


PROJECT :			DATE :	8-Sep-10
PROJ. NO.:			BY :	S. Rahimi
CLIENT:			REV :	A
UNIT :			DOC NO.:	

PSV Sizing for Non Ideal Gases - Nonfire Case ($Z < 0.8$ or $Z > 1.1$)

RV Tag Number:		
Equipment Tag No		
P&ID NO.		
Relief Rate	kg/hr	8037
Set Pressure	barg	27.3
Overpressure	%	10
Relieving Pressure	barg	30.0
Relieving Temperature	C	80.3
Molar Entropy @ Relieving Con.	kcal/kgmol-C	36.3

Molar Entropy	Press	Temp	Mass Enthalpy	Mass Density	Mass Flux	Max Mass Flux	
kcal/kgmol°C	bara	°C	kcal/kg	kg/m3	kg/hr-in2	kg/hr-in2	
36.34	31.0	80.3	-563.4	82.46	0	20924	
36.34	30.1	78.7	-563.7	79.21	8852		
36.34	29.1	77.1	-564.0	76.03	12140		
36.34	28.2	75.4	-564.3	72.92	14411		
36.34	27.3	73.7	-564.6	69.88	16104		
36.34	26.3	71.9	-564.9	66.90	17427		
36.34	25.4	70.1	-565.2	63.99	18464		
36.34	24.5	68.2	-565.6	61.13	19272		
36.34	23.5	66.2	-566.0	58.34	19891		
36.34	22.6	64.2	-566.4	55.59	20347		
36.34	21.7	62.2	-566.8	52.90	20662		
36.34	20.7	60.0	-567.2	50.26	20850		
36.34	19.8	57.8	-567.7	47.67	20924		
36.34	18.9	55.6	-568.2	45.12	20893		
36.34	17.9	53.2	-568.7	42.62	20764		
36.34	17.0	50.7	-569.2	40.16	20545		
36.34	16.1	48.2	-569.8	37.74	20239		
36.34	15.1	45.5	-570.4	35.36	19851		
36.34	14.2	42.7	-571.0	33.01	19384		
36.34	13.3	39.7	-571.7	30.71	18839		
36.34	12.3	36.6	-572.5	28.44	18218		
36.34	11.4	33.4	-573.3	26.20	17522		
36.34	10.5	29.9	-574.2	23.99	16750		
36.34	9.5	26.2	-575.2	21.81	15901		
36.34	8.6	22.2	-576.2	19.66	14974		
36.34	7.7	17.9	-577.4	17.53	13964		
36.34	6.7	13.1	-578.8	15.42	12865		
36.34	5.8	7.9	-580.4	13.34	11672		
36.34	4.9	2.0	-582.2	11.26	10373		
36.34	3.9	-4.9	-584.4	9.20	8951		
36.34	3.0	-13.1	-587.1	7.13	7380		
Kd factor					---		0.975
Orifice Area					in2		0.394
Orifice Area					mm2	254.2	