

MODUL DESIGNATION	Sizing of Control Valve , Steam	06,V 7.81	DOCUMENT NUMBER	
MODUL DATABASE	P:\WBABSY\DATEN\BABSY3.598			
CONTAINER	70011158_1-[00100]		PAGE	1
40 41 00 00 00 00 00 plant/project	Maritza East I		USER-[0001-112][S]	
customer	Alstom Power		v.d. Lieck	
offer no./commission	40007823		LAST ACTION	
plant identification			12.05.2007 10:51:47	

DATA SHEET OF CONTROL VALVES

INQUIRY NUMBER	
PART DESIGNATION	ND- Bypass Isolating Valve

VALVE TYPE	STEAM PRESSURE REDUCING VALVE
VALVE DESCRIPTION	155B

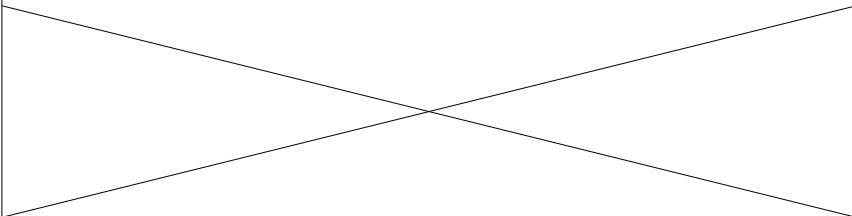
DN-INLET	PN-INLET	DN-OUTLET	PN-OUTLET
650	---	500	---

DESIGN	INLET	OUTLET	
DESIGN PRESSURE	50,00	50,00	barg {O}
DESIGN TEMPERATURE	550	550	°C
CALCULATION TEMPERATURE	555	555	°C

SERVICE DATA	CASE A	CASE B	CASE C	CASE D	CASE E	CASE F	
	LF 1	LF 2					
INLET FLOW	268,000	94,400					kg/s
INLET PRESSURE	39,00	14,00					bar abs
OUTLET PRESSURE	36,25	13,50					bar abs
INLET TEMPERATURE	540	517					°C
OUTLET TEMPERATURE	539	517					°C
SPRAYWATER PRESSURE							bar abs
SPRAYWATER TEMP.							°C
SPRAYWATER FLOW							kg/s

RANGE OF CONTROL	1 : 1,5	CALCULATED
KV(min) VALUE	5834,2	m³/h
KV(max) VALUE	7819,8	m³/h
KVS VALUE	8601,8	m³/h
PLUG TYPE	PERFORATED DISC	
CHARACTERISTIC	LINEAR	
STEM-ø	55,00	mm
SEAT-ø	430,00	mm
STROKE	155,00	mm
NUMBER OF STAGES	1	
FLOW DIRECTION	FLOW TENDS TO CLOSE	
BODY TYPE	ANGLE TYPE	

RANGE OF CONTROL : 1:25,0 AVAILABLE



Date	09.10.2007			
Name	v.d. Lieck			
Sempell				
Re.Ind.	Revision Notice		Date	Name

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MAXIMUM NOISE PRESSURE LEVEL (NOISE GUARANTEE)	80,0	dB(A)
CALCULATION MODUL FROM Müller BBM		

ACTUATOR MAKE	Sempell Hydraulic		DELTA-P	50,00	bar
ACTUATOR TYPE	AHFS.O.160/80-165 spring to close				
REV. STROKE	-		THREAD	-	
OPERATING TIME	CONTROL CASE	SAFETY CASE	FAST OPENING	FAST CLOSING	
	-	-	10-15	0,6	sec
THRUST REQUIRED	OPEN	CLOSE	SPRING		
	-	-	-	N	
TORQUE REQUIRED	OPEN	CLOSE	MAXIMUM		
	-	-	-	Nm	
ACCESSORIES					

INSPECTION PROCEDURE	97/23/EC

MATERIALS	NUMBER	DIN CODE	REMARKS
INLET	1.4903	X10CrMoVNb91	
OUTLET	1.7706	GS-17CrMoV511	
BODY	1.7706	GS-17CrMoV511	
SEAT			
PLUG			

ENDS	TYPE	DIMENSIONS
INLET	BW ends DN 650	OD 710 x 25
OUTLET	BW ends DN 650	OD 620 x 50

REMARKS	

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NOISE GUARANTEE

CALCULATION MODUL FROM Müller BBM - V2.05

NUMBER OF PRESSURE STAGES	1	-
PIPE OUTSIDE DIAMETER, OUTLET	620,00	mm
PIPE WALLTHICKNESS , OUTLET	50,00	mm
INSULATION THICKNESS , OUTLET	150,00	mm
LOCATION OF INSTALLATION	OUTDOOR	
TYPE OF INSULATION	NOISE INSULATION WITH ELASTIC SPACER FIBROUS MATERIAL; 1 MM STEEL- OR ALUM. SHELL WITH MINIMUM 3 MM ANTI NOISE PASTE LAYER, ELASTIC SPACER NOISE SPECIFICATION ACC. TO Zi. 51700 76.5A	

SERVICE DATA	CASE A	CASE B	CASE C	CASE D	CASE E	CASE F	
INLET FLOW	268,000 964,79	94,400 339,84					kg/s SI ton/h
INLET PRESSURE	39,00	14,00					bar abs
OUTLET PRESSURE	36,25	13,50					bar abs
INLET TEMPERATURE	540	517					°C
OUTLET TEMPERATURE	539	517					°C

NOISE LEVEL	CASE A	CASE B	CASE C	CASE D	CASE E	CASE F	
OUTLET	80,0	63,0					dB(A)

MAXIMUM NOISE PRESSURE LEVEL (NOISE GUARANTEE)	80,0	dB(A)
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OKTAV NOISE PRESSURE LEVEL IN 1 M DISTANCE FROM VALVE STATION									
	125	250	500	1000	2000	4000	8000	Σ	Hz
WITHOUT INSULATION	59,0	69,0	78,0	88,0	96,0	95,0	86,0	99,0	dB(A)
WITH INSULATION	59,0	59,0	59,0	67,0	76,0	76,0	68,0	80,0	dB(A)

OKTAV NOISE EFFICIENCY LEVEL, PIPE LINE DOWNSTREAM THE VALVE									
	125	250	500	1000	2000	4000	8000	Σ	Hz
WITHOUT INSULATION	79,0	91,0	100,0	112,0	121,0	120,0	110,0	124,0	dB(A)
WITH INSULATION	78,0	80,0	80,0	82,0	91,0	90,0	80,0	95,0	dB(A)

OKTAV NOISE EFFICIENCY LEVEL, REFLECTION FROM PIPE OUTLET TO OUTDOOR									
	125	250	500	1000	2000	4000	8000	Σ	Hz
	89,0	103,0	114,0	123,0	128,0	128,0	124,0	133,0	dB(A)

OKTAV NOISE EFFICIENCY LEVEL, IN THE PIPE LINE DOWNSTREAM THE VALVE									
	125	250	500	1000	2000	4000	8000	Σ	Hz
	103,0	110,0	115,0	123,0	128,0	128,0	124,0	133,0	dB(A)

Sempell

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