



TAIWAN VALVE COMPANY LTD.

3,24TH ROAD TAICHUNG INDUSTRIAL PARK TAICHUNG, R.O.C

Pos. 15, 19 St.

Inspection Certificate(EN 10204-3.1B)

Report No.: ECH-5A9902-050413

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S/C ECH-5A9902

P/O 9460624 OP

Customer: ECONOSTO NEDERLAND B.V.

Article: ECON 3PC DIN2999 BALL VALVE

Material: EN10213-2(1995)/1.0619

Heat Treatment: 920 , Normalizing, Cooling by air, 1hr

A) Chemical Analysis

B) Tensile test / Hardness / Charpy (Test Temp RT)

Spec				C %	Si %	Mn %	P %	S %	Ni %	Cr %	Mo %	Cu %	V %	N %	Rp 0.2		Rp 1.0		Tensile	Elong- ation(%)	Reduct- ion(%)		HB	Energy Charpy Impact (Joule)				
															N/mm ²	N/mm ²	N/mm ²	N/mm ²			-	-		1	2	3	AVG	
																												Min
	Size	Heat No	Piece	Article	Min	Max																						
	DN15	ABC75	30	BODY	0.18	0.23	0.60	1.20	0.030	0.020	-	-	-	-	-	240	-	420	22	-	-	-	-	-	-	-	-	27
	DN15	CBC56	50	BODY	0.19	0.19	0.50	0.82	0.018	0.018	-	-	-	-	-	268	-	549	37	-	-	-	-	-	-	-	-	-
	DN15	CBD60	48	BODY	0.22	0.43	0.71	0.027	0.013	-	-	-	-	-	-	259	-	521	33	-	-	-	-	157	46	42	48	45
	DN15	E9A0J	52	BODY	0.20	0.45	0.74	0.022	0.012	-	-	-	-	-	-	260	-	469	30	-	-	-	-	191	51	52	54	52
	DN15	NB933	75	BODY	0.18	0.51	0.64	0.013	0.014	-	-	-	-	-	-	251	-	524	27	-	-	-	-	162	44	46	45	45
	DN15	CBC57	70	CAP	0.23	0.49	0.75	0.025	0.014	-	-	-	-	-	-	315	-	535	36	-	-	-	-	134	82	101	72	85
	DN15	CBD40	80	CAP	0.22	0.43	0.72	0.025	0.015	-	-	-	-	-	-	255	-	502	31	-	-	-	-	193	52	54	50	52
	DN15	E9AZ3	75	CAP	0.20	0.42	0.63	0.024	0.016	-	-	-	-	-	-	285	-	536	26	-	-	-	-	217	43	47	45	45
	DN15	EBCD2	75	CAP	0.22	0.34	0.63	0.001	0.001	-	-	-	-	-	-	300	-	590	23	-	-	-	-	148	52	47	42	47
	DN15	NB334	32	CAP	0.19	0.54	0.65	0.013	0.012	-	-	-	-	-	-	268	-	501	28	-	-	-	-	160	46	47	49	47
	DN15	NB934	150	CAP	0.20	0.39	0.76	0.022	0.010	-	-	-	-	-	-	285	-	510	37	-	-	-	-	150	42	48	49	46
	DN15	WB159	28	CAP	0.22	0.46	0.63	0.023	0.014	-	-	-	-	-	-	345	-	570	33	-	-	-	-	139	55	67	91	71
	DN15	ABD38	10	BODY	0.19	0.30	0.72	0.020	0.009	-	-	-	-	-	-	267	-	519	46	-	-	-	-	154	44	41	43	43
	DN20	CBD62	60	BODY	0.19	0.54	0.68	0.011	0.013	-	-	-	-	-	-	268	-	500	29	-	-	-	-	150	45	48	42	45
	DN20	NB933	15	BODY	0.20	0.43	0.73	0.022	0.012	-	-	-	-	-	-	266	-	471	31	-	-	-	-	193	45	42	41	43
	DN20	NB933	15	BODY	0.23	0.49	0.75	0.025	0.014	-	-	-	-	-	-	315	-	535	36	-	-	-	-	134	82	101	72	85

C) Dimensional check and NDT

Testing Item	Details	Result
Visual inspection & dimensional check	Kennzeichnung auf Aluschild H13003, H13003 H13013, H13013 H13080, H13088	OK
Surface crack inspection (PT)	H13180, H13181 H13280, H13281 H14006, H14012	
Radiographic examination (RT)	H14080, H14081 H14088, H14180 H14181, H14280	
I.K. Intergranular corrosion testing (ASTM A 262-98)	H14281	
D) Remarks:	N/A	

Delivery Condition:

Anti-rust

It is here by certified that above results are true and correct in every detail.

Place: Taiwan Taichung

Date: 2005/04/13

Works inspector

K-M. Cao.



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Customer: ECONOSTO NEDERLAND B.V.

Valve Type: ECON

Date: 2005/04/13

Specification: EN12516-1(2000)

P/I NO: ECH-5A9902

Order No.: 9460624 OP

Material: EN10213-2(1995)/1.0619

Content of Delivery

Leak and Pressure Test according to DIN EN12266-1(2003)

Item No	No of Piece	Article	Size	Class	Trim (Ball/Stem/Seat)	Shell test (Water)		Seat test (Water)		Seat test (Air)		Test Result		
						94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Shell	Seat-Water	Seat-Air
1	75	ECON 3PC DIN2999 BALL VALVE	DN15	PN63								Acceptable	N/A	Acceptable
2	30	ECON 3PC DIN2999 BALL VALVE	DN15	PN63								Acceptable	N/A	Acceptable
3	150	ECON 3PC DIN2999 BALL VALVE	DN15	PN63								Acceptable	N/A	Acceptable
4	60	ECON 3PC DIN2999 BALL VALVE	DN20	PN63								Acceptable	N/A	Acceptable
5	25	ECON 3PC DIN2999 BALL VALVE	DN20	PN63								Acceptable	N/A	Acceptable
6	90	ECON 3PC DIN2999 BALL VALVE	DN25	PN63								Acceptable	N/A	Acceptable
7	20	ECON 3PC DIN2999 BALL VALVE	DN32	PN63								Acceptable	N/A	Acceptable
8	10	ECON 3PC DIN2999 BALL VALVE	DN40	PN63								Acceptable	N/A	Acceptable
9														
10														

Test Results

Test Item		According	Result
Check of Calculation and safety Requirements acc. to		EN12516-1	Acceptable
Visual and functional tests		TV STD	Acceptable
NDE, material certificates (see material certificate, as annex)		N/A	N/A

Annexes/ 1)Material certificates of pressure parts

2)Material list of other parts

It is here by certified that above results are true and correct in every detail.

Place: Taiwan Taichung

Date: 2005/04/13

Works inspector

H-M. Liao