



TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 1 of 13

TANCHOR CHANNELS CO., LTD.

3F, BUILDING 3, NO. 1221, YAN-AN XI RD, SHANGHAI

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name : TANCHOR CAST-IN CHANNEL
Sample Number : SHCCM130500994
Test Required : Please see the next page(s)
Test Method : Please see the next page(s)
Product Specification : TRS52/34
Manufacturer : Tanchor Channels Co., Ltd.
Material and Mark : Hot rolled
Date of Receipt : May. 24, 2013
Test Period : May. 24, 2013 to May. 30, 2013
Test result(s) : For further details, please refer to the following page(s)

***** To be continued*****

Signed for SGS-CSTC Standards
Technical Services (Shanghai) Co., Ltd.

Sally Xie

Sally Xie
Authorized signatory

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only, and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



No.69, Block 1159, East Kang Qiao Road, Pudong District, Shanghai, China 201319 t(86-21) 61196300 f(86-21) 68183122/68183920 www.cn.sgs.com
中国·上海·浦东康桥东路1159弄69号 邮编: 201319 t(86-21) 61196300 f(86-21) 68183122/68183920 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 2 of 13

1. Brief Introduction:

Tanchor Channels Co., Ltd consigns SGS-CSTC Standard Technical Services (Shanghai) Co., Ltd. to test the tensile loading and shear loading of Tanchor Cast-in Channel. The embedment of the sample and the mold of the concrete (strength grade C30) are done by consigner.

2. Test Method:

- 1). With reference to BS 5080-1:1993(R2008) Structural fixings in concrete and masonry-Part 1: Method of test for tensile loading
- 2). With reference to BS 5080-2:1986(R2008) Method of test for Structural fixings in concrete and masonry-Part 2: Method for determination of resistance to loading in shear

3. Test Equipments

No.	Equipment	Type
1	Bolt pull test apparatus	ZY-30
2	Dial indicator	0~10mm

4. Test result:

1) Tension test

Sample No.	Design Load (kN)	Acceptable Load of Failure (kN)	Safety Factor	Test result		
				Maximum Test Load (kN)	Breaking Form of Samples	Conclusion
1	49	147	3	157	Concrete is broken	Meet the design requirements.
2				173	Concrete is broken	Meet the design requirements.
3				175	Concrete is broken	Meet the design requirements.

***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 3 of 13

2) Shear test

Sample No.	Design Load (kN)	Acceptable Load of Failure (kN)	Safety Factor	Test result	
				When test load is 35kN, check sample's status	Conclusion
4	11.2	33.6	3	No abnormal	Meet the design requirements.
5				No abnormal	Meet the design requirements.
6				No abnormal	Meet the design requirements.

Note:

1. The embedment of the sample and the mold of the concrete (strength grade C30) are done by client.
2. The design load and safety factor are declared by client.

Annex A: Detailed test results of tensile loading test

Annex B: Sample drawing and photo

Annex C: Test photos

Statement: Unless otherwise stated the result shown in this test report refer only to the sample(s) tested.

***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



SGS Standards Technical Services (Shanghai) Co., Ltd.
Testing Service

No.69, Block 1159, East Kang Qiao Road, Pudong District, Shanghai, China 201319 t (86-21) 61196300 f (86-21) 68183122/68183920 www.cn.sgs.com
中国·上海·浦东康桥东路1159弄69号 邮编: 201319 t (86-21) 61196300 f (86-21) 68183122/68183920 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 4 of 13

Annex A: Detailed test results of each sample

Table 1: Test results of Sample 1

No.	Load (kN)	Deflection (mm)		Average Deflection (mm)
		1	2	
1	0	0.00	0.00	0.00
2	5	0.00	0.02	0.01
3	10	0.03	0.06	0.04
4	15	0.10	0.14	0.12
5	20	0.17	0.23	0.20
6	25	0.21	0.34	0.28
7	30	0.25	0.45	0.35
8	35	0.30	0.58	0.44
9	40	0.35	0.76	0.56
10	45	0.39	0.86	0.62
11	50	0.44	0.94	0.69
12	55	0.48	1.02	0.75
13	60	0.53	1.09	0.81
14	65	0.58	1.16	0.87
15	70	0.63	1.24	0.94
16	75	0.69	1.30	1.00
17	80	0.74	1.40	1.07
18	85	0.80	1.48	1.14
19	90	0.88	1.58	1.23
20	95	0.95	1.69	1.32
21	100	1.01	1.78	1.40
22	105	1.10	1.90	1.50
23	110	1.19	2.05	1.62
24	115	1.28	2.18	1.73
25	120	1.37	2.30	1.84
26	125	1.47	2.44	1.96
27	130	1.56	2.58	2.07
28	135	1.68	2.76	2.22
29	140	1.82	2.95	2.38
30	145	2.03	3.21	2.62
31	150	2.20	3.43	2.82

***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 5 of 13

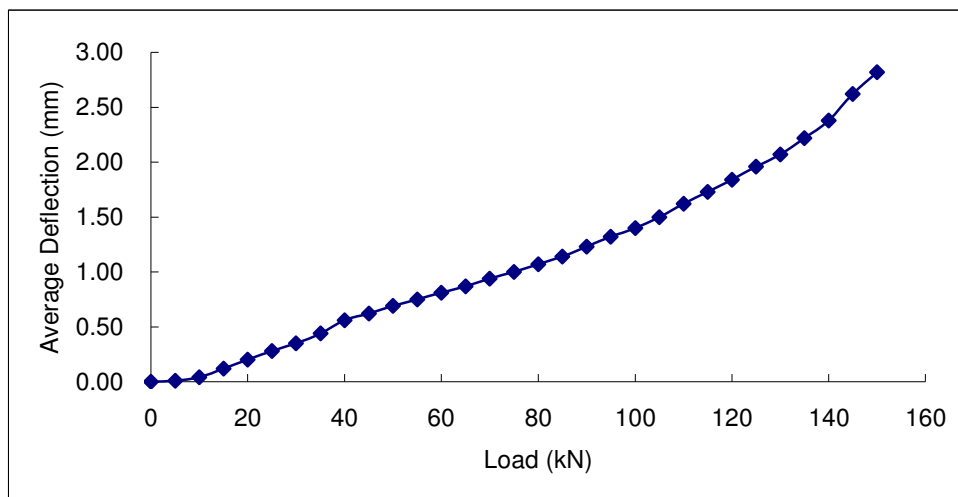


Fig.1: Average Deflection-Load Graph of Sample 1

***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 6 of 13

Table 2: Test results of Sample 2

No.	Load (kN)	Deflection (mm)		Average Deflection (mm)
		1	2	
1	0	0.00	0.00	0.00
2	5	0.00	0.04	0.02
3	10	0.06	0.16	0.11
4	15	0.08	0.19	0.14
5	20	0.12	0.29	0.20
6	25	0.17	0.40	0.28
7	30	0.22	0.49	0.36
8	35	0.25	0.57	0.41
9	40	0.30	0.64	0.47
10	45	0.35	0.74	0.54
11	50	0.40	0.81	0.60
12	55	0.45	0.90	0.68
13	60	0.50	0.98	0.74
14	65	0.57	1.07	0.82
15	70	0.62	1.15	0.88
16	75	0.70	1.25	0.98
17	80	0.76	1.33	1.04
18	85	0.83	1.42	1.12
19	90	0.90	1.51	1.20
20	95	0.97	1.60	1.28
21	100	1.06	1.70	1.38
22	105	1.14	1.80	1.47
23	110	1.23	1.91	1.57
24	115	1.32	1.99	1.66
25	120	1.42	2.09	1.76
26	125	1.55	2.24	1.90
27	130	1.65	2.35	2.00
28	135	1.79	2.50	2.14
29	140	1.96	2.67	2.32
30	145	2.16	2.87	2.52
31	150	2.46	3.14	2.80
32	155	2.85	3.52	3.18

***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 7 of 13

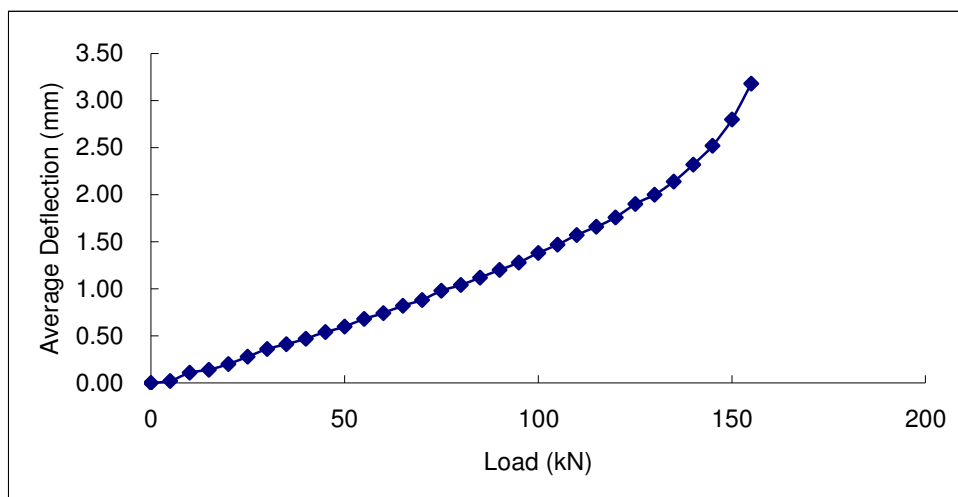


Fig.2: Average Deflection-Load Graph of Sample 2

***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



SGS Standards Technical Services (Shanghai) Co., Ltd.
Testing Center

No.69, Block 1159, East Kang Qiao Road, Pudong District, Shanghai, China 201319 t(86-21) 61196300 f(86-21) 68183122/68183920 www.cn.sgs.com
中国·上海·浦东康桥东路1159弄69号 邮编: 201319 t(86-21) 61196300 f(86-21) 68183122/68183920 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 8 of 13

Table 3: Test results of Sample 3

No.	Load (kN)	Deflection (mm)		Average Deflection (mm)
		1	2	
1	0	0.00	0.00	0.00
2	5	0.06	0.07	0.06
3	10	0.11	0.41	0.26
4	15	0.27	0.59	0.43
5	20	0.47	0.64	0.56
6	25	0.62	0.67	0.64
7	30	0.75	0.72	0.74
8	35	0.92	0.80	0.86
9	40	1.07	0.87	0.97
10	45	1.20	0.94	1.07
11	50	1.29	1.01	1.15
12	55	1.36	1.07	1.22
13	60	1.43	1.13	1.28
14	65	1.51	1.21	1.36
15	70	1.60	1.28	1.44
16	75	1.69	1.37	1.53
17	80	1.77	1.45	1.61
18	85	1.86	1.53	1.70
19	90	1.96	1.61	1.78
20	95	2.06	1.70	1.88
21	100	2.13	1.77	1.95
22	105	2.25	1.88	2.06
23	110	2.35	1.99	2.17
24	115	2.46	2.08	2.27
25	120	2.55	2.19	2.37
26	125	2.68	2.33	2.50
27	130	2.81	2.45	2.63
28	135	2.95	2.59	2.77
29	140	3.08	2.73	2.90
30	145	3.25	2.91	3.08
31	150	3.53	3.21	3.37
32	155	3.71	3.41	3.56

***** To be continued *****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 9 of 13

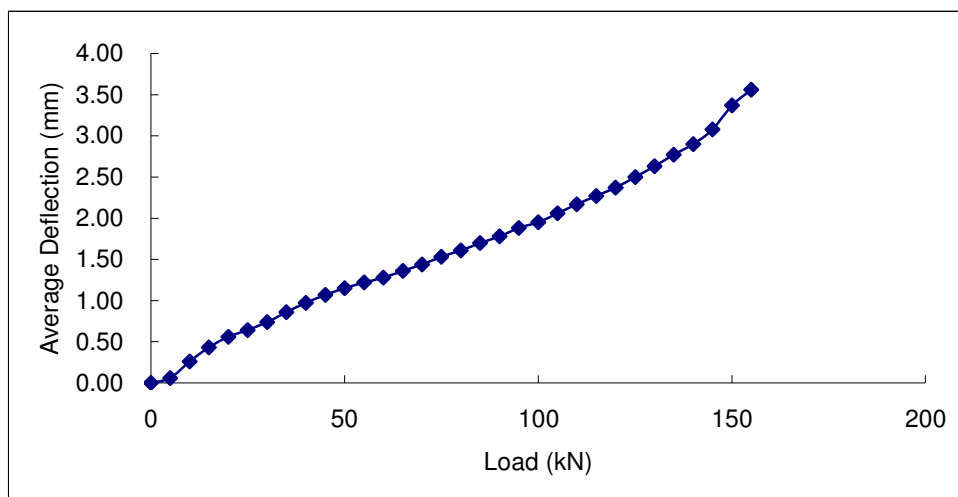


Fig.3: Average Deflection-Load Graph of Sample 3

***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



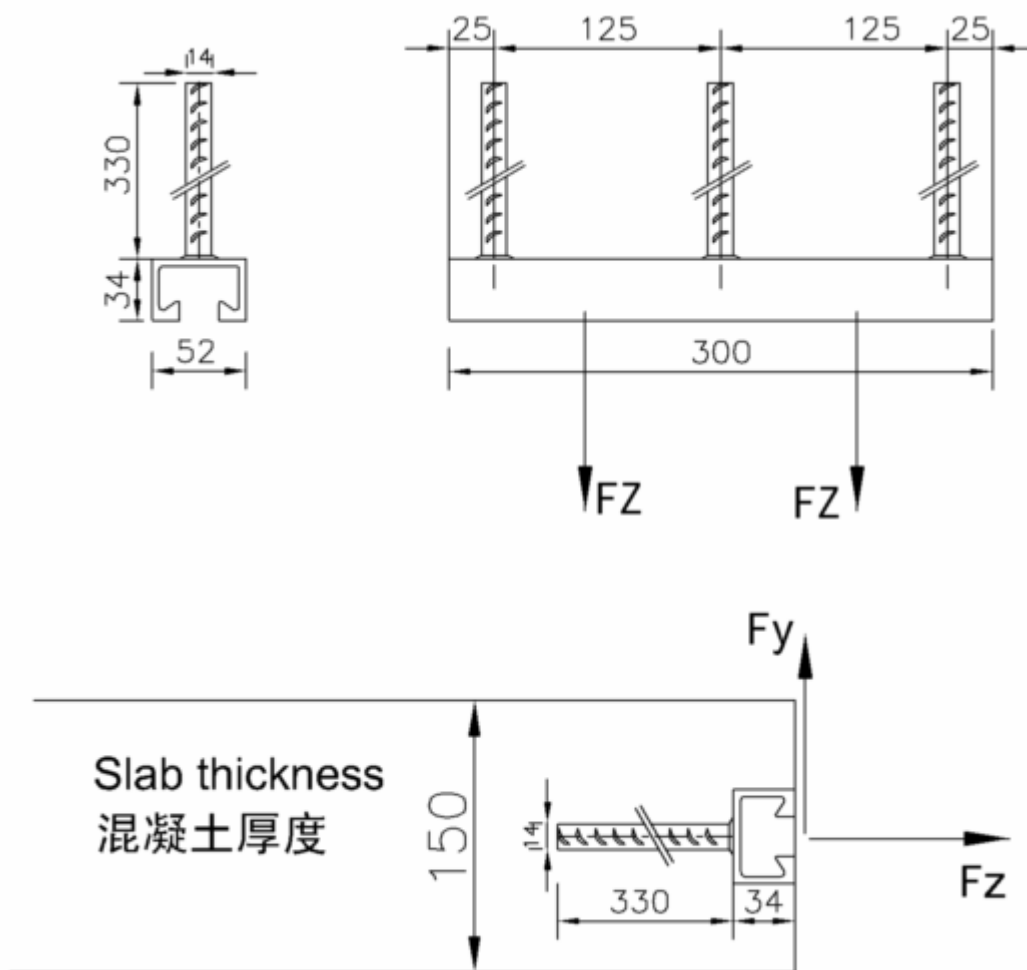
TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 10 of 13

Annex B: Sample drawing and photo



***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 11 of 13



Annex C: Test photos



Before test(1)



Before test(2)

***** To be continued*****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 12 of 13



The sample 1 after test



The sample 2 after test



The sample 3 after test



The sample 4 after test

***** To be continued*****

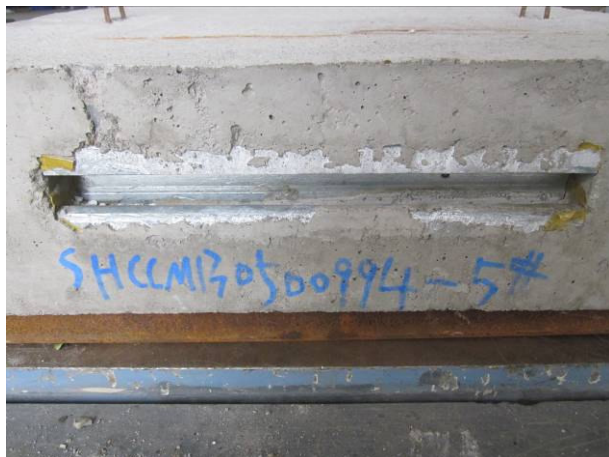
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

TEST REPORT

No. : SHCCM130500994

Date : May. 30, 2013

Page: 13 of 13



The sample 5 after test



The sample 6 after test

***** End of report *****

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/terms_and_conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its inspection only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



No.69, Block 1159, East Kang Qiao Road, Pudong District, Shanghai, China 201319 t(86-21) 61196300 f(86-21) 68183122/68183920 www.cn.sgs.com
中国·上海·浦东康桥东路1159弄69号 邮编:201319 t(86-21) 61196300 f(86-21) 68183122/68183920 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)