ENGINEERING SERVICES DEPARTMENT

CONTROL VALVE SPECIFICATION SHEET

Project	PTFE Filter Destruction Project	**Unit Tag Number**	AV83345F
Datasheet Document No.	ENS-FDP-SPE-24032	**Revision**	1.0
Description	Analytical control valve AV83345F is installed on the oxygen gas supply line 15-833-GSVP-064 to regulate the oxygen feed rate into the plasma reactor R82018 in the PTFE Filter Destruction Facility.		
Plant Location	Necsa, Pelindaba, North-West Province		
Equipment Location	PTFE Filter Destruction Facility - Process area inside Laboratory-131, Building V-H2		
Controlling Instrument No.	AT83122F / AICA83122F		
Safety Classification	SC-2(C) and Non-classified(N)		
Quality Classification	QC-2(C) and Non-classified(N)		
Fluid	Oxygen		
Fluid state	Gas		

FLUID PROPERTIES

Mass flow rate [4]	**kg/h**	12,5
Volume flow rate	**m^3/h**	2,3
Inlet temperature [2]	**°C**	25
Inlet pressure [4]	**kPa (g)**	400
Outlet pressure [4]	**kPa (g)**	-5
Control valve design pressure drop [4]	**kPa**	402
Cv-value [4]		0,173
Inlet density [4]	**kg/m^3**	6,32
Viscosity [4]	**Pa.s**	2,07E-05
Specific heat capacity (Cp) [4]	**kJ/kg.K**	0,92
Specific heat capacity (Cv)	**kJ/kg.K**	0,653

MECHANICAL PROPERTIES

Pipeline Size	15 NB, Sch 40
Process Connections	Threaded connection, Class 150, RF, SS,ASTM A182-F304/304L, ASME B16,5 if flanged
Gasket (if flanged)	Class 150, 1/16" thick flexible graphite w/ 304 or 316 SS corrugated insert, ASME B16.21
Bolitng (if flanged)	ASTM A193, Gr B7 stud w/ 2 heavy hex nuts ASTM A194, Gr 2H
Valve rating	150#
Material of Construction	
Wetted parts	304/304L Stainless Steel
Non-wetted parts	Supplier to advise
Valve type	Globe valve
Valve fail position	Fail closed (FC)
Control characteristics	Linear
Limit switches	N/A

INTERLOCKS

N/A

REFERENCE DRAWINGS AND DOCUMENTS

[1] ENS-FDP-PID-24005, PTFE Filter Destruction Project P&ID Diagram Gas Supply System 833

[2] ENS-FDP-CLC-24015, Energy Balance Calculation for the PTFE Destruction System

[3] ENS-FDP-CLC-24014, Mass Balance Calculation for the PTFE Destruction System

[4] ENS-FDP-REP-24035, Sizing of Pressure Control Valve PV82014D and Anlytical Control Valve AV83345F

NOTES

N/A

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