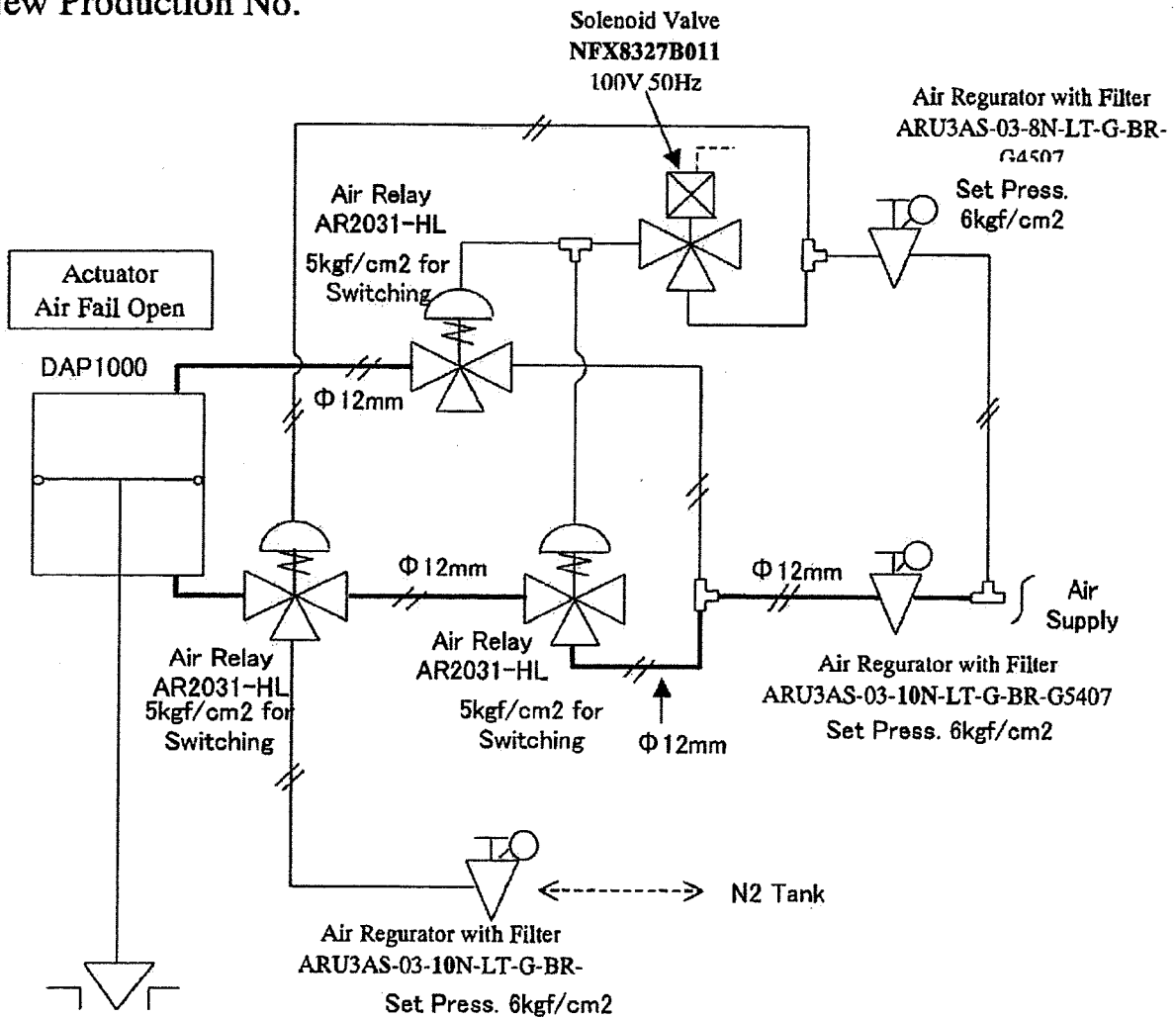


Item No. / Qty	1		3		Ref. No.	
Tag No.	EmV-44				Purchaser	
Service					End user	
					Project	
<Control valve>					<Remarks>	
Model	VAA				SV0703-105 Indicating unit : "kgf/cm2"	
Description	Acorn Type, Angle Control Valve				SV0601-001 Air piping Connection: 1/4 NPT	
Body/Port size	3 in.		3 in.		SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			83		SV0402-001 Packing follower with O-ring	
Rating / Conn. Type	ANSI900		M&F(F)		SV0005-002 Copper free for exposed to outside	
Body material	SF440A				SV0801-E02 Material certificate in English. Scope: valve body, bonnet, plug, seat ring (cage) and stem	
Trim material	SUS316 STELLITE				SV0507 Actuator yoke material: SCPH2 or WCB	
Flow characteristic	LINEAR				SV0506 On-Off action	
Bonnet	PLAIN (0 to 200 degC)				SV0201-003 Seat leakage: Less than 0.01%CV (Equivalent IEC, JIS Class IV) Stroke Speed (close to open) within 5sec	
Actuator / Handle	DAP1000		SIDE		Old Production No : 415-8075-4800	
Action	AIR TO CLOSE(Bottom to Side)				Control Valve (Ambient Temp : -45degC)	
Gland packing / Grease	P6610CH+P6528		650		Accessories (Ambient Temp : -40degC)	
Gasket	V543					
Air supply / Spring range	6.0kgf/cm2					
Seat leakage	CLASS IV					
Color: Body/Diaph./Yoke	SILVER	SILVER	SILVER			
Paint	Standard					
<Accessories>						
Positioner						
Structure						
Input signal						
Regulator	ARU3AS-03-10N-LT-5-G-BR-G45			2		
Regulator2	ARU3AS-03-8N-LT-5-G-BR-G450			1		
Limit switch	VCX7001			1		
Action	Full Close on					
Solenoid valve	NFX8327B011			1		
Action / Power	En: Open, De: Close		AC100V 50Hz			
Booster						
Air lock valve						
Air valve	AR2031-H-L				3	
<Process data>						
Fluid name/Phase	Syntehsis Gas			GAS		
	MAX	NOR	MIN	Unit		
Flow rate	165000	117000		m3/h(N)		
Inlet pressure	113	113		kgf/cm2G		
Outlet pressure				kgf/cm2G		
Differential press.	76	76		kgf/cm2		
Shut-off press.		113		kgf/cm2		
Temperature	119	119		degC		
Density/Gravity(Liq)				kg/m3		
Density/Gravity(G,V)	8.68	8.68		MW		
Viscosity				mPa-s		
Flash				%		
Calculated CV	81.2	54.1				
Travel				%		
Outlet velocity	0.7207	0.5111		Mach		
Predictive SPL	109	105		dBA		
<Piping spec.>						
Strength Calc. Sheet						
Design						kgf/cm2G
Temp.						degC
Size		6 in.		6 in.		
Sch No.		40		40		
Thickness		7.1		7.1		
Yamatake Corporation						

Tag. No. EmV-44
 User's Name JSC Minudobrenia
 Old Production No. 415-8075-4800
 New Production No. _____



SOV	Control Valve Action
Energized	Open
De-energized	Close

Air Signal	Control Valve Action
Increase	Open to Close
Air Fail	Open

Stroke speed: within 5 sec for valve full close to full open at energizing SOV

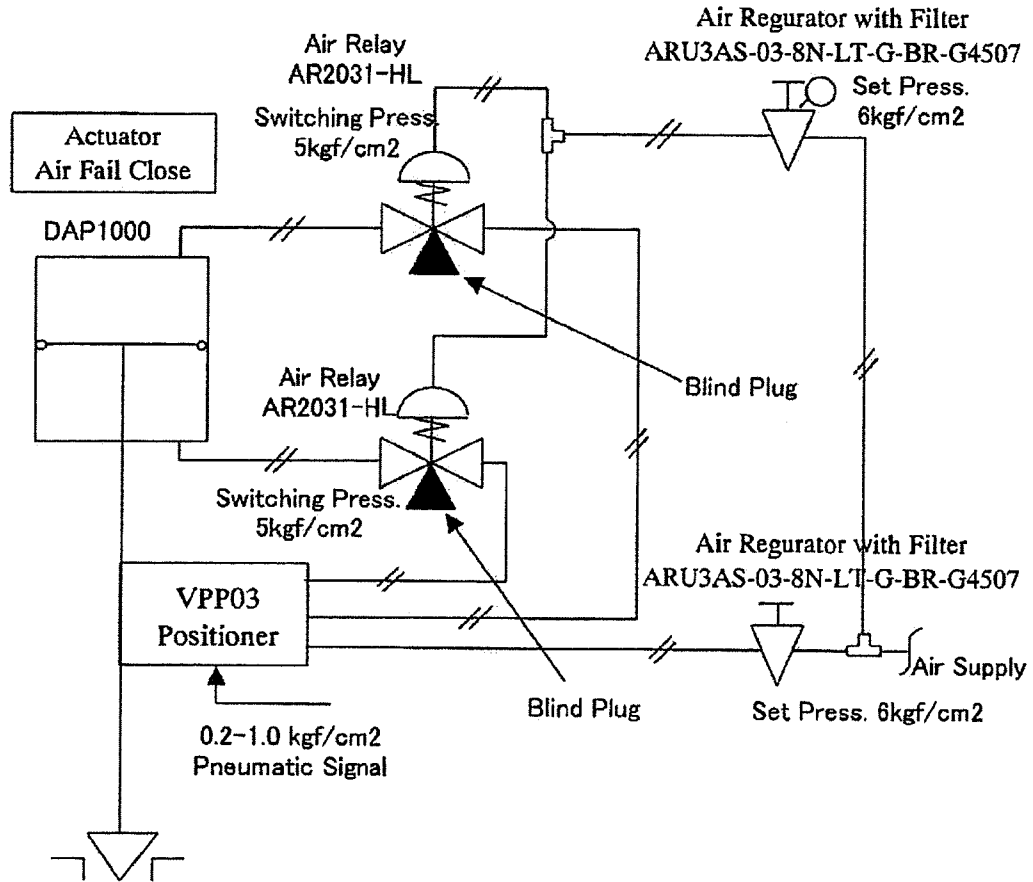
Approved _____
 Checked _____
 Drawn _____
 DATE : _____

AIR PIPING DIAGRAM

Yamatake Corporation

Item No. / Qty	2		3		Ref. No.	
Tag No.	PRC-7				Purchaser	
Service					End user	
<Control valve>					Project	
<Control valve>					<Remarks>	
Model	HTS				SV0703-105 Indicating unit : "kgf/cm2"	
Description	Top-Guided Single Seated Control Valves				SV0601-001 Air piping Connection: 1/4 NPT	
Body/Port size	8 in.		8 in.		SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			640		SV0402-001 Packing follower with O-ring	
Rating / Conn. Type	ANSI150		T&G(G)		SV0005-002 Copper free for exposed to outside	
Body material	SCS13A				SV0801-E02 Material certificate in English. Scope: valve body, bonnet, plug, seat ring (cage) and stem	
Trim material	SUS316				SV0507 Actuator yoke material: SCPH2 or WCB	
Flow characteristic	EQ%				SV0201-003 Seat leakage: Less than 0.01%CV (Equivalent IEC, JIS Class IV)	
Bonnet	EXT-1 (-45 to -17 degC)				SV0210 High shut-off pressure trim for Model HTS	
Actuator / Handle	DAP1000		SIDE		SV0020-100 Water free treatment	
Action	AIR TO OPEN				Old Production No : 415-8075-0400	
Gland packing / Grease	V-PTFE		---		Control Valve (Ambient Temp : -45degC)	
Gasket	V543				Accessories (Ambient Temp : -40degC)	
Air supply / Spring range	6.0kgf/cm2		---			
Seat leakage	CLASS IV					
Color: Body/Diaph./Yoke	XXX		M10B5/10			
Paint	Standard					
<Accessories>						
Positioner	VPP03-1					
Structure						
Input signal	0.2-1.0 kgf/cm2					
Regulator	ARU3AS-03-10N-LT-5-G-BR-G45		2			
Regulator2						
Limit switch						
Action						
Solenoid valve						
Action / Power						
Booster						
Air lock valve						
Air valve	AR2031-H-L				2	
<Process data>						
Fluid name/Phase	Natural Gas			GAS		
	MAX	NOR	MIN	Unit		
Flow rate	31500	23000		m3/h(N)		
Inlet pressure	12	12		kgf/cm2G		
Outlet pressure				kgf/cm2G		
Differential press.	4	4		kgf/cm2		
Shut-off press.		17		kgf/cm2		
Temperature	119	119		degC		
Density/Gravity(Liq)				kg/m3		
Density/Gravity(G,V)	18.86	18.86		MW		
Viscosity				mPa-s		
Flash				%		
Calculated CV	209.3	152.4				
Travel	59	53		%		
Outlet velocity	0.093	0.0679		Mach		
Predictive SPL	92	90		dBA		
<Piping spec.>						
Strength Calc. Sheet						
Design					kgf/cm2G	
Temp.		-30			degC	
Size		8 in.		8 in.		
Sch No.		40		40		
Thickness		8.2		8.2		
Yamatake Corporation						

Tag. No. PRC-7
 User's Name JSC Minudobrenia
 Old Production No. 415-8075-0400
 New Production No.



Air Signal	Control Valve Action
Increase	Close to Open
Air Fail	Lock

Approved _____
 Checked _____
 Drawn _____
 DATE : _____

AIR PIPING DIAGRAM

Yamatake Corporation