

Summary of Test Results

Reference no. : BC-SUMMARY-2019-42

Customer : Gate Way Valve & Fitting Ltd.

Address : Flat A2, 4/F., Galaxy Factory Building, 25-27 Luk Hop Street, San Po Kong, Kowloon, H. K.

Sample description : Cast Iron Y-strainer

Nominal pressure (PN) : 16

Manufacturer : Kitz Corporation

Brand name : Toyo

Body marking : TOYO (DN) PN16 CI →

Model no. : 381EHHK

Origin : PRC

Sample submitted by : Gate Way Valve & Fitting Ltd.

Test standard : BS EN 1092-2 : 1997 / WIS 4-52-01 / BS EN 12266-1 : 2012 / BS EN 1561 : 2011 / BS EN 10088-1 : 2014

Test period : 21 February to 13 June 2019

A) Sample List

DN (mm)	Specimen no.
65	BC0190131-045-MISL
80	BC0190131-046-MISL
100	BC0190131-047-MISL
150	BC0190131-048-MISL
200	BC0190131-049-MISL
250	BC0190131-050-MISL
300	BC0190131-051-MISL

B) Test Item

1) Dimensions Check (In-house method and BS EN 1092-2 : 1997 Clause 5 Table 9)

DN (mm)	Test results	Castco LRN
65	Passed	BC0190131-044-MISL
80	Passed	
100	Passed	
150	Passed	
200	Passed	
250	Passed	
300	Passed	

2) Coating Thickness Test (WIS 4-52-01 Appendix B)

DN (mm)	Test results	Castco LRN
65	Passed	BC0190131-044-MISL
80	Passed	
100	Passed	
150	Passed	
200	Passed	
250	Passed	
300	Passed	

Summary of Test Results

Reference no. : BC-SUMMARY-2019-42

B) Test Item (con't)

3) Hydrostatic Strength Test (BS EN 12266-1 : 2012 Clause 4 Annex A)

DN (mm)	Test results	Castco LRN
65	Passed	BC0190131-044-MISL
80	Passed	
100	Passed	
150	Passed	
200	Passed	
250	Passed	
300	Passed	

4) Tensile Properties (BS EN 1561 : 2011 Clause 7.2 and 9.1 Table 1 Grade EN-GJL-250)

DN (mm)	Test results	Castco LRN
65	Passed	BC0190131-044-MISL
100	Passed	
150	Passed	
200	Passed	
300	Passed	

5) Chemical Composition-Screen (BS EN 10088-1 : 2014, Table 2, Grade 1.4301 (304))

DN (mm)	Test results	Castco LRN
65	Passed	MS0190213-48
100	Passed	MS0190213-50
150	Passed	MS0190213-52
200	Passed	MS0190213-54
300	Passed	MS0190213-56

6) Chemical Composition-Screen (BS EN 10088-1 : 2014, Table 2, Grade 1.4401 (316))

DN (mm)	Test results	Castco LRN
65	Passed	MS0190213-49
100	Passed	MS0190418-1
150	Passed	MS0190213-53
200	Passed	MS0190213-55
300	Passed	MS0190213-57

Prepare by :
Date : 27 June 2019
FU HO MAN
Assistant Technical Manager

Review by :
Date : 27 June 2019
WONG KA MAN
Senior Manager

Test Report
Dimensions Check of Y-strainers
(In-house method and BS EN 1092-2 : 1997 Clause 5 Table 9)

Date of issue : 14 June 2019

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Castco LRN : BC0190131-044-MISL

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A2, 4/F., Galaxy Factory Building, 25-27 Luk Hop Street, San Po Kong, Kowloon, H. K.

Contract no. : - -

Job title : Toyo Valve Testing for WSD Approval

Sample description : Cast Iron Y-strainer

Nominal pressure (PN) : 16

Manufacturer : Kitz Corporation

Brand name : Toyo

Body marking : TOYO (DN) PN16 CI →

Model no. : 381EHHK

Origin : PRC

Sample submitted by : Gate Way Valve & Fitting Ltd.

Laboratory test results

Date of sample received : 21 May 2019

Date of test : 13 June 2019

Specimen no.		BC0190131-045-MISL	BC0190131-046-MISL	BC0190131-047-MISL	BC0190131-048-MISL	BC0190131-049-MISL	BC0190131-050-MISL	BC0190131-051-MISL
DN (mm)		65	80	100	150	200	250	300
H (mm)	Measured mean value	175	200	242	319	400	514	565
	Manufacturer requirement	172 to 180	195 to 203	235 to 245	315 to 325	394 to 404	511 to 521	563 to 573
L (mm)	Measured mean value	292	311	350	481	600	731	850
	Manufacturer requirement	287 to 293	307 to 313	347 to 353	477 to 483	596 to 604	726 to 734	845 to 855
Outside diameter of flange (mm)	Measured mean value	185	201	221	285	340	406	461
	Manufacturer requirement	185	200	220	285	340	405	460
Diameter of bolt circle (mm)	Measured mean value	145	160	180	241	295	356	411
	Manufacturer requirement	145	160	180	240	295	355	410
Diameter of bolt hole & Bolts number (mm & no.)	Measured mean value	19.32 - 4	19.59 - 8	19.62 - 8	23.35 - 8	23.45 - 12	28.63 - 12	28.55 - 12
	Manufacturer requirement	19 to 20.5 - 4	19 to 20.5 - 8	19 to 20.5 - 8	23 to 24.5 - 8	23 to 24.5 - 12	28 to 29.5 - 12	28 to 29.5 - 12
Flange thickness (mm)	Measured mean value	18.87	22.91	24.25	25.81	28.80	30.67	30.84
	Manufacturer requirement	17 to 24	19 to 26	21 to 28	23 to 30	27 to 34	29 to 36	29 to 36


Remark(s) :

1. Test results relate only to the specimen tested.
2. Test results of sample comply with the requirement of BS EN 1092-2 : 1997 Table 9.

Checked by :


FU HO MAN
Assistant Technical Manager

Certified by :


WONG KA MAN
Senior Manager

**Test Report
Coating Thickness Test of Strainers
(WIS 4-52-01 Appendix B)**

Date of issue : 14 June 2019

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Castco LRN : BC0190131-044-MISL

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A2, 4/F., Galaxy Factory Building, 25-27 Luk Hop Street, San Po Kong, Kowloon, H. K.

Contract no. : - -

Job title : Toyo Valve Testing for WSD Approval

Sample description : Cast Iron Y-strainer

Nominal pressure (PN) : 16

Manufacturer : Kitz Corporation

Brand name : Toyo

Body marking : TOYO (DN) PN16 CI →

Model no. : 381EHHK

Origin : PRC

Sample submitted by : Gate Way Valve & Fitting Ltd.

Laboratory test results

Date of sample received : 21 May 2019

Date of test : 13 June 2019

Specimen no.	BC0190131-045-MISL	BC0190131-046-MISL	BC0190131-047-MISL	BC0190131-048-MISL	BC0190131-049-MISL	BC0190131-050-MISL	BC0190131-051-MISL	
DN (mm)	65	80	100	150	200	250	300	
Measured value of coating thickness (µm)	1	342	676	510	807	546	270	474
	2	418	543	309	273	462	374	455
	3	326	369	508	332	448	324	470
	4	585	282	447	318	403	342	459
	5	611	371	446	393	273	283	337
	6	523	523	513	469	467	421	411
	7	536	716	519	480	290	645	603
	8	273	525	444	404	355	477	444
	9	596	576	513	520	406	290	452
	10	456	751	639	392	450	333	423
	11	403	510	592	441	380	560	372
	12	429	375	485	438	636	627	333
	13	680	404	432	373	538	324	356
	14	567	453	479	526	560	411	383
	15	603	525	423	511	391	411	344
Mean	489.9	506.6	483.9	445.1	440.3	406.1	421.1	

Remark(s) :

1. Test results relate only to the specimen tested.

Checked by :


FU HO MAN
Assistant Technical Manager

Certified by :


WONG KA MAN
Senior Manager



Test Report
Hydrostatic Strength Test of Y-strainers
(BS EN 12266-1 : 2012 Clause 4 Annex A)

Date of issue : 14 June 2019

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Castco LRN : BC0190131-044-MISL

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A2, 4/F., Galaxy Factory Building, 25-27 Luk Hop Street, San Po Kong, Kowloon, H. K.

Contract no. : - - -

Job title : Toyo Valve Testing for WSD Approval

Sample description : Cast Iron Y-strainer

Nominal pressure (PN) : 16

Manufacturer : Kitz Corporation

Brand name : Toyo

Body marking : TOYO (DN) PN16 CI →

Model no. : 381EHHK

Origin : PRC

Sample submitted by : Gate Way Valve & Fitting Ltd.

Laboratory test results


Date of sample received : 21 May 2019

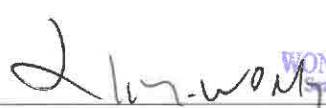
Date of test : 13 June 2019

Specimen no.	BC0190131-045-MISL	BC0190131-046-MISL	BC0190131-047-MISL	BC0190131-048-MISL	BC0190131-049-MISL	BC0190131-050-MISL	BC0190131-051-MISL
DN (mm)	65	80	100	150	200	250	300
Apply pressure (bar)	24	24	24	24	24	24	24
Test duration (s)	60	60	60	60	120	120	120
Visually detectable leakage	0	0	0	0	0	0	0
Requirement	Visually detectable leakage is not permitted						
Test results	Passed	Passed	Passed	Passed	Passed	Passed	Passed

Remark(s) :

1. Test results relate only to the specimen tested.
2. Test results of sample comply with the requirement of BS EN 12266-1 : 2012 Clause 4 Annex A.

Checked by :  FU HO MAN
Assistant Technical Manager

Certified by :  WONG KA MAN
Senior Manager



Test Report

Spheroidal Graphite Cast Iron - Tensile Properties
(BS EN 1561 : 2011 Clause 7.2 and 9.1 Table 1)

Date of issue : 14 June 2019

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Castco LRN : BC0190131-044-MISL

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A2, 4/F., Galaxy Factory Building, 25-27 Luk Hop Street, San Po Kong, Kowloon, H. K.

Contract no. : - -

Job title : Toyo Valve Testing for WSD Approval

Sample description : Cast Iron Y-strainer

Nominal pressure (PN) : 16

Manufacturer : Kitz Corporation

Brand name : Toyo

Body marking : TOYO (DN) PN16 CI →

Model no. : 381EHHK

Origin : PRC

Sample submitted by : Gate Way Valve & Fitting Ltd.

Laboratory test results

Date of sample received : 31 January 2019


Date of test : 23 February 2019

Specimen no.	BC0190131-045-MISL	BC0190131-047-MISL	BC0190131-048-MISL	BC0190131-049-MISL	BC0190131-051-MISL	
DN (mm)	65	100	150	200	300	
Steel grade	EN-GJL-250					
Total specimen length (mm)	152	155	154	153	153	
Area (mm ²)	202.1	203.6	201.6	200.3	201.3	
Tensile (MPa)	Strength	334	301	327	288	274
	Requirement	250 to 350				
Test results	Passed	Passed	Passed	Passed	Passed	

Remark(s) :

1. Test results relate only to the specimen tested.
2. Test results of sample comply with the requirement of BS EN 1561 : 2011 Table 1.

Checked by :  **FU HO MAN**
Assistant Technical Manager

Certified by :  **WONG KA MAN**
Senior Manager

Test Report
Dimensions Check of Y-strainers
(In-house method and BS EN 1092-2 : 1997 Clause 5 Table 9)

Date of issue : 14 June 2019
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Castco LRN : BC0190131-044-MISL

Appendix A



BC0190131-045-MISL



BC0190131-046-MISL

Test Report
Dimensions Check of Y-strainers
(In-house method and BS EN 1092-2 : 1997 Clause 5 Table 9)

Date of issue : 14 June 2019

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Castco LRN : BC0190131-044-MISL

Appendix B



BC0190131-047-MISL



BC0190131-048-MISL

Test Report
Dimensions Check of Y-strainers
(In-house method and BS EN 1092-2 : 1997 Clause 5 Table 9)

Date of issue : 14 June 2019
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Castco LRN : BC0190131-044-MISL

Appendix C



BC0190131-049-MISL



BC0190131-050-MISL

Test Report
Dimensions Check of Y-strainers
(In-house method and BS EN 1092-2 : 1997 Clause 5 Table 9)

Date of issue : 14 June 2019

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Castco LRN : BC0190131-044-MISL

Appendix D



BC0190131-051-MISL

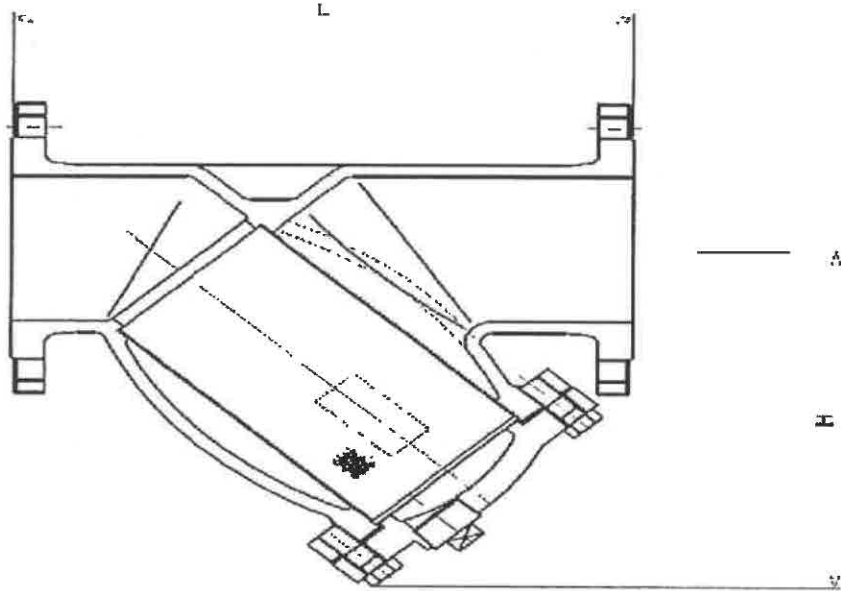
Test Report
Dimensions Check of Y-strainers
(In-house method and BS EN 1092-2 : 1997 Clause 5 Table 9)

Date of issue : 14 June 2019

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Castco LRN : BC0190131-044-MISL

Appendix E



Dimensions Figure

End of Report