

**Test Certificate**  
**Determination of dimensions of cast iron discharge and ventilating pipes**  
**and fittings, sand-cast or spun in cast iron**  
**(BS 416 : Part 1 : 1990 Clause 4.1 and 4.2)**

Date of issue : 29-12-2005

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Castco LRN : DP251122-0552 DIM

**Details as supplied by client**

Sample Submitted by : Asia Development (HK) Ltd.

Client : Cheung Hing Foundry Limited

Client's ref. no. : --

Contract no. : --

Job title : --

Description of pipe :

Nominal internal bore (DN) : 50 mm

Brand: CHF 

Length : 1830 mm

Type : Cast Iron Pipe

Socket type : A

Manufacturer : Cheung Hing Foundry Limited

**Laboratory test result**

Date sample received : 22-11-2005

Date of test : 24-11-2005

**Dimensions Check**

Specimen no. : DP251122-0552

Nominal internal bore (DN) : 50 mm

		BS requirement from table 1 (mm)	Measured mean value (mm)
Pipe	Internal diameter (min.)	48	51
	Outside diameter (max.)	63	60
	Thickness (nominal)	5	4.94
Socket	Internal diameter (min.)	73	75
	Outside diameter (max.)	89	85
	Thickness (nominal)	6.5	8
	Internal depth (nominal)	64	66
	Outside diameter over beads (min.)	100	102
Total length (pipe)		1830	1832
Total length (fitting)		--	--
Angles (fitting)		--	--

Legend : \* - The figure fails to comply with BS416 : Part 1 : 1990 Clause 4.1 / 4.2.  
 N/A - Not applicable.

Remarks : 1. Test result relates only to the specimen tested.  
 2. Test result complies with the requirement of BS416 : Part 1 : 1990 Clause 4.1 for dimensions.  
 3. This report supersedes previous test certificate of Castco LRN:DP251122-0552 DIM.

Checked by : 

W.K. LEUNG

Certified by : 

Form No. PIPE DIM416\_T1 dd 16/01/2004

PETER K. F. CHOI  
 B.Sc., C. Eng., MICE, MHKIE  
 Registered Professional Engineer  
 (H.K.)

Hong Kong Accreditation Service (HKAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for the laboratory activities as listed in the HOKLAS Directory of Accredited Laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation. This report shall not be reproduced unless with prior written approval from this laboratory.

## Test Certificate

**Determination of dimensions of cast iron discharge and ventilating pipes  
and fittings, sand-cast or spun in cast iron  
(BS 416 : Part 1 : 1990 Clause 4.1 and 4.2)**

Date of issue : 29-12-2005

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Castco LRN : DP251122-0553 DIM

Details as supplied by client

Sample Submitted by : Asia Development (HK) Ltd.

Client : Cheung Hing Foundry Limited

Client's ref. no. : --

Contract no. : --

Job title : --

Description of pipe :

Nominal internal bore (DN) : 75 mm

Brand: CHF 

Length : 1830 mm

Type : Cast Iron Pipe

Socket type : A

Manufacturer : Cheung Hing Foundry Limited

Laboratory test result

Date sample received : 22-11-2005

Date of test : 24-11-2005

Dimensions Check

Specimen no. : DP251122-0553

Nominal internal bore (DN) : 75 mm

		BS requirement from table 1 (mm)	Measured mean value (mm)
Pipe	Internal diameter (min.)	74	76
	Outside diameter (max.)	89	87
	Thickness (nominal)	5	4.9
Socket	Internal diameter (min.)	100	101
	Outside diameter (max.)	116	105
	Thickness (nominal)	6.5	6
	Internal depth (nominal)	70	70
	Outside diameter over beads (min.)	129	129
Total length (pipe)		1830	1823
Total length (fitting)		--	--
Angles (fitting)		--	--

Legend : \* - The figure fails to comply with BS416 : Part 1 : 1990 Clause 4.1 / 4.2.  
N/A - Not applicable.

Remarks : 1. Test result relates only to the specimen tested.  
2. Test result complies with the requirement of BS416 : Part 1 : 1990 Clause 4.1 for dimensions.  
3. This report supersedes previous test certificate of Castco LRN:DP251122-0553 DIM.

Checked by :

W.K. LEUNG

Certified by :

Form No. PIPE DIM416\_T1 dd 16/01/2004

PETER K. F. CHOI  
B.Sc., C. Eng., MICE, MHKIE  
Registered Professional Engineer  
Deputy General Manager

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### Test Certificate Determination of dimensions of cast iron discharge and ventilating pipes and fittings, sand-cast or spun in cast iron (BS 416 : Part 1 : 1990 Clause 4.1 and 4.2)

Date of issue : 03 January 2015

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Castco LRN : DP0141106-057 DIM

#### Details as supplied by client

Client : Cheung Hing Foundry (HK) Limited

Client's ref. no. : --

Contract no. : --

Job title : --

Description of pipe :

Nominal internal bore (DN) : 100 mm

Socket type : A

Length : 1830 mm

Type : Cast Iron Pipe

Brand : CHF 

Manufacturer : Liuzhou Lizhi Casting Co., Ltd.

#### Laboratory test result

Date sample received : 06 November 2014

Date of test : 26 November 2014

#### Dimensions Check

Specimen no. : DP0141106-057

Nominal internal bore (DN) : 100 mm

		BS requirement from table 1 (mm)	Measured mean value (mm)
Pipe	Internal diameter (min.)	99	101
	Outside diameter (max.)	114	113
	Thickness (nominal)	5 $\left( \begin{smallmatrix} +0 \\ -1.5 \end{smallmatrix} \right)$	4.9
Socket	Internal diameter (min.)	127	127
	Outside diameter (max.)	143	142
	Thickness (nominal)	6.5 $\left( \begin{smallmatrix} +0 \\ -1.5 \end{smallmatrix} \right)$	6
	Internal depth (nominal)	76	76
	Outside diameter over beads (min.)	157	158
Total length (pipe)		1830 ( $\pm 20$ )	1835
Total length (fitting)		--	--
Angles (fitting)		--	--

Legend : \* - The figure fails to comply with BS416 : Part 1 : 1990 Clause 4.1 / 4.2.  
N/A - Not applicable.

Remarks : 1. Test result relates only to the specimen tested.  
2. Compliance of the test results to the specification is an opinion of the laboratory and is not covered under the HOKLAS accreditation.  
3. Test result complies with the requirement of BS416 : Part 1 : 1990 Clause 4.1 for dimensions.  
4. Sample Submitted by: Asia Development (HK) Limited.

Checked by :

 **FU HO MAN**  
Assistant Technical Officer

Approved Signatory :

  
**WONG KA MAN**  
Laboratory Manager

## Test Certificate

**Determination of dimensions of cast iron discharge and ventilating pipes  
and fittings, sand-cast or spun in cast iron  
(BS 416 : Part 1 : 1990 Clause 4.1 and 4.2)**

Date of issue : 13 February 2015

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Castco LRN : DP0141229-190 DIM

Details as supplied by client

Client : Cheung Hing Foundry (HK) Limited

Client's ref. no. : --

Contract no. : --

Job title : --

Description of pipe :

Nominal internal bore (DN) : 150 mm

Socket type : A

Length : 1830 mm

Type : Cast Iron Pipe

Brand : CHF 

Manufacturer : Liuzhou Lizhi Casting Co., Ltd.

Laboratory test result

Date sample received : 29 December 2014

Date of test : 19 January 2015

Dimensions Check

Specimen no. : 1

Nominal internal bore (DN) : 150 mm

		BS requirement from table 1 (mm)	Measured mean value (mm)
Pipe	Internal diameter (min.)	150	154
	Outside diameter (max.)	165	164
	Thickness (nominal)	5 $\left( \begin{smallmatrix} +0 \\ -1.5 \end{smallmatrix} \right)$	4.9
Socket	Internal diameter (min.)	181	181
	Outside diameter (max.)	197	196
	Thickness (nominal)	6.5 $\left( \begin{smallmatrix} +0 \\ -1.5 \end{smallmatrix} \right)$	6
	Internal depth (nominal)	89	90
	Outside diameter over beads (min.)	213	213
Total length (pipe)		1830 ( $\pm 20$ )	1839
Total length (fitting)		--	--
Angles (fitting)		--	--

Legend : \* - The figure fails to comply with BS416 : Part 1 : 1990 Clause 4.1 / 4.2.

N/A - Not applicable.

- Remarks :
1. Test result relates only to the specimen tested.
  2. Compliance of the test results to the specification is an opinion of the laboratory and is not covered under the HOKLAS accreditation.
  3. Test result complies with the requirement of BS416 : Part 1 : 1990 Clause 4.1 for dimensions.
  4. Sample Submitted by: Asia Development (HK) Limited.

Checked by :

  
 SIT KWAN NING  
 Laboratory Supervisor

Approved Signatory :

  
 WONG KA MAN  
 Laboratory Manager

End of Report

Form No. PIPE DIM416\_T1 dd 01/09/2006

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Item no. DP/0501