DRESSER Flow Control

Consolidated Safety Relief Valve Sizing and Selection Report
SRVS6.0, June 15, 2001 Serial No.: 4311
Dresser Flow Control - Alexandria, LA, USA

11/26/2003

Arnd Brandstaeter
Dresser Valves Europe GmbH
D-41751 Viersen / Germany
Prepared by Arnd Brandstaeter
Checked by
Spec. Sheet No.
Revision 03

Customer Information
Name UNIS,spol, s.r.o.
Location BRNO, CZECH REPUBLIK
Contract 70 000
Project HYDROGEN - NOVOPOLOTSK

Tag Number	PRV-20317			
P&ID Number - Location	220-PC-B-11164	-		
Valve Type	**1910-00DC-2-CC-MS-31-RF-GS-HP**			
Gag Required	**NO**			
Inlet Connection				
Specified	1.00	Flg	150#	Rf
Selected	1.00	Flg	300#	Rf
Outlet Connection				
Specified	2.00	Flg	150#	Rf
Selected	2.00	Flg	150#	Rf
Sizing Data				
Design Code	ASME Section VIII			
Sizing Basis	Required Flow Rate			
Fluid	HYDROGEN			
Fluid State	Gas			
M	2.0300			
Z	1.0100			
k	1.400			
C	356			
Kd (vapor) Kd (liquid)	0.975			
Kb Kw	1.0000			
Ksh Kn				
G Density @ P1			0.140	lb/ft3
Viscosity Kv				
Acc	10.00	%		
Kc	1.000			
Pressure				
Operating Set	29.80		34.00	Kg/cm2g
MAWP	34.00			Kg/cm2g
Flowing	38.43			Kg/cm2a
Superimposed Minimum	0.00			Kg/cm2g
Superimposed Maximum	1.50			Kg/cm2g
Builtup Total BP	0.30		1.80	Kg/cm2g
Barometric	1.03			Kg/cm2a
Temperature				
Operating	124.00	C		
Relieving	124.00	C		
Design	150.00	C		
Flow Area				
Required	21.2256	mm²		
Selected	70.9676	mm²		
Standard	API Effective			
Capacity				
Required	150.0	Kg/hr		
Selected	502.0	Kg/hr		
Nameplate	1,097	SCFM		
Reaction Force	141	Lbs		
Noise Level	150	DBa @ 3 ft.		

Valve Number 1
1D2

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P&ID Number - Location 220-PC-B-11164 -

Tag Number PRV-20317 **Valve Number** 1

PART NAME	MATERIAL
ADJ. RING PIN GASKET	SOFT IRON
ADJUSTING RING	316 STAINLESS STEEL
ADJUSTING RING PIN	316 STAINLESS STEEL
ADJUSTING SCREW	416 STAINLESS STEEL
ADJUSTING SCREW LOCKNUT	416 STAINLESS STEEL
BASE	ASME SA216 WCC CARBON STEEL
BASE PLUG	CARBON STEEL
BASE STUDS	ASME SA193 B7 ALLOY STEEL
BONNET	ASME SA216 WCC CARBON STEEL
BONNET GASKET	SOFT IRON
CAP	CARBON STEEL
CAP GASKET	SOFT IRON
DISC	316 STAINLESS STEEL
DISC HOLDER	316 STAINLESS STEEL
DISC RETAINER	INCONEL X-750
EDUCTOR TUBE	304 STAINLESS STEEL
GUIDE	316 STAINLESS STEEL
GUIDE GASKET	SOFT IRON
LIMIT WASHER	316 STAINLESS STEEL
NOZZLE	316 STAINLESS STEEL
SPINDLE	410 STAINLESS STEEL
SPINDLE RETAINER	INCONEL X-750
SPRING	ALLOY STEEL
SPRING WASHER	CARBON STEEL
STUD NUTS	ASME SA194 2H ALLOY STEEL
VENT PIPE PLUG	CARBON STEEL

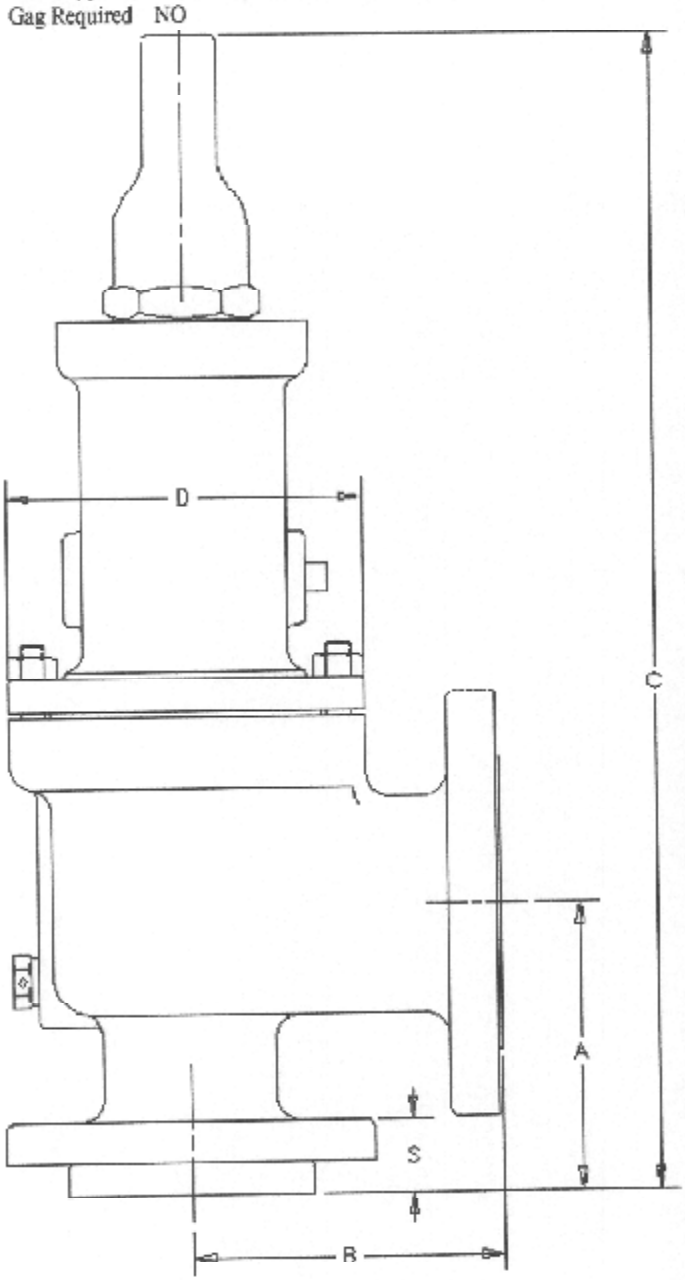
DRESSER
Flow Control

11/26/2003

Certified by Dresser Flow Control

Valve Number 1
Area 70.9676

Tag Number PRV-20317
Valve Type 1910-00DC-2-CC-MS-31-RF-GS-HP
Gag Required NO



A - 104.8 mm -- 4-1/8 in
B - 114.3 mm -- 4-1/2 in
C - 444.5 mm -- 17-1/2 in
D - 138.1 mm -- 5-7/16 in
S - 34.9 mm -- 1-3/8 in
Weight - 22.7 kg -- 50 lb

Inlet Size	1.00	Inches	Flg	300#	Rf
Outlet Size	2.00	Inches	Flg	150#	Rf