

Review: H 12003, H 1400342, H 1400362

TAIWAN VALVE COMPANY LTD.

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

Inspection Certificate(EN 10204-3.1B) Certificate No.: 01 202 ROC/Q-01 0001 Report No.: 0930611009 Page: 1/17

S/C ECH-A42502

P/O 94487260P

Customer: ECONOSTO NEDERLAND B.V.

Article: ECON 3PC BUTT WELD BALL VALVE

Material: EN10213-2(1995)1.0619

Pos. 13 3st

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

A) Chemical Analysis

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

Size	Heat No	Piece	Spec	C %	Si %	Mn %	P %	S %	Ni %	Cr %	Mo %	Cu %	V %	N %	Rp 0.2 N/mm ²	Rp 1.0 N/mm ²	Tensile N/mm ²	Elong- ation(%)	Reduct- -ion(%)	HB	Energy Charpy Impact (Joule)			
																					1	2	3	AVG
			Min	0.18	-	0.50	-	-	-	-	-	-	-	-	240	-	420	22	-	-	-	-	-	27
			Article	0.23	0.60	1.20	0.030	0.020	-	-	-	-	-	-	-	-	600	-	-	-	-	-	-	-
DN15	AB608	5	BODY	0.21	0.48	0.94	0.027	0.018	-	-	-	-	-	-	268	-	511	26	-	145	40	42	41	41
DN15	E9AUX	3	BODY	0.20	0.45	0.66	0.014	0.001	-	-	-	-	-	-	268	-	513	30	-	157	48	50	47	48
DN15	E9AW6	12	BODY	0.21	0.24	0.51	0.002	0.002	-	-	-	-	-	-	301	-	462	24	-	168	50	48	49	49
DN15	E9AYS	25	BODY	0.22	0.33	0.55	0.001	0.001	-	-	-	-	-	-	278	-	512	25	-	150	47	47	48	47
DN15	64407	10	CAP	0.21	0.35	0.84	0.020	0.009	-	-	-	-	-	-	248	-	522	25	-	158	47	47	48	47
DN15	E9AZA	80	CAP	0.23	0.41	0.74	0.001	0.002	-	-	-	-	-	-	288	-	544	24	-	150	44	52	49	48
DN20	A8A83	10	BODY	0.18	0.37	0.51	0.020	0.014	-	-	-	-	-	-	268	-	522	25	-	161	48	49	51	49
DN20	E9AY7	20	BODY	0.22	0.31	0.61	0.006	0.001	-	-	-	-	-	-	295	-	523	24	-	130	59	54	57	57
DN20	80840	19	CAP	0.23	0.30	0.62	0.001	0.003	-	-	-	-	-	-	287	-	529	24	-	149	44	45	47	45
DN20	E9ACJ	21	CAP	0.21	0.37	0.69	0.014	0.005	-	-	-	-	-	-	327	-	539	25	-	167	56	58	59	58
DN20	WB070	20	CAP	0.21	0.43	0.62	0.019	0.004	-	-	-	-	-	-	252	-	531	24	-	160	51	50	48	50
DN25	A8A83	3	BODY	0.18	0.37	0.51	0.020	0.014	-	-	-	-	-	-	268	-	522	25	-	161	48	49	51	49
DN25	A8A84	25	BODY	0.19	0.48	0.55	0.008	0.008	-	-	-	-	-	-	254	-	531	24	-	160	48	49	47	48
DN25	AB34	2	BODY	0.19	0.38	0.51	0.017	0.011	-	-	-	-	-	-	258	-	531	26	-	158	47	48	48	48
DN25	E9APC	17	BODY	0.23	0.44	0.68	0.005	0.007	-	-	-	-	-	-	284	-	534	24	-	161	39	41	38	39

C) Dimensional check and NDT

Testing Item	Details	Remark
Visual inspection & dimensional check	TV Standard	OK
Surface crack inspection (PT)	N/A	
Radiographic examination (RT)	N/A	
Ultrasonic corrosion testing (ASTM A 262-98)	N/A	

D) Remarks:

Delivery Condition: Anti-rust

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

Date: 2004/06/11

Place: Taiwan Taichung

Works inspector

Taiwan Taichung



TAIWAN VALVE COMPANY LTD.
3,24TH ROAD TAICHUNG INDUSTRIAL PARK TAICHUNG, R.O.C

Inspection Certificate(EN 10204-3.1B)	Certificate No.: 01 202 ROC/Q-01 0001	Report No.: 0930611005	Page: 1/8
---------------------------------------	---------------------------------------	------------------------	-----------

Customer: ECONOSTO NEDERLAND B.V.	Valve Type: ECON	Date: 2004/06/11
Specification: EN12516-1(2000)	P/I NO: ECH-A42502	Order No.: 94487260P
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			
1	40	ECON 3PC BUTT WELD BALL VALVE	DN15	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Shell	Seat-Water	Seat-Air	
2	5	ECON 3PC BUTT WELD BALL VALVE	DN15	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	
3	20	ECON 3PC BUTT WELD BALL VALVE	DN20	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	
4	10	ECON 3PC BUTT WELD BALL VALVE	DN20	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	
5	30	ECON 3PC BUTT WELD BALL VALVE	DN25	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	
6	40	ECON 3PC BUTT WELD BALL VALVE	DN25	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	
7	5	ECON 3PC BUTT WELD BALL VALVE	DN25	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	
8	25	ECON 3PC BUTT WELD BALL VALVE	DN25	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	
9	15	ECON 3PC BUTT WELD BALL VALVE	DN32	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	
10	15	ECON 3PC BUTT WELD BALL VALVE	DN40	PN63		94.5Bar	15SEC	N/A	N/A	6Bar	15SEC	Acceptable	N/A	Acceptable	

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: 2004/06/11

Works inspector

T.-M. Liao.