

Summary of Test Results

Reference no. : BC-SUMMARY-2022-019

Customer : Gate Way Valve & Fitting Ltd.


Address : Flat A1, 4/F., Galaxy Factory Building, 25 Luk Hop Street, San Po Kong, Kowloon, H. K.

Sample description : Pressure Reducing Valve

Nominal pressure (PN) : 16

Manufacturer : Yoshitake Works (Thailand) Ltd.

Brand name : Yoshitake

Body marking :  (DN)

Model no. : GD-200H

Origin : Thailand

Sample submitted by : Gate Way Valve & Fitting Ltd.

Test standard : BS EN 1567 : 1999 / WIS 4-52-01 Dec. 1992 : Issue 1 / BS EN 1563 : 2011 / BS EN 10088-1 : 2014

Test period : 18 January to 14 February 2022

A) Sample List

DN (mm)	Specimen no.
65	220110-2241-001
80	220110-2241-002
100	220110-2241-003
150	220110-2241-004

B) Test Item

1) Dimensions Check (BS EN 1567 : 1999 Clause 4)

DN (mm)	Test results	Castco LRN
65	Passed	220110-2241
80	Passed	
100	Passed	
150	Passed	

2) Coating Thickness Test (WIS 4-52-01 Dec. 1992 : Issue 1 Appendix B)

DN (mm)	Test results	Castco LRN
65	Passed	220110-2241
80	Passed	
100	Passed	
150	Passed	

3) Pressure Strength and Tightness of the Body (BS EN 1567 : 1999 Clause 8.2.2)

DN (mm)	Test results	Castco LRN
65	Passed	220110-2241
80	Passed	
100	Passed	
150	Passed	

Summary of Test Results

Reference no. : BC-SUMMARY-2022-019

B) Test Item (con't)

4) Flow Rate and Outlet Pressure (BS EN 1567 : 1999 Clause 8.3.4)

DN (mm)	Test results	Castco LRN
65	Passed	220110-2241
80	Passed	
100	Passed	
150	Passed	

5) Tensile Test (BS EN 1563 : 2011 Clause 7.2.1.1 Table 1 (Grade EN-GJS-450-10) and Clause 9.1)

DN (mm)	Test results	Castco LRN
65	Passed	220110-2241
80	Passed	
150	Passed	

6) Chemical Composition (Seat) (BS EN 10088-1 : 2014 Table 2 Grade 1.4301 (304))

DN (mm)	Test results	Castco LRN
65	Passed	220111-2240
80	Passed	220111-2242
150	Passed	220111-2243

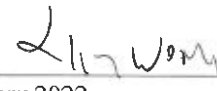
Prepare by : _____

Date : 16 February 2022

 **FU HO MAN**
Assistant Technical Manager

Review by : _____

Date : 16 February 2022

 **WONG KA MAN**
Senior Manager

Test Report
Pressure Reducing Valves - Dimensions Check
(BS EN 1567 : 1999 Clause 4)

Date of issue : 16 February 2022

Page 1 of 6 page(s)

Castco LRN : 220110-2241

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A1, 4/F., Galaxy Factory Building, 25 Luk Hop Street, San Po Kong, Kowloon, H. K. Contract no. : - -


Job title : - -

Sample description : Pressure Reducing Valve

Nominal pressure (PN) : 16

Manufacturer : Yoshitake Works (Thailand) Ltd.

Brand name : Yoshitake

Body marking :  (DN)

Model no. : GD-200H

Origin : Thailand

Sample submitted by : Gate Way Valve & Fitting Ltd.

Laboratory test results

Date of sample received : 10 January 2022

Date of test : 18 January 2022

Specimen no.		220110-2241-001	220110-2241-002	220110-2241-003	220110-2241-004
DN (mm)		65	80	100	150
Dimension of End Connection (mm)	Measured mean value	65.50	80.03	100.23	149.23
	Requirement	65	80	100	150
Outside diameter of flange (mm)	Measured mean value	187	203	224	308
	Requirement	185	200	220	285
Diameter of bolt circle (mm)	Measured mean value	145	160	180	240
	Requirement	145	160	180	240
Diameter of bolt hole & Bolts number (mm & no.)	Measured mean value	19.72 & 4	19.90 & 8	19.40 & 8	23.23 & 8
	Requirement	19 to 20.5 & 4	19 to 20.5 & 8	19 to 20.5 & 8	23 to 24.5 & 8
Flange thickness (mm)	Measured mean value	24.22	24.17	26.71	29.40
	Requirement	19 to 26	19 to 26	20 to 27	23 to 30

Remark(s) :

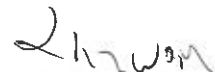
1. Test results relate only to the specimen tested.
2. Test results of sample comply with the requirement of BS EN 1567 : 1999 Table 1 (effect of measurement uncertainty has not been taken into account).

Checked by : _____



FU HO MAN
Assistant Technical Manager

Certified by : _____



WONG KA MAN
Senior Manager

Test Report

Valves - Coating Thickness Measurement

(WIS 4-52-01 Dec. 1992 : Issue 1 Appendix B in conjunction with the following specification(s) : WIS 4-52-01 Dec. 1992 : Issue 1 Cl. 12.7.1)

Date of issue : 16 February 2022

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Castco LRN : 220110-2241

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A1, 4/F., Galaxy Factory Building, 25 Luk Hop Street, San Po Kong, Kowloon, H. K. Contract no. : - -


Job title : - -

Sample description : Pressure Reducing Valve

Nominal pressure (PN) : 16

Manufacturer : Yoshitake Works (Thailand) Ltd.

Brand name : Yoshitake

Body marking :  (DN)

Model no. : GD-200H

Origin : Thailand

Sample submitted by : Gate Way Valve & Fitting Ltd.

Laboratory test results

Date of sample received : 10 January 2022

Date of test : 18 January 2022

Specimen no.	220110-2241-001	220110-2241-002	220110-2241-003	220110-2241-004
DN (mm)	65	80	100	150
Ambient temperature (°C)	22.2	22.2	22.2	22.2
Measured value of coating thickness at external surface (µm)	1	292	265	190
	2	245	282	200
	3	277	332	201
	4	295	312	196
	5	295	375	198
Measured value of coating thickness at internal surface (µm)	6	248	208	191
	7	215	197	255
	8	217	277	228
	9	181	249	332
	10	198	230	226
	11	276	192	269
	12	277	222	259
	13	324	297	312
	14	232	181	234
	15	293	204	188
Mean	257.7	254.9	231.9	411.9
Minimum coating thickness (µm)	181	181	188	275
Maximum coating thickness (µm)	324	375	332	560
Standard deviation (µm)	41.9	57.3	45.4	79.0
Manufacturer requirement (µm)	Minimum coating thickness	min. 100		
	Maximum coating thickness	max. 1500		

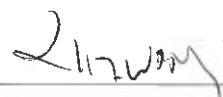
Remark(s) :

1. Test results relate only to the specimen tested.

Checked by : _____


FU HO MAN
Assistant Technical Manager

Approved Signatory : _____


WONG KA MAN
Senior Manager

Test Report

Pressure Reducing Valves - Pressure Strength and Tightness Test
(BS EN 1567 : 1999 Clause 8.2.2)

Date of issue : 16 February 2022

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Castco LRN : 220110-2241

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A1, 4/F., Galaxy Factory Building, 25 Luk Hop Street, San Po Kong, Kowloon, H. K. Contract no. : - -

Job title : - -

Sample description : Pressure Reducing Valve

Nominal pressure (PN) : 16

Manufacturer : Yoshitake Works (Thailand) Ltd.

Brand name : Yoshitake

Body marking :  (DN)

Model no. : GD-200H

Origin : Thailand

Sample submitted by : Gate Way Valve & Fitting Ltd.

Laboratory test results

Date of sample received : 10 January 2022

Date of test : 19 January 2022

Specimen no.		220110-2241-001	220110-2241-002	220110-2241-003	220110-2241-004
DN (mm)		65	80	100	150
Apply pressure (bar)	to inlet connection	25	25	25	25
	to outlet connection	16	16	16	16
Maintain period (min)		10	10	10	10
Observation		No leakage was observed	No leakage was observed	No leakage was observed	No leakage was observed
Requirement		No leakage or permanent deformation shall occur			

Remark(s) :

1. Test results relate only to the specimen tested.
2. Test results of sample comply with the requirement of BS EN 1567 : 1999 Clause 8.2.2 (effect of measurement uncertainty has not been taken into account).

Checked by : _____



FU HO MAN
Assistant Technical Manager

Certified by : _____



WONG KA MAN
Senior Manager

Test Report
Pressure Reducing Valves - Flow Rate and Outlet Pressure Test
(BS EN 1567 : 1999 Clause 8.3.4)

Date of issue : 16 February 2022

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Castco LRN : 220110-2241

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A1, 4/F., Galaxy Factory Building, 25 Luk Hop Street, San Po Kong, Kowloon, H. K. Contract no. : - -

Job title : - -

Sample description : Pressure Reducing Valve

Nominal pressure (PN) : 16

Manufacturer : Yoshitake Works (Thailand) Ltd.

Brand name : Yoshitake

Body marking :  (DN)

Model no. : GD-200H

Origin : Thailand

Sample submitted by : Gate Way Valve & Fitting Ltd.

Laboratory test results

Date of sample received : 10 January 2022

Date of test : 21 to 22 January 2022

Specimen no.	220110-2241-001	220110-2241-002	220110-2241-003	220110-2241-004	
DN (mm)	65	80	100	150	
Nominal flow rate (QN) (L/s)	6.67	10	15.56	15.56	
Measured outlet pressure (bar)	Inlet pressure	8			
	Outlet pressure	3.0	3.2	3.1	3.1
	Inlet pressure	6			
	Outlet pressure	2.8	3.1	2.9	3.0
	Inlet pressure	16			
	Outlet pressure	3.2	3.3	3.2	3.1
Requirement	The outlet pressure shall be within 2.2 to 3.8 bar				

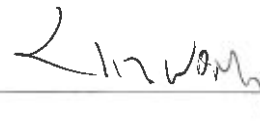
Remark(s) :

1. Test results relate only to the specimen tested.
2. Test results of sample comply with the requirement of BS EN 1567 : 1999 Clause 8.3.4 (effect of measurement uncertainty has not been taken into account).
3. Due to the Nominal flow rate (QN) of DN150 did not specified on BS EN 1567 : 1999 Table 5, the test method and requirement just based on DN100.

Checked by : _____


FU HO MAN
 Assistant Technical Manager

Certified by : _____


WONG KA MAN
 Senior Manager

Test Report
Metallic Materials - Tensile Test of Metallic Materials
(BS EN ISO 6892-1 : 2009)

Date of issue : 16 February 2022

Page 5 of 6 page(s)

Castco LRN : 220110-2241

Details as supplied by customer

Customer : Gate Way Valve & Fitting Ltd.

Customer's ref. no. : - -

Address : Flat A1, 4/F., Galaxy Factory Building, 25 Luk Hop Street, San Po Kong, Kowloon, H. K. Contract no. : - -

Job title : - -

Sample description : Pressure Reducing Valve

Nominal pressure (PN) : 16

Manufacturer : Yoshitake Works (Thailand) Ltd.

Brand name : Yoshitake

Body marking : (DN)

Model no. : GD-200H

Origin : Thailand

Sample submitted by : Gate Way Valve & Fitting Ltd.

Acceptance standard : BS EN 1563 : 2011 Clause 7.2.1.1 Table 1 (Grade EN-GJS-450-10) and Clause 9.1

Laboratory test results

Date of sample received : 10 January 2022

Date of test : 14 February 2022

Tensile Test

Specimen no.	DN (mm)	Type & Prepar'n	Specimen length (mm)	Area (mm ²)	Yield strength (MPa)	Tensile strength (MPa)	Elongation (%)	Position of fracture	Remark
220110-2241-001	65	B, M	139	158.8	316	484	12.7	Valid	--
220110-2241-002	80	B, M	139	159.0	314	458	10.4	Valid	--
220110-2241-004	150	B, M	139	159.0	330	550	13.2	Valid	--

Remark(s) :

- A - Proportional; B - Non - proportional; M - Machined; N - Unmachined;
+ - This measurement is 'invalid' which relates to the position of fracture only.
- The yield strength is determined at 0.2% proof strength.
- Test results relate only to the specimen tested.
- Test results of sample comply with the requirement of BS EN 1563 : 2011 Table 1 (this specification is not covered by the laboratory's HOKLAS accreditation).
- The requirement of BS EN 1563 : 2011 Table 1 : 0.2% proof strength = min. 310MPa; Tensile strength = min. 450MPa; Elongation = min. 10%.
- The acceptance limit is the same as the tolerance limit (simple acceptance, see Figure A). Only test results out of the tolerance/acceptance limit will be concluded as out-of-tolerance.

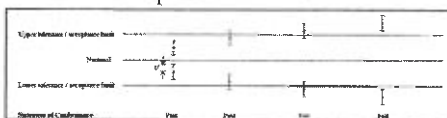


Figure A - Graphical representation of a binary statement - Simple acceptance

Checked by :

FU HO MAN
Assistant Technical Manager

Approved Signatory :

WONG KA MAN
Senior Manager

Form no. : ST 6892_T1(for BC)_dd_02/01/2020

Test Report
Pressure Reducing Valves - Dimensions Check
(BS EN 1567 : 1999 Clause 4)

Date of issue : 16 February 2022

Page 6 of 6 page(s)

Castco LRN : 220110-2241

Appendix A220110-2241-001220110-2241-002220110-2241-003220110-2241-004

End of Report

Test Report**Chemical Analysis of Steel**

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2240-001

Page 1 of 2

Castco LRN: 220111-2240

Details as supplied by customer

Name of Customer : Gate Way Valve & Fitting Limited

Address : Flat A1, 4/F, Galaxy Fty Bldg, 25-27 Luk Hop Street, San Po Kong, Kowloon, Hong Kong

Job Title : WSD GA renew of Yoshitake Pressure Reducing Valve Model GD-200H

Contract No. : --

Customer's Ref. No. : --

Sample details as supplied by customer

Date Sampled : --

Sample Description : DN65 Pressure Reducing Valve (Seat)

Specification : BS EN 10088-1:2014, Table 2, Grade 1.4301 (304)

Specimen No. : 220110-2241-001

Sample Identification No. : -- / Model no. : GD-200H / Origin : Thailand

Location of Works : --

Manufacturer : Yoshitake Works (Thailand) Ltd. / Brand name: Yoshitake

Test Method(s):-

- 1) BS EN ISO 15350 : 2010
- 2) ST-Multi-1(ICP-OES)
- 3) BS EN ISO 15351: 2010

Remark(s):

- I. Test results only relate to the specimen tested.

Checked by :


Lau Hiu Yat
Assistant Technical Manager

Approved Signatory :


Cheng Chi Fai
Senior Manager

**Test Report
Chemical Analysis of Steel**

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2240-001

Page 2 of 2

Castco LRN: 220111-2240

Laboratory test details

Date of Request Confirmed: 11-01-2022

Date of Received by Lab.: 11-01-2022

Testing Period: 24-01-2022 to 27-01-2022

Chemical Analysis		Result
¹⁾ Total Carbon Content	C %	0.055
¹⁾ Total Sulfur Content	S %	0.020
²⁾ Chromium	Cr %	18.36
²⁾ Manganese	Mn %	1.40
²⁾ Nickel	Ni %	8.00
²⁾ Phosphorus	P %	0.028
²⁾ Silicon	Si %	0.470
³⁾ Nitrogen	N %	0.098

End of Report

Form No.: CHM Steel-I T dd 16/12/2015

Appendix A**Summary of Chemical Analysis of Steel**

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2240-001

Page 1 of 1

Castco LRN: 220111-2240

Name of Customer: Gate Way Valve & Fitting Limited

Job Title: WSD GA renew of Yoshitake Pressure Reducing Valve Model GD-200H

Contract No.: --

Customer's Ref. No.: --

Date of Received by Lab.: 11-01-2022

Testing Period: 24-01-2022 to 27-01-2022

Castco LRN:	220111-2240				
Sample Description :	DN65 Pressure Reducing Valve (Seat)				
Specimen No. :	220110-2241-001				
Sample Identification No.:	-- / Model no. : GD-200H / Origin : Thailand				
Manufacturer :	Yoshitake Works (Thailand) Ltd. / Brand name: Yoshitake				
Specification: BS EN 10088-1:2014, Table 2, Grade 1.4301 (304)			Test Results	Within / Exceed limit	
Carbon	C	0.07 max.	%	0.055	Within limit
Sulfur	S	0.015 max. ^(III)	%	0.020	Within limit
Chromium	Cr	17.5 to 19.5	%	18.36	Within limit
Manganese	Mn	2.00 max.	%	1.40	Within limit
Nickel	Ni	8.0 to 10.5	%	8.00	Within limit
Phosphorus	P	0.045 max.	%	0.028	Within limit
Silicon	Si	1.00 max.	%	0.470	Within limit
Nitrogen	N	0.10 max.	%	0.098	Within limit

Remark(s):

- I. Test results only relate to the specimen tested.
- II. Test results of the specimen are in compliance with the chemical requirements of BS EN 10088-1:2014, Table 2, Grade 1.4301 (304).
- III. For bars, rods, wire, sections, bright products and the relevant semi-finished products, a maximum content of 0.030 % S applies. Particular ranges of sulfur content may provide improvement of particular properties. For machinability a controlled sulfur content of 0.015 % to 0.030 % is recommended and permitted. For weldability, a controlled sulfur content of 0.008 % to 0.030 % is recommended and permitted. For polishability, a controlled sulfur content of 0.015 % max. is recommended.

**Test Report
Chemical Analysis of Steel**

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2242-001

Page 1 of 2

Castco LRN: 220111-2242

Details as supplied by customer

Name of Customer : Gate Way Valve & Fitting Limited

Address : Flat A1, 4/F, Galaxy Fty Bldg, 25-27 Luk Hop Street, San Po Kong, Kowloon, Hong Kong

Job Title : WSD GA renew of Yoshitake Pressure Reducing Valve Model GD-200H

Contract No. : --

Customer's Ref. No. : --

Sample details as supplied by customer

Date Sampled : --

Sample Description : DN80 Pressure Reducing Valve (Seat)

Specification : BS EN 10088-1:2014, Table 2, Grade 1.4301 (304)

Specimen No. : 220110-2241-002

Sample Identification No. : -- / Model no. : GD-200H / Origin : Thailand

Location of Works : --

Manufacturer : Yoshitake Works (Thailand) Ltd. / Brand name: Yoshitake


Test Method(s):-

- 1) BS EN ISO 15350 : 2010
- 2) ST-Multi-1(ICP-OES)
- 3) BS EN ISO 15351: 2010

Remark(s):

I. Test results only relate to the specimen tested.

Checked by : 
Lau Hiu Yat
Assistant Technical Manager

Approved Signatory : 
Cheng Chi Fai
Senior Manager

**Test Report
Chemical Analysis of Steel**

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2242-001

Page 2 of 2

Castco LRN: 220111-2242

Laboratory test details

Date of Request Confirmed: 11-01-2022

Date of Received by Lab.: 11-01-2022

Testing Period: 24-01-2022 to 27-01-2022

Chemical Analysis		Result
¹⁾ Total Carbon Content	C %	0.052
¹⁾ Total Sulfur Content	S %	0.019
²⁾ Chromium	Cr %	18.57
²⁾ Manganese	Mn %	1.41
²⁾ Nickel	Ni %	8.08
²⁾ Phosphorus	P %	0.027
²⁾ Silicon	Si %	0.473
³⁾ Nitrogen	N %	0.091

End of Report

Form No.: CHM Steel-1 T dd 16/12/2015

Appendix A

Summary of Chemical Analysis of Steel

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2242-001

Page 1 of 1

Castco LRN: 220111-2242

Name of Customer: Gate Way Valve & Fitting Limited

Job Title: WSD GA renew of Yoshitake Pressure Reducing Valve Model GD-200H

Contract No.: --

Customer's Ref. No.: --

Date of Received by Lab.: 11-01-2022

Testing Period: 24-01-2022 to 27-01-2022

Castco LRN:	220111-2242				
Sample Description :	DN80 Pressure Reducing Valve (Seat)				
Specimen No. :	220110-2241-002				
Sample Identification No.:	-- / Model no. : GD-200H / Origin : Thailand				
Manufacturer :	Yoshitake Works (Thailand) Ltd. / Brand name: Yoshitake				
Specification: BS EN 10088-1:2014, Table 2, Grade 1.4301 (304)			Test Results	Within / Exceed limit	
Carbon	C	0.07 max.	%	0.052	Within limit
Sulfur	S	0.015 max. ^(III)	%	0.019	Within limit
Chromium	Cr	17.5 to 19.5	%	18.57	Within limit
Manganese	Mn	2.00 max.	%	1.41	Within limit
Nickel	Ni	8.0 to 10.5	%	8.08	Within limit
Phosphorus	P	0.045 max.	%	0.027	Within limit
Silicon	Si	1.00 max.	%	0.473	Within limit
Nitrogen	N	0.10 max.	%	0.091	Within limit

Remark(s):

- I. Test results only relate to the specimen tested.
- II. Test results of the specimen are in compliance with the chemical requirements of BS EN 10088-1:2014, Table 2, Grade 1.4301 (304).
- III. For bars, rods, wire, sections, bright products and the relevant semi-finished products, a maximum content of 0.030 % S applies. Particular ranges of sulfur content may provide improvement of particular properties. For machinability a controlled sulfur content of 0.015 % to 0.030 % is recommended and permitted. For weldability, a controlled sulfur content of 0.008 % to 0.030 % is recommended and permitted. For polishability, a controlled sulfur content of 0.015 % max. is recommended.

Test Report**Chemical Analysis of Steel**

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2243-001

Page 1 of 2

Castco LRN: 220111-2243

Details as supplied by customer

Name of Customer : Gate Way Valve & Fitting Limited

Address : Flat A1, 4/F, Galaxy Fty Bldg, 25-27 Luk Hop Street, San Po Kong, Kowloon, Hong Kong

Job Title : WSD GA renew of Yoshitake Pressure Reducing Valve Model GD-200H

Contract No. : --

Customer's Ref. No. : --

Sample details as supplied by customer

Date Sampled : --

Sample Description : DN150 Pressure Reducing Valve (Seat)

Specification : BS EN 10088-1:2014, Table 2, Grade 1.4301 (304)

Specimen No. : 220110-2241-004

Sample Identification No. : -- / Model no. : GD-200H / Origin : Thailand

Location of Works : --

Manufacturer : Yoshitake Works (Thailand) Ltd. / Brand name: Yoshitake

Test Method(s):-

- 1) BS EN ISO 15350 : 2010
- 2) ST-Multi-1(ICP-OES)
- 3) BS EN ISO 15351: 2010

Remark(s):


- I. Test results only relate to the specimen tested.

Checked by :


 Lau Hiu Yat

Assistant Technical Manager

Approved Signatory :


 Cheng Chi Fai

Senior Manager

Test Report

Chemical Analysis of Steel

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2243-001

Page 2 of 2

Castco LRN: 220111-2243

Laboratory test details

Date of Request Confirmed: 11-01-2022

Date of Received by Lab.: 11-01-2022

Testing Period: 24-01-2022 to 27-01-2022

Chemical Analysis	Result
¹⁾ Total Carbon Content C %	0.054
¹⁾ Total Sulfur Content S %	0.020
²⁾ Chromium Cr %	18.38
²⁾ Manganese Mn %	1.40
²⁾ Nickel Ni %	8.04
²⁾ Phosphorus P %	0.028
²⁾ Silicon Si %	0.468
³⁾ Nitrogen N %	0.094

End of Report

Form No.: CHM Steel-1 T dd 16/12/2015

Appendix A

Summary of Chemical Analysis of Steel

Date of issue: 04-02-2022

Specimen No.: CHEM-220111-2243-001

Page 1 of 1

Castco LRN: 220111-2243

Name of Customer: Gate Way Valve & Fitting Limited

Job Title: WSD GA renew of Yoshitake Pressure Reducing Valve Model GD-200H

Contract No.: --

Customer's Ref. No.: --

Date of Received by Lab.: 11-01-2022

Testing Period: 24-01-2022 to 27-01-2022

Castco LRN:	220111-2243				
Sample Description :	DN150 Pressure Reducing Valve (Seat)				
Specimen No. :	220110-2241-004				
Sample Identification No.:	-- / Model no. : GD-200H / Origin : Thailand				
Manufacturer :	Yoshitake Works (Thailand) Ltd. / Brand name: Yoshitake				
Specification: BS EN 10088-1:2014, Table 2, Grade 1.4301 (304)			Test Results	Within / Exceed limit	
Carbon	C	0.07 max.	%	0.054	Within limit
Sulfur	S	0.015 max. ^(III)	%	0.020	Within limit
Chromium	Cr	17.5 to 19.5	%	18.38	Within limit
Manganese	Mn	2.00 max.	%	1.40	Within limit
Nickel	Ni	8.0 to 10.5	%	8.04	Within limit
Phosphorus	P	0.045 max.	%	0.028	Within limit
Silicon	Si	1.00 max.	%	0.468	Within limit
Nitrogen	N	0.10 max.	%	0.094	Within limit

Remark(s):

- I. Test results only relate to the specimen tested.
- II. Test results of the specimen are in compliance with the chemical requirements of BS EN 10088-1:2014, Table 2, Grade 1.4301 (304).
- III. For bars, rods, wire, sections, bright products and the relevant semi-finished products, a maximum content of 0.030 % S applies. Particular ranges of sulfur content may provide improvement of particular properties. For machinability a controlled sulfur content of 0.015 % to 0.030 % is recommended and permitted. For weldability, a controlled sulfur content of 0.008 % to 0.030 % is recommended and permitted. For polishability, a controlled sulfur content of 0.015 % max. is recommended.