

Acceptance Note

Date of issue : 5 December 2011 Castco LRN: INS0110705-2-GV

Customer : TOYO Valve Co. Ltd.

Address : TT-2 Bldg., 8-1, 3 Chome, Nihonbashi-Ningyocho, Chuo-ku, Tokyo 103-0013, Japan

Manufacturer : KITZ Corporation of Thailand

Project : Type Test

Subject : Inspection of "TOYO" brand bronze valve : gate valve & Y-pattern strainer

Date of inspection : 5,6 July 2011

Location of inspection : 426 Moo 17, T. Bangsaothong, A. Bangsaothong, Samutprakarn 10540 Thailand.

Product description :

Item No.	Sample Description	Nominal size (DN)	Quantity
1	"TOYO" brand bronze PN25 gate valve to BSEN12288, screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated. FIG No.: 206P	15	1
2		20	1
3		25	1
4		32	1
5		40	1
6		50	1
7	"TOYO" brand bronze PN25 gate valve to BSEN12288, screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated. FIG No.: 207P	15	1
8		20	1
9		25	1
10		32	1
11		40	1
12		50	1
13	"TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21. FIG No.: 380P	15	1
14		20	1
15		25	1
16		32	1
17		40	1
18		50	1


Conclusion :

Based on our inspection results and reviewing the relevant documents, it was found that the above-mentioned for this delivery complied with the requirements of :

- Standard requirement (as agreed with customer) : BS EN12288 : 2003, BS EN12266-1 : 2003, BS 21 : 1985, BS864-2 : 1983
- Manufacturer's drawing

The inspected items are recommended for acceptance.

Remark : This acceptance note supersedes previous acceptance note of Castco LRN : INS0110705-2-GV issued on 24 August 2011.

Inspected by : 
W. K. Leung

Reviewed by : 
M. K. Chan

Inspection Report
of
“TOYO” brand bronze valve : Gate Valve &
Y-pattern Strainer

Location of inspection: 426 Moo 17, T. Bangsaothong, A. Bangsaothong, Samutprakarn 10540
Thailand.

Date of inspection: 5, 6 July 2011

To:
KITZ Corporation
(Attn : Gillian Yang)

Inspected by:

W.K. Leung

Reviewed by:

M.K. Chan

Approved by:

W.K. Lee
(Executive Director)



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Castco LRN: INS0110705-2-GV

Inspection Report

Customer : TOYO Valve Co. Ltd.
Address : TT-2 Bldg., 8-1, 3 Chome, Nihonbashi-Ningyocho, Chuo-ku, Tokyo 103-0013, Japan
Manufacturer : KITZ Corporation of Thailand
Project : Type test
Subject : Inspection of "TOYO" brand bronze valve : gate valve & Y-pattern strainer.
Assigned inspector : Mr. W.K. Leung

As the request of "KITZ Corporation of Lianyungang", a factory inspection of the manufactured products for customer's ad-hoc type test has been carried out with details as follow:

1. Date of inspection : 5, 6 July 2011
2. Location of inspection : 426 Moo 17, T. Bangsaothony, A. Bangsaothong, Samutprakam 10540 Thailand
3. Applicable standard : BS EN12288 : 2003, BS EN 12266-1 : 2003, BS 21 : 1985, BS 864-2 : 1983 and the manufacturer's drawing
4. Scope of works :
 - (1) Visual inspection
 - (2) Dimensional measurement and marking check
 - (3) Witnessed operation test
 - (4) Witnessed hydrostatic pressure test
 - (5) Review the manufacturer's Q.C. documentation and verification of measuring & testing equipments for validity
 - (6) Conclusion
 - (7) Issuing of acceptance note
 - (8) Submission of inspection report

5. Inspection details & results :**(1) Sample for inspection**

Item No.	Sample Description	Nominal size (DN)	Quantity
1	"TOYO" brand bronze PN25 gate valve to BS EN12288 screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated. FIG No.: 206P	15	1
2		20	1
3		25	1
4		32	1
5		40	1
6		50	1
7	"TOYO" brand bronze PN25 gate valve to BS EN12288 screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated. FIG No.: 207P	15	1
8		20	1
9		25	1
10		32	1
11		40	1
12		50	1
13	"TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21. FIG No.: 380P	15	1
14		20	1
15		25	1
16		32	1
17		40	1
18		50	1

(1) Visual inspection

- There was no defect (e.g. blowholes, hot tears, cracks, shrinks, sand inclusions, gas porosities, wrinkles & laps etc.) observed on the sample of bronze gate valves & Y-pattern strainer and they were all generally acceptable.

(2) Dimensional measurement and marking check

- The dimensions of the samples were measured by the inspector. The requirements and actual dimensions were tabulated as following:
(1st row = requirement; 2nd row = actual dimensions)

Item (1) DN15mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated.

d	d1	H	L	D	S	MASS (kg)
Rc 1/2	13	81	45	48	28	0.30
Rc 1/2	13.1	81.4	44.4	48.3	28.0	0.295

Item (2) DN20mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated.

d	d1	H	L	D	S	MASS (kg)
Rc 3/4	19	90	50	55	34	0.40
Rc 3/4	19.1	90.4	49.7	55.1	34.2	0.390

Item (3) DN25mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated.

d	d1	H	L	D	S	MASS (kg)
Rc 1	24	106	57	63	41	0.60
Rc 1	24.2	106.6	56.8	63.1	41.9	0.590

Item (4) DN32mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated.

d	d1	H	L	D	S	MASS (kg)
Rc 1.1/4	31	119	61	70	50	0.82
Rc 1.1/4	31.1	119.5	61.0	69.9	49.9	0.815

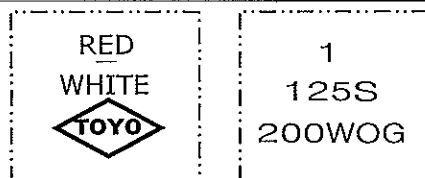
Item (5) DN40mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated.

d	d1	H	L	D	S	MASS (kg)
Rc 1.1/2	37	135	67	80	57	1.10
Rc 1.1/2	37.1	135.3	67.2	79.9	57.6	1.095

Item (6) DN50mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated.

d	d1	H	L	D	S	MASS (kg)
Rc 2	49	159	74	90	70	1.73
Rc 2	49.1	159.3	73.5	90.4	70.1	1.715

Body Marking :

**Item (7) DN15mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated.**

d	d ₀		G	H	L	D	MASS (kg)
	MAX	MIN					
13	15.145	15.065	12.7	81	46	48	0.27
13.0	Within the range		12.8	81.4	46.9	48.0	0.270

Item (8) DN20mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated.

d	d ₀		G	H	L	D	MASS (kg)
	MAX	MIN					
19	22.155	22.075	19.1	90	61	55	0.39
19.2	Within the range		19.2	90.6	61.3	55.1	0.380

Item (9) DN25mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated.

d	d ₀		G	H	L	D	MASS (kg)
	MAX	MIN					
24	28.155	28.075	23.2	106	72	63	0.57
24.2	Within the range		23.3	106.3	71.7	63.2	0.550

Item (10) DN32mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated.

d	d _o		G	H	L	D	MASS (kg)
	MAX	MIN					
31	35.170	35.090	24.7	119	78	70	0.78
31.2	Within the range		24.9	119.6	78.0	70.0	0.765

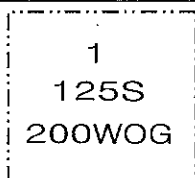
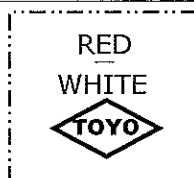
Item (11) DN40mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated.

d	d _o		G	H	L	D	MASS (kg)
	MAX	MIN					
37	42.170	42.090	27.7	135	87	80	1.05
36.9	Within the range		27.8	135.5	87.0	79.8	1.015

Item (12) DN50mm "TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated.

d	d _o		G	H	L	D	MASS (kg)
	MAX	MIN					
49	54.170	54.090	34.1	159	102	90	1.73
49.0	Within the range		33.9	159.7	102.0	90.4	1.710

Body Marking :


Item (13) DN15mm "TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21

d	H	L	S	MASS (kg)
Rc 1/2	49	80	28	0.31
Rc 1/2	49.2	79.5	28.1	0.310

Item (14) DN20mm "TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21

d	H	L	S	MASS (kg)
Rc 3/4	57	100	35	0.53
Rc 3/4	57.4	99.6	35.3	0.545

Item (15) DN25mm "TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21

d	H	L	S	MASS (kg)
Rc 1	70	115	43	0.76
Rc 1	70.3	114.4	43.1	0.785

Item (16) DN32mm "TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21

d	H	L	S	MASS (kg)
Rc 1.1/4	82	135	52	1.21
Rc 1.1/4	82.5	134.6	52.6	1.210

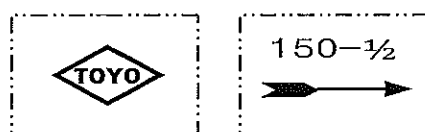
Item (17) DN40mm "TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21

d	H	L	S	MASS (kg)
Rc 1.1/2	98	160	59	1.78
Rc 1.1/2	98.3	159.3	59.3	1.810

Item (18) DN50mm "TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21

d	H	L	S	MASS (kg)
Rc 2	121	195	72	2.91
Rc 2	121.6	194.7	72.6	3.410

Body Marking :



Notes:

- (i) The measured dimensions of the bronze gate valves & Y-pattern strainers were found to comply with the requirement of BS EN12288 : 2003, BS 21 : 1985, BS 864-2 : 1983 and manufacturer's specification drawing.

(3) Witnessed operation test

- The trouble-free operation of handle was effective without causing galling or being stuck.
- The connection between the stem & the disc was firm & secured.
- Additional operation test on gate valve : The center of the disc was located upwards from the center of the body seat at fully closed position. The lower end of the disc was not remained in the valve port at fully open position.
- Additional operation test on check valve : The disc was fully open until it contacted the stopper provided inside the body & fully closed without any disturbance.

(4) Witnessed hydrostatic pressure test

The sample of gate valves & Y-pattern strainer were witness for hydrostatic pressure test by the inspector. There were no sign leakage or oozing of water & no abnormal deformation observed during the tests. The test results were found to comply with the requirement of EN 12266-1 : 2003.

Item No.	Sample test	Nominal size (DN)	Shell Test		Seat tightness	
			Pressure (bar)	Duration (minutes)	Pressure (bar)	Duration (minutes)
1	"TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, threaded ends to BS21, hand wheel operated.	15	37.5	10	27.5	10
2		20				
3		25				
4		32				
5		40				
6		50				
7	"TOYO" brand bronze PN25 gate valve, screwed-over bonnet, non-rising stem, solder joint end to BS864, hand wheel operated.	15	37.5	10	27.5	10
8		20				
9		25				
10		32				
11		40				
12		50				
13	"TOYO" brand bronze PN25 Y-pattern strainer, Y-pattern body, screwed cap, threaded ends to BS21	15	37.5	10	--	--
14		20				
15		25				
16		32				
17		40				
18		50				

(6) Reviewed the manufacturer's Q.C. documentation and verification of measuring & the testing equipments for validity

Appendix No.	Document type	Remark
A	Manufacturer's drawing	For review and information
B	Material test results	The materials for parts of body, bonnet, stem & disc were tested by manufacturer. The test results of chemical composition & mechanical properties were comply to the relevant standard.
C	Manufacturer's inspection certificate (pressure test, material test, dimension check, visual, operation test)	The samples were quality controlled by manufacturer before delivery & the test results were acceptable.
D	Quality management system certificate of manufacturer to ISO 9001 : 2008	For review and check for validity
E	Calibration certificate of pressure gauge	Check for validity
F	Calibration certificate of torque wrench	Check for validity
G	Calibration certificate of vernier caliper	Check for validity
H	Calibration certificate of gauge block set	Check for validity
I	Calibration certificate of go and non-go gauge	Check for validity
J	Calibration certificate of taper thread plug gauge	Check for validity

(7) Conclusion

- Based on the inspection results and reviewing the bronze gate valves & Y-pattern strainers were found to comply with the manufacturer's specification, BS EN12288 : 2003, BS EN12266-1 : 2003, BS 21-1985, BS864-2 : 1983 and manufacturer's drawing respectively.

(8) Remark

This report supersedes previous report of Castco LRN: INS0110705-2-GV issued on 24 August 2011.

~ End of Report ~

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