



佳力高試驗中心有限公司
CASTCO TESTING CENTRE LTD.

香港粉嶺安樂街33號
香港粉嶺安樂街29A號
E-mail: castco@netvigator.com.hk
Website: www.castco.com.hk

On Kui Street, Fanling, Hong Kong.
On Chuen Street, Fanling, Hong Kong.

Tel: 2677 2138
Fax: 2677 0351



HOKLAS 032
TEST

Test Certificate

Measurement of Permanent Set & Loading Test of Manhole Covers, Gully Gratings

[Tested to BS EN 124 : 1994, CI 8 (AM, 8587)]

Date of issue : 11 March 2013

Page 1 of 1 page(s)

Details as supplied by customer

Customer: Cheung Hing Foundry (HK) Limited

Address: --

Title: --

Sample description : 225mm Ductile Iron Hinged Cover

Castco Ref: DP0130227-045 MISCEL

Customer Ref. No.: --

Contact No.: --

Class : B125

Laboratory Test Result

Date Received: 27 February 2013

Date Tested: 04 March 2013

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of permanent set			Application of the test load (Test load maintained for <u>30</u> sec.)		
				2/3 of the test load applied (kN)	Permanent set of cover/grooving (mm)	Permanent set test result	Load applied (kN)	Loading test result	Observation
DP0130227-045	225mm Ductile Iron Hinged Cover	225	φ150	--	--	--	25	Passed	N/V

Remarks :-

- Legend : FC - Fracture at cover FF - Fracture at frame N/V - No visible fracture.
- Test results relate only to the specimen tested.
- Compliance of the test results to the specification is an opinion of the laboratory and is not covered under the HOKLAS accreditation.
- Test results of the sample comply with the requirement of BS EN 124 : 1994, CI 8 (Excluding CI 8.3.1)(AMD 8587).
- Customer instructed to waive the permanent set testing.
- Brand : CHF

Checked by :

Approved signatory :

End of Report

FU HO MAN
Assistant Technical Officer

CHOTZE WING
C. Eng., HKIE, MICE
Quality Manager

Form No. : PIP Manhole_EN124_T_d 08/10/2010

Hong Kong Accreditation Service (HOKLAS) has accredited this laboratory under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific 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. This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAP Communiqué dated January 2009)

225sq. Hinged Cover-(B125)

Test Certificate

Measurement of Permanent Set & Loading Test of Manhole Covers, Gully Gratings

[Tested to BS EN 124 : 1994, Cl. 8 (AMD 8587)]

Date of issue : 09 January 2012

Page 1A of 1 page(s)

Details as supplied by customer

Customer: Cheung Hing Foundry (HK) Limited

Contract No.: --

Title: --

Sample description : 225mm Ductile Iron Hinged Grating

Manufacturer : Cheung Hing Foundry (HK) Limited

Castco LRN : DP0121204-030 MISCECL

Customer Ref. No.: --

Class: B125

Brand : CHF

Laboratory Test Result

Date Received: 04 December 2012

Date Tested: 20 December 2012

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of permanent set		Application of the test load (Test load maintained for 30 sec.)		
				2/3 of the test load applied (kN)	Permanent set of cover / grating (mm)	Permanent set result	Load applied (kN)	Observation
DP0121204-030	225mm Ductile Iron Hinged Grating	225	φ150	--	--	--	125	Passed
								N/V

Remarks :-

- Legend : FC - Fracture at cover FF - Fracture at frame N/V - No visible fracture.
- Test results relate only to the specimen tested.
- Compliance of the test results to the specification is an opinion of the laboratory and is not covered under the HOKLAS accreditation.
- Test results of the sample comply with the requirement of BS EN 124 : 1994, Cl. 8 (Excluding Cl.8.3.1)(AMD 8587).
- Customer instructed to waive the permanent set testing.
- This test report supersedes previous test report of Castco LRN: DP0121204-030 issued on 21 December 2012.

Checked by :

SIT KWAN NING
Laboratory Supervisor

Form No. : PIP Manhole_EN124_T dd 08/10/2010

End of Report

Approved signatory :

LEE WAI KWOK
B.Sc., C. Eng., MICE, MHKIE
Registered Professional Engineer



佳力高試驗中心有限公司
CASTCO TESTING CENTRE LTD.

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Test Certificate

Measurement of Permanent Set & Loading Test of Manhole Covers, Gully Gratings

[Tested to BS EN 124 : 1994, Cl. 8 (AM, 8587)]

Date of issue : 11 March 2013

Page 1 of 1 page(s)

Details as supplied by customer

Customer: Cheung Hing Foundry (HK) Limited

Address: --

Title: --

Sample description : 250mm Ductile Iron Hinged Grating

Castco L2N : DP0130227-042 MISCEL

Customer Ref. No.: --

Contact No.: --

Class : B125

Laboratory Test Result

Date Received: 27 February 2013

Date Tested: 04 March 2013

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of permanent set			Application of the test load (Test load maintained for 30 sec.)	
				2/3 of the test load applied (kN)	Permanent set of cover/grating (mm)	Permanent set test result	Load applied (kN)	Loading test result
DP0130227-042	250mm Ductile Iron Hinged Grating	255	φ150	--	--	--	125	Passed
								N/V

Remarks :-

- Legend : FC - Fracture at cover FF - Fracture at frame N/V - No visible fracture.
- Test results relate only to the specimen tested.
- Compliance of the test results to the specification is an opinion of the laboratory and is not covered under the HOKLAS accreditation.
- Test results of the sample comply with the requirement of BS EN 124 : 1994, Cl. 8 (Excluding Cl. 8.3.1)(AMD 8587).
- Customer instructed to waive the permanent set testing.
- Brand : CHF

- Permissible permanent set as given in BSEN 124 : 1994 AMD 8587 Table 8.
a) For class A15 and B125 : $\frac{CO}{100}$, OR $\frac{CO}{50}$ when $CO < 450$ mm.
b) For class C250 up to F900 : $\frac{CO}{300}$, OR 1mm max. when $CO < 500$ mm.
(When secured according to 7.8a or 7.8c)
c) For class C 50 up to F400 : $\frac{CO}{500}$, OR 1mm max. when $CO < 500$ mm.
(When secured according to 7.8b)
- Manufacturer : Cheung Hing Foundry (HK) Limited
- Sample Submitted by : Asia Development (HK) Limited

Checked by :

FU HO MAN
Assistant Technical Officer

Form No. : PIP Manhole_EN124_T_d 08/10/2010

Approved signatory :

End of Report

CHOI TZE WING
C. Eng., MHKIE, MKCB
Quality Manager

Test Certificate

Measurement of Permanent Set & Loading Test of Manhole Covers, Gully Gratings

[Tested to BS EN 124 : 1994 Cl. 8 (AMD 8587)]

Date of issue : 09 January 2013

Page 1A of 1 page(s)

Details as supplied by customer

Customer: Cheung Hing Foundry (HK) Limited

Contract No.: --

Sample description : 300mm Ductile Iron Hinged Cover

Manufacturer : Cheung Hing Foundry (HK) Limited

Title: --

Castco LRN : DP0121204-031 MISCEL

Customer Ref. No.: --

Class : B125

Brand : CHF

Laboratory Test Result

Date Received: 04 December 2012

Date Tested: 10 December 2012

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of permanent set		Application of the test load (Test load maintained for 30 sec.)	
				2/3 of the test load applied (kN)	Permanent set of cover/grating (mm)	Load applied (kN)	Loading test result Observation
DP0121204-031	300mm Ductile Iron Hinged Cover	300	250 x 150	--	--	125	Passed N/V

Remarks :-

- Legend : FC - Fracture at cover FF - Fracture at frame N/V - No visible fracture.
- Test results relate only to the specimen tested.
- Compliance of the test results to the specification is an opinion of the laboratory and is not covered under the HOKLAS accreditation.
- Test results of the sample comply with the requirement of BS EN 124 : 1994, Cl. 8 (Excluding Cl.8.3.1)(AMD 8587).
- Customer instructed to waive the permanent set testing.
- This test report supersedes previous test report of Castco LRN: DP0121204-031 issued on 21 December 2012.

- Permissible permanent set as given in BSEN 124 : 1994 AMD 8587 Table 8.
a) For class A15 and B125 : $\frac{CO}{100}$, OR $\frac{CO}{50}$ when $CO < 50mm$.
b) For class C250 up to F900: $\frac{CO}{300}$, OR 1mm max. when $CO < 300mm$.
(When secured according to 7.8a or 7.8c)
c) For class C250 up to F900: $\frac{CO}{500}$, OR 1mm max. when $CO < 500mm$.
(When secured according to 7.8b)
- Sample submitted by Asia Development (HK) Limited

Checked by :


SIT KWAN NING
Laboratory Supervisor

Form No. : PIP Manhole_EN124_T_d08/10/2010

End of Report

Approved signatory :


LEE WAI KWOK
B.Sc., C. Eng., MICE, MHKIE
Registered Professional Engineer
Executive Director

Test Certificate

Measurement of Permanent Set & Loading Test of Manhole Covers, Gully Gratings

[Tested to BS EN 124 : 1994, Cl. 8 (AMD 8587)]

Date of issue : 03 January 2015
Page 1 of 1 page(s)

Details as supplied by customer

Customer: Cheung Hing Foundry (HK) Limited
Address: 299 Pak Sha Tsuen, Kwong Um Road, Yuen Long, NT, HK
Title: --

Castco JRN DP0141106-068 MISCEL

Customer Ref. No.: --

Contract No.: --

Class : B125

Sample description : 300mm Ductile Iron Hinged Grating

Laboratory Test Result

Date Received: 06 November 2014

Date Tested: 24 November 2014

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of Permanent set			Application of the test load (Test load maintained for 30 sec.)		
				2/3 of the test load applied (kN)	Permanent set of covering (mm)	Permanent set test result	Load applied (kN)	Loading test result	Observation
DP0141106-068	300mm Ductile Iron Hinged Gratings	302	φ250	--	--	--	125	Passed	N/V

Remarks :-

- Legend : FC - Fracture at cover FF - Fracture at frame N/V - No visible fracture.
- Test results relate only to the specimen tested.
- Compliance of the test results to the specification is an opinion of the laboratory and is not covered under the HOKLAS accreditation.
- Test results of the sample comply with the requirement of BS EN 124 : 1994, Cl. 8 (Excluding Cl. 8.3.1) (AMD 8587).
- Sample Submitted by: Asia Development (HK) Limited.

- Permissible permanent set as given in BS EN 124 : 1994 AMD 8587 Table 8.
 - For class A15 and B125 : $\frac{CO}{100}$, OR $\frac{CO}{50}$ when $CO < 40mm$.
 - For class C250 up to F900; $\frac{CO}{300}$, OR 1mm max. when $CO < 30mm$.
(When secured according to 7.8a or 7.8c)
 - For class C250 up to F900; $\frac{CO}{500}$, OR 1mm max. when $CO < 500mm$.
(When secured according to 7.8b)
- Customer instructed to waive the permanent set testing.

Checked by : 

FU HO MAN
Assistant Technical Officer

Approved signatory : 

End of Report

WONG KA MAN
Laboratory Manager