GAG	无				
工艺参数 TECHNOLOGICAL PARAMETER											
13	介质FLUID	Carbon dioxide			19	绝热指数SPE. HEAT RATIO	k	1.29			
14	介质状态STATE	Gas			20	压缩系数COMPRESS. FACTOR	Z	0.99438			
15	摩尔质量MOL. WEIGHT	M	44.01	kg/kmol	21	黏度VISCOSITY	μ	1.495	(mPa. s)		
16	密度DESITY	ρ	1,977	kg/m³	22	设计温度DESING T.			°C		
17	工作温度OPER. TEMP.		25	°C	23	排放温度RELIEV. TEMP.	T	298	K		
18	排放温度RELIEV. TEMP.	T	25	°C							
压力PRESSURE											
24	工作压力OPER. PRESSURE	P	7.52	MPa (G)	28	恒定背压CONC. SUPERIMPOSED		0	MPa (G)		
25	整定压力SET PRESSURE	Ps	8.1	MPa (G)	29	可变背压VAR. SUPERIMPOSED		0	MPa (G)		
26	额定排放压力RATED RELIEVING PRE.	Pdr	9.9	MPa (A)	30	排放背压BULIT-UP BP			MPa (G)		
27	冷态试验差压力COLD DIF. STET PRE.	Pc		MPa (G)	31	总背压TOTAL BP	Pb	0	MPa (G)		
计算和选择CALCULATION AND SELECTION											
32	计算面积CALCULATED AREA	Ac	807.95	mm²	37	喉径代号DRIFICE DESIGN	H				
33	选择面积SELECTED AREA	A	1017.36	mm²	38	流道直径THROAT DIAMETER	36.0	mm			
34	需要排量REQUIRED CAPACITY	W _r	60800	kg/h	39	开启高度LIFT	9.0	mm			
35	额定排量RATED RELIEVING CAPACITY	W _{dr}	76558.60	kg/h	40						
36	型号MODEL NO.	A42PK-900R 2H3			41						
计算公式CALCULATION FORMULA											
42	$Ac = W_r / (0.076 \times C \times K_{dr} \times K_b \times P_{dr} \times K_c \times (M / (Z \times T))^{1/2})$										