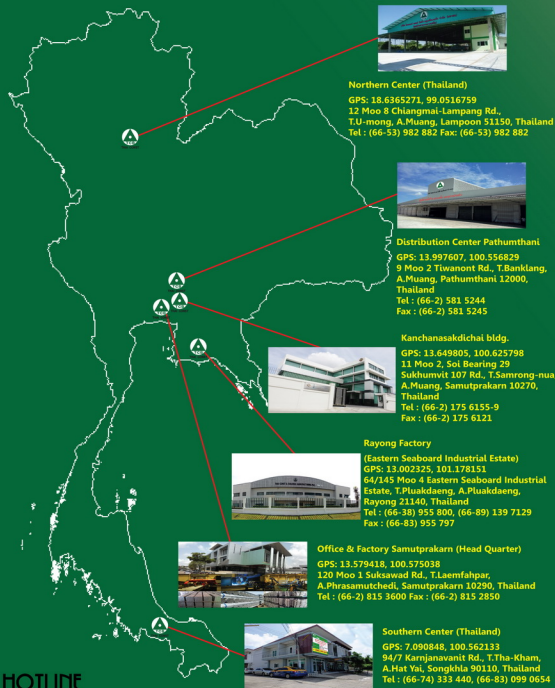




Northern Center (Thailand)
GPS: 18.6365271, 99.0516759
12 Moo 8 Chiangmai-Lampang Rd.,
T.U-mong, A.Muang, Lamphoo 51150, Thailand
Tel : (66-53) 982 882 Fax: (66-53) 982 882



Distribution Center Pathumthani
GPS: 13.997607, 100.556829
9 Moo 2 Tiwanont Rd., T.Banklang,
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Thailand
Tel : (66-2) 581 5244
Fax : (66-2) 581 5245



Kanchanasakdichai bldg.
GPS: 13.649805, 100.625798
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Sukhumvit 107 Rd., T.Samrong-nua,
A.Muang, Samutprakarn 10270,
Thailand
Tel : (66-2) 175 6155-9
Fax : (66-2) 175 6121



Rayong Factory
(Eastern Seaboard Industrial Estate)
GPS: 13.002325, 101.178151
64/145 Moo 4 Eastern Seaboard Industrial
Estate, T.Pluakdaeng, A.Pluakdaeng,
Rayong 21140, Thailand
Tel : (66-38) 955 800, (66-89) 139 7129
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THAI CONST

THAI CONST & BUILDING MANUFACTURING PCL.

บริษัท ไทย คอนสท์ แอนด์ บิลด์ดิ้ง แมนูแฟคเจอร์ริง จำกัด (มหาชน)

**BRITISH STANDARD SYSTEM
(BS 1139)**

QUALITY CERTIFICATED BY



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For English : (66 81) 720 7959

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COMPANY PROFILE

บริษัท ไทย คอนสตรัคชั่น บิลด์นิ่ง เมเนจเม้นท์ จำกัด (มหาชน) ก่อตั้งขึ้นเมื่อเดือนมีนาคม พ.ศ. 2533 ภายใต้ชื่อเดิม (บริษัท สยามชูโอบิลด์นิ่ง อินดัสทรี จำกัด) เพื่อดำเนินการผลิตและจำหน่ายชิ้นส่วนต่อเหล็กและอุปกรณ์อื่นๆ เพื่อใช้ในอุตสาหกรรม การก่อสร้าง และ ไทย คอนสตรัคชั่น มีเทคโนโลยีการผลิตที่ได้รับการถ่ายทอดจาก บริษัท ชูโอเอบิลด์นิ่งอินดัสทรี จำกัด ซึ่งเป็นผู้ผลิตชิ้นส่วน ระดับแนวหน้าในประเทศญี่ปุ่น ซึ่งปัจจัยเหล่านี้ มีผลทำให้ ไทย คอนสตรัคชั่น สามารถผลิตสินค้าคุณภาพสูงจนเข้าสู่ตลาด ได้อย่างมีประสิทธิภาพ

ในปัจจุบัน บริษัท ไทย คอนสตรัคชั่น บิลด์นิ่ง เมเนจเม้นท์ จำกัด (มหาชน) เป็นบริษัทแรกและบริษัทเดียวในประเทศไทย ที่ได้รับเครื่องหมายมาตรฐานผลิตภัณฑ์อุตสาหกรรม มอก. 801-2531 VDC 69.057.6 และได้รับ ISO 9001:2008 จาก TUV และด้วย ไทย คอนสตรัคชั่น ได้ใส่ใจในความสำคัญในเรื่องความปลอดภัยเป็นอันดับหนึ่ง ทำให้ ไทย คอนสตรัคชั่น มั่นใจและพร้อมที่จะเป็นผู้นำในด้าน ชิ้นส่วนและอุปกรณ์ก่อสร้างต่อไป ดังปรัชญาบริษัทที่ว่า **"มาตรฐานคือจุดเริ่มต้นของความปลอดภัย"**

Thai Const & Building Manufacturing Pcl. or Thai Const, was established in March 1990 under the original name of Siam Chuo Build Industry Co.,Ltd., for the manufacturing and sales of high quality steel scaffoldings and accessories. Equipped with experienced staffs, sophisticated equipment and advanced production technology, Thai Const has been able to supply high quality products to construction industry in Thailand and the neighboring countries at its highest efficiency.

At present, Thai Const is the first and only scaffolding company in Thailand, awarded the Certificate of Standard from the Thai Industrial Standard Institute (TISI) and achieved ISO 9001:2008 from TUV, and then Thai Const has refocused its main priority onto safety alongside its new philosophy : **"Safety Begins with Standard."** This ensure that Thai Const is confident and has good potential to be a leader of scaffolding and construction materials.

QUALITY CERTIFICATION FOR BS STANDARD BY SGS



TISI 801-2531



Certified from
Thai Industrial Standard Institute

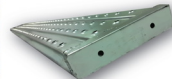


ISO 9001 : 2008



LVL SCAFFOLD BOARD PRODUCT OF BS STANDARD

TUBE (HOT-DIP GALVANIZED), STEEL PLANK, LVL SCAFFOLD BOARD



DOUBLE COUPLER, SWIVEL COUPLER, BEAM COUPLER, PUTLOG COUPLER (DROP FORGED)



BASE PLATE, PLANK CLAMP, BOARD RETAINING COUPLER (BRC), LADDER CLAMP



SLEEVE COUPLER, BONE JOINT (PRESSED), U-HEAD, JACK BASE



STEEL & ALUMINIUM LADDER, SCAFFOLDING RATCHET-WRENCH, PROTECTION CAP, SCAFFOLD TAG, LITEFIT SAFETY HARNESS, DECOIL TIE-BACK



"มาตรฐานคือจุดเริ่มต้นของความปลอดภัย"
"Safety Begins with Standard"

CONTENT

- 5 TUBE (HOT-DIP GALVANEZED)
- 10 DOUBLE COUPLER (DROP FORGED)
- 16 SWIVEL COUPLER (DROP FORGED)
- 22 BEAM COUPLER (DROP FORGED)
- 28 PUTLOG COUPLER (DROP FORGED)
- 31 SLEEVE COUPLER (PRESSED)
- 36 BONE JOINT (PRESSED)
- 40 STEEL PLANK
- 44 BASE PLATE
- 47 U-HEAD, JACK BASE
- 52 PLANK CLAMP, BOARD RETAINING COUPLER (BRC)
- 53 SCAFFOLDING RATCHET-WRENCH, LVL SCAFFOLD BOARD
- 54 STEEL & ALUMINIUM LADDER
- 55 LADDER CLAMP, PROTECTION CAP
- 56 SCAFFOLD TAG, LITEFIT Safety Harness, DECOIL TIE-BACK

TUBE (HOT-DIP GALVANIZED) 4.0 / 3.2 mm.

5

STANDARD : EN 39 : 2001 Refer to BS 1139



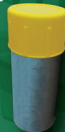
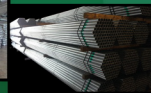
Specification :

48.3 x 3.2 x 6000 mm.

48.3 x 4.0 x 6000 mm.

Packing :

80 pcs. / bundle

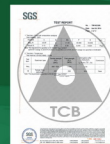


Length : 6 m. or Customised

ท่อ Hot-Dip Galvanized เป็นท่อที่ผ่านระบบการชุบแบบจุ่มร้อนที่มีความหนาแน่นกว่าการชุบแบบอื่น ๆ และเป็นที่ยอมรับในระดับสากล

Hot-Dip Galvanized tube that last longer than the coating.

All types are recognized in the industry. It is sold at an affordable price.



“มาตรฐานคือจุดเริ่มต้นของความปลอดภัย”
 “Safety Begins with Standard”

SGS

4.0 mm.



TEST REPORT

No. : TM1404129
Date : Apr.17, 2014
Page: 1 of 2

THAI CONST & BUILDING MANUFACTURING PUBLIC COMPANY LIMITED
No. 120 Moo 1, Soi Mohbang, Suksawad Road, Laemfahpa, Phrasamutchedi, Samutprakan 10290
THAILAND
Tel (66-2)8153600 Fax (66-2)8153114

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

Sample Name : Hot-dip Galvanized Scaffolding Pipe
Spec : 48.3mm*4.0mm*6m
Material : S235GT
Quantity : 1
Date of Receipt : Apr. 09, 2014
Test Period : Apr. 09, 2014 to Apr 16, 2014
Test result(s) : For further details, please refer to the following page(s)

The testing report only refers to the sample(s) tested.

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

Signed for and on behalf of
SGS-CSTC Standards
Technical Services (Tianjin) Co., Ltd.

Seaman Zhang
Materials Lab
Authorized Signatory

TCB



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4.0 mm.



TEST REPORT

No. : TM1404129
Date : Apr.17, 2014
Page: 2 of 2

1. Test item: Chemical composition analysis

Test method: OES

Element	C	Si	Mn	P	S	Con.
Req. %	≤0.20	a	≤1.40	≤0.040	≤0.045	
Result %	0.15	0.16	0.47	0.028	0.022	Pass

Note: The requirement is specified in EN 39:2001 Type S235GT

(a) ≤ 0.05 % (range 1) (≤ 0.04 % if option 2 is specified) or ≤ 0.15 % ≤ 0.25 % (range 2) is specified in EN39:2001

2. Test item: Tensile test

Test method: EN ISO 6892-1:2009

Test item	Specimen type	Tensile strength (R_m) (MPa)	Proof strength (R_p) (MPa)	Elongation after fracture(A) $L_0=5.65\sqrt{S_0}$, (%)	Conclusion
Req	-	340~520	≥ 235	≥ 24	-
1#	Tubular Strip specimen	428	375	24.0	Pass

Note: The requirement is specified in EN 39:2001 Type S235GT

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

TCB



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3.2 mm.



TEST REPORT

No. : TM1403386
Date : Apr.04, 2014
Page : 1 of 2

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Tel:(66-2)8153600 Fax:(66-2)8153114

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

Sample Name : Hot-dip Galvanized Scaffolding Pipe
Spec : 48.3mm*3.2mm*6m
Material : S235GT
Quantity : 1
Date of Receipt : Mar.27, 2014
Test Period : Mar.27, 2014 to Apr.03, 2014
Test result(s) : For further details, please refer to the following page(s)
The testing report only refers to the sample(s) tested.

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

Signed for and on behalf of
SGS-CSI Standards
Technical Services (Tianjin) Co., Ltd.

Seaman Zhang
Seaman Zhang
Materials Lab
Authorized Signatory

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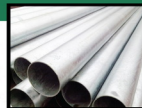
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3.2 mm.



TEST REPORT

No. : TM1403386
Date : Apr.04, 2014
Page : 2 of 2

1. Test item: Chemical composition analysis

Test method: OES

Element	C	Si	Mn	P	S	Con.
Req. %	≤0.20	≤0.15	≤1.40	≤0.040	≤0.045	-----
Result %	0.12	0.15	0.36	0.019	0.024	Pass

Note: The requirement is specified in EN 392001 Type S235GT

(a) ≤0.05 % (range 1) (b) 0.04 % if option 2 is specified (c) 0.15 % ≤0.2 % (range 2) is specified in EN392001

2. Test item: Tensile test

Test method: EN ISO 6892-1:2009

Test item	Specimen type	Tensile strength (R _m) (MPa)	Yield strength (R _e) (MPa)	Elongation after fracture(A) L ₀ = 5.65 √S ₀ (%)	Conclusion
Req.	-	340-520	≥235	≥24	-
1#	Tubular Strip specimen	430	358	26.0	Pass

Note: The requirement is specified in EN 392001 Type S235GT

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



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48.3 mm.



TEST REPORT

No. : SHCCM140400658

Date : Apr. 14, 2014

Page : 2 of 5

Test Conducted:

EN 74-1:2005 Couplers, spigot pins and baseplates for use in falsework and scaffolds – Part 1: Couplers for tubes – Requirements and test procedures

Test Result:

Test Clause	Test Item	Test Requirement (Right angle coupler, Class A)	Test Result	Verdict
7.2.1	Slipping force	$\Delta_1 \leq 7\text{mm}$, $F_{k,5\%} \geq 7.0\text{kN}$ and $1\text{mm} \leq \Delta_2 \leq 2\text{mm}$, $F_{k,5\%} \geq 10.0\text{kN}$	$\Delta_1 = 7\text{mm}$, $F_{k,5\%} = 13.9\text{kN}$; $1\text{mm} \leq \Delta_2 \leq 2\text{mm}$, $F_{k,5\%} = 13.5\text{kN}$	Pass
7.2.2	Failure force	$F_{L,5\%}/YR2 \geq 20.0\text{kN}$	$F_{L,5\%}/YR2 = 43.4\text{kN}$	Pass
7.3	Pull-apart force	$F_{k,5\%}/YR2 \geq 20.0\text{kN}$	$F_{k,5\%}/YR2 = 38.4\text{kN}$	Pass
7.5	Indentation	$F = 6.67\text{kN}$, $\Delta_{10} \leq 1.5\text{mm}$	$F = 6.67\text{kN}$, $\Delta_{10} = 1.5\text{mm}$	Pass

Note:

- $F_{k,5\%}$, $F_{L,5\%}$, $F_{k,5\%}$: The 5% quantile for the 75% level of confidence.
- $YR2 = 1.25$ according to EN 74-1.
- Please see Annex A for details of test results.

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

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SHCCM 007162

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48.3 mm.



TEST REPORT

No. : SHCCM140400658

Date : Apr. 14, 2014

Page : 3 of 5

Annex A Detailed test results

1. Slipping force

Specimens	F_k (kN, $\Delta_1 = 7\text{mm}$)	F_k (kN, $1\text{mm} \leq \Delta_2 \leq 2\text{mm}$)
No.1	15.27	15.10
No.2	16.38	15.79
No.3	16.69	16.24
No.4	16.54	16.20
No.5	14.73	14.51
No.6	15.06	14.11
No.7	15.73	15.41
No.8	14.99	14.79
No.9	14.53	14.32
No.10	17.21	16.93
$F_{k,5\%}$	13.9	13.5

2. Failure force

Specimens	F_L (kN)
No.1	59.40
No.2	64.00
No.3	61.80
No.4	66.50
No.5	71.30
$F_{L,5\%}/YR2$	43.4

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

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TEST REPORT DOUBLE COUPLER (DROP FORGED)

SGS

48.3 mm.

TEST REPORT

No. : SHCCM140400658
Date : Apr. 14, 2014
Page: 4 of 5



3. Pull-apart force

Specimens	F_p (kN)
No.1	63.05
No.2	60.11
No.3	52.18
No.4	61.48
No.5	55.42
$F_{0.5\sigma}/\sqrt{R2}$	38.4

4. Indentation

Specimens	$\Delta 10$ (mm, $F=6.67\text{kN}$)
No.1	0.11
No.2	0.08
No.3	0.19
No.4	0.27
No.5	0.12

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

Test photos:



Sample photo
***** To be continued*****

[illegible]

SHCCM 007164

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SGS

48.3 mm.

TEST REPORT

No. : SHCCM140400658
Date : Apr. 14, 2014
Page: 5 of 5



Test arrangement for indentation test

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

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SHCCM 007165

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STANDARD : EN 74-1 : 2005 Refer to BS 1139

SIZE 48.3 mm.



Specification : 48.3 mm.

Packing : 25 pcs. / bag

Screw Thread End Caps



แต่ห้ามใช้สกรู ขนาดมาตรฐาน BS STANDARD หมุนได้แบบอิสระ

สามารถหมุนได้ 360 องศา ซึ่งใช้จับยึดค้ำยันกับเสาหรือใช้ต่อท่อแบบขนาขาน

Do not use Swivel Coupler to replace the Double Coupler.

Our Drop Forged Couplers and Fittings are manufactured by a modern rapid production system. The materials employed are principally mild steel and forged steel, and fittings have been tested and conform to the BS-1139. The fittings are tested to resist corrosion having a complete zinc coating with chromate passivation.



48.3 mm.



SGS

TEST REPORT

No. : SHCCM140400659
Date : Apr. 14, 2014
Page: 1 of 5

THAI CONST & BUILDING MANUFACTURING PUBLIC COMPANY LIMITED
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TEL (+662) 815-3600 FAX (+662) 815-2850

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

Sample Name : SCAFFOLD SWIVEL COUPLER
Sample Number : SHCCM140400659
Test Required : Please see the next page(s)
Test method : EN 74-1:2005
Product specification : 48.3*48.3mm
Material and Mark : Q235
Date of Receipt : Apr. 02, 2014
Test Period : Apr. 02, 2014 to Apr. 14, 2014
Test result(s) : For further details, please refer to the following page(s)
***** To be continued*****

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Technical Services (Shanghai) Co., Ltd.

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Authorized signatory

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48.3 mm.



TEST REPORT

No. : SHCCM140400659

Date : Apr. 14, 2014

Page: 2 of 5

Test Conducted

EN 74-1:2005 Couplers, spigot pins and baseplates for use in falsework and scaffolds – Part 1: Couplers for tubes – Requirements and test procedures

Test Result

Test Clause	Test Item	Test Requirement (Swivel coupler, Class A)	Test Result	Verdict
7.2.1	Slipping force	$\Delta_1 \leq 7\text{mm}$, $F_{L20} \geq 7.0\text{kN}$ and $1\text{mm} \leq \Delta_2 \leq 2\text{mm}$, $F_{L30} \geq 10.0\text{kN}$	$\Delta_1 = 7\text{mm}$, $F_{L20} = 10.1\text{kN}$; $*F_{L3} = 20.0\text{kN}$, $\Delta_2 < 1\text{mm}$	Pass
7.2.2	Failure force	$F_{L10}/R2 \geq 14.0\text{kN}$	$F_{L10}/R2 = 17.5\text{kN}$	Pass
7.5	Indentation	$F = 4.7\text{kN}$, $\Delta_{10} \leq 1.5\text{mm}$	$F = 4.7\text{kN}$, $\Delta_{10} < 1.5\text{mm}$	Pass

Note:

1. $F_{0.95}, F_{0.05}$: The 5% quantile for the 75% level of confidence.
2. $\gamma R2=1.25$ according to EN 74-1.
3. Please see Annex A for details of test results.

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

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48.3 mm.



TEST REPORT

No. : SHCCM140400659

Date : Apr. 14, 2014

Page: 3 of 6

Annex A Detailed test results

1. Slipping force

Specimens	F_u (kN, $\Delta u=7mm$)	F_u (kN, $1mm \leq \Delta u \leq 2mm$)
No.1	11.37	$F_u = 20.0kN, \Delta u \leq 1mm$
No.2	10.43	$F_u = 20.0kN, \Delta u \leq 1mm$
No.3	11.08	$F_u = 20.0kN, \Delta u \leq 1mm$
No.4	11.12	$F_u = 20.0kN, \Delta u \leq 1mm$
No.5	10.87	$F_u = 20.0kN, \Delta u \leq 1mm$
No.6	10.13	$F_u = 20.0kN, \Delta u \leq 1mm$
No.7	11.54	$F_u = 20.0kN, \Delta u \leq 1mm$
No.8	10.87	$F_u = 20.0kN, \Delta u \leq 1mm$
No.9	11.22	$F_u = 20.0kN, \Delta u \leq 1mm$
No.10	10.69	$F_u = 20.0kN, \Delta u \leq 1mm$
$F_{u,95\%}$	10.1	-

*Note: In accordance with EN 74-1:2005, the test can be ended when the test load reached twice the specified F_s given in Table 8 of EN 74-1:2005.

2 Failure force

Specimens	F_T (kN)
No.1	24.60
No.2	30.10
No.3	28.30
No.4	32.03
No.5	33.96
F_{100}/R_2	17.5

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

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TEST REPORT

No.: SHCCM140400659
Date: Apr. 14, 2014
Page: 4 of 5

3. Indentation

Specimens	Δ_{10} (mm, F=4.7kN)
No.1	0.20
No.2	0.11
No.3	0.21
No.4	0.17
No.5	0.14

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

Test photos:



Sample photo



Test arrangement for slipping force test

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

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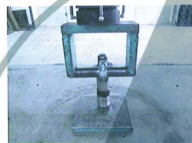
SGS

48.3 mm.

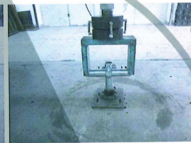


TEST REPORT

No.: SHCCM140400659
Date: Apr. 14, 2014
Page: 5 of 5



Test arrangement for failure force test



Test arrangement for indentation test

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

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STANDARD : AS/NZS 1576.2 : 2009 Refer to BS 1139



Specification : 48.3 mm.

Packing : 20 pcs. / bag

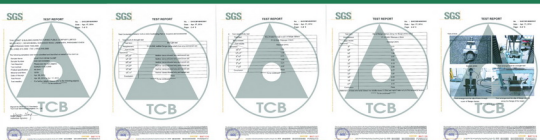


SIZE 48.3 mm.



ใช้ยึดท่อเข้ากับโครงสร้างอาคารที่เป็นเหล็ก H Beam

Provides a fixed 90 degrees coupling for a scaffolding tube to an 'H'-beam girder.



48.3 mm.



SGS

TEST REPORT

No. : SHCCM140400661

Date : Apr. 17, 2014

Page: 1 of 5

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TEL (+662) 815-3600 FAX (+662) 815-2850

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

Sample Name	: SCAFFOLD BEAM CLAMP
Sample Number	: SHCCM140400691
Test Required	: Please see the next page(s)
Test method	: AS/NZS 1576.2:2009
Product specification	: 48.3mm
Material and Mark	: Q235
Date of Receipt	: Apr. 02, 2014
Test Period	: Apr. 02, 2014 to Apr. 17, 2014
Test result(s)	: For further details, please refer to the following page(s)

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Vivien Zhang
Authorized signatory

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SHCOM 007175

5562 • J. Neurosci., September 24, 2008 • 28(39):5556–5564

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48.3 mm.



TEST REPORT

No. : SHCCM140400661

Date : Apr 17, 2014

Page: 2 of 5

Test Conducted: AS/NZS 1576.2:2009 Scaffolding-Part 2: Couplers and accessories

1. Test result of strength test

Test item	Strength test
Requirement	P=30.0kN, neither flange clamp shall show any permanent set.
Test results	
Specimen	
26 ^a , 28 ^a	Neither clamp showed any permanent set.
14 ^a , 16 ^a	Neither clamp showed any permanent set.
20 ^a , 29 ^a	Neither clamp showed any permanent set.
17 ^a , 27 ^a	Neither clamp showed any permanent set.
12 ^a , 25 ^a	Neither clamp showed any permanent set.
13 ^a , 11 ^a	Neither clamp showed any permanent set.
Conclusion	Pass

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

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SHCCM - 007176

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48.3 mm.



TEST REPORT

No. : SHCCM140400661

Date : Apr. 17, 2014

Page: 3 of 5

2. Test result of slip test

Test Item	Slip of tube through a pair of flange clamps
Requirement	P=12.5kN, Slippage $\leq$ 6mm
Test results	
Specimen	Slippage (mm)
30 ^a , 3 ^a	1.31
10 ^a , 31 ^a	1.39
5 ^a , 15 ^a	2.71
6 ^a , 9 ^a	1.89
2 ^a , 24 ^a	2.21
1 ^a , 23 ^a	2.07
Conclusion	Pass

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

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48.3 mm.



TEST REPORT

No. : SHCCM140400661

Date : Apr. 17, 2014

Page: 4 of 5

Test Item	Slip of flange clamps along the flange of the beam
Requirement	P=12.5kN, Slippage ≤ 6mm
Test results	
Specimen	Slippage (mm)
6 [#]	3.21
32 [#]	2.25
10 [#]	1.96
22 [#]	2.97
4 [#]	3.54
35 [#]	3.13
7 [#]	2.89
33 [#]	2.77
34 [#]	1.87
36 [#]	2.52
18 [#]	2.67
21 [#]	2.91
Conclusion	Pass

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

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

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48.3 mm.



TEST REPORT

No. : SHCCM140400661

Date : Apr. 17, 2014

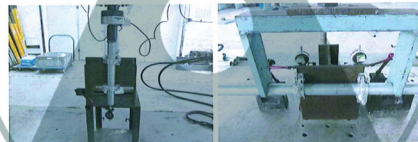
Page: 5 of 5

Test photos:



Sample photo

Test arrangement for strength test



Test arrangement for slip of tube through a pair of flange clamps

Test arrangement for slip of flange clamps
along the flange of the beam

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

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SIZE 48.3 mm.

Specification : 48.3 mm.

Packing : 40 pcs. / bag

ใช้จับยึดตรงเสริมกับคานหรือจันทันราวกันตก

To complement the use of drop forged double couplers, putlog couplers are also supplied. There are used to fasten putlogs to ledgers. The flap is manufactured by a high-quality steel drop-forging procedure.



STANDARD : BS 1139-2.2 : 2009 Refer to BS 1139

48.3 mm.



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TEST REPORT

No. : SHCCM140400818

Date : Apr. 30, 2014

Page: 1 of 2

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SAMUTPRAKAN 10290 THAILAND
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The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name	: SCAFFOLD PUTLOG COUPLER
Sample Number	: SHCCM140400818
Test Required	: Slipping force
Test method	: With reference to BS 1139-2.2:2009 and client's requirement
Product specification	: 48.3mm
Material and Mark	: Q235
Date of Receipt	: Apr. 24, 2014
Test Period	: Apr. 24, 2014 to Apr. 30, 2014
Test result(s)	: For further details, please refer to the following page(s)

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

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48.3 mm.



TEST REPORT

No. : SHCCM140400818
 Date : Apr. 30, 2014
 Page: 2 of 2

Test Conducted: With reference to BS 1139-2:2009 Metal scaffolding – Part 2: Couplers – Section 2.2:
 Aluminium couplers and special couplers in steel – Requirements and test methods and client's requirement

Test Result:

Test item	Specimens	P _{max} (kN)	Client's requirement	Conclusion
Slipping force	No.1	2.261	>1.25 kN	Pass
	No.2	2.493		
	No.3	2.087		
	No.4	2.289		
	No.5	2.164		

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

Test photo:



Sample photo



Test arrangement

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

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186-21-6110030 186-21-6110030 186-21-6110030
 186-21-6110183 186-21-6110183 186-21-6110183

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STANDARD : EN 74-1 : 2005 Refer to BS 1139

SIZE 48.3 mm.



Specification : 48.3 mm.

Packing : 20 pcs. / bag

ข้อต่อนอก ใช้ต่อท่อแบบปลายชนปลายมีความต้านทานต่อการกดงัดได้ดีกว่าข้อต่อใน

Sleeve Couplers joins two scaffolding tubes externally from end to end. A steel divider located in the center ensures equal and steady insertion of each tube. They can be employed where tension joints are required therefore, proving it to be useful for long bracing.



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48.3 mm.



TEST REPORT

No. : SHCCM140400660

Date : Apr, 16, 2014

Page: 3 of 4

Annex A Details of test results

Slipping force

Specimens	F_u (kN, 1mm $\leq\Delta_2\leq$ 2mm)
No.1	$*F_u=12.0$ kN, $\Delta_2<1$ mm
No.2	10.28
No.3	11.03
No.4	$*F_u=12.0$ kN, $\Delta_2<1$ mm
No.5	$*F_u=12.0$ kN, $\Delta_2<1$ mm
No.6	$*F_u=12.0$ kN, $\Delta_2<1$ mm
No.7	$*F_u=12.0$ kN, $\Delta_2<1$ mm
No.8	$*F_u=12.0$ kN, $\Delta_2<1$ mm
No.9	$*F_u=12.0$ kN, $\Delta_2<1$ mm
No.10	10.86
F_u 5%	9.5

*Note: In accordance with EN 74-1:2005, the test can be ended when the test load reached twice the specified $F_{1.5\%}$ given in Table 8 of EN 74-1:2005. The result of $F_{1.5\%}$ is the statistical result of the other 3 specimens.

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

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

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[illegible]

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48.3 mm.



TEST REPORT

No. : SHCCM140400660

Date : Apr. 16, 2014

Page: 4 of 4

Test photos:



Sample photo

Test arrangement for slipping force test

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

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STANDARD : AS/NZS 1576.2 Refer to BS 1139



SIZE 48.3 mm.

Specification : 48.3 mm.

Packing : 25 pcs. / bag

ข้อต่อใน ใช้ต่อท่อแบบปลายชนปลาย โดยข้อต่อจะอยู่ด้านในของท่อ
มีน๊อตขันตรงกลางข้อต่อ ทำให้สามารถขยายตัวอยู่ภายในท่อเพื่อยึดท่อเข้าด้วยกัน

Bone Joint Provides end to end connection between scaffolding tubes. Operates by being inserted internally and expands to apply grip against the inner walls of the tubes. The fittings are designed only for compression joints. They should not be used where tension can be developed in the tubes.



48.3 mm.



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TEST REPORT

No. : SHCCM140400662

Date : Apr. 17, 2014

Page: 1 of 3

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

Sample Name	: SCAFFOLD BONE JOINT PIN
Sample Number	: SHCCM140400662
Test Required	: Bending test
Test method	: AS/NZS 1576.2:2009
Product specification	: 48.3mm
Material and Mark	: Q235
Date of Receipt	: Apr. 02, 2014
Test Period	: Apr. 02, 2014 to Apr. 17, 2014
Test result(s)	: For further details, please refer to the following page(s)

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48.3 mm.



TEST REPORT

No. : SHCCM140400662
Date : Apr. 17, 2014
Page: 2 of 3

Test Conducted: AS/NZS 1576.2:2009 Scaffolding-Part 2: Couplers and accessories

Test results:

Test Clause	Test Item	Test Requirement	Test Result	Verdict
Appendix E	Bending test	P=7.5kN, the sample shall not defect more than 12mm.	P=7.5kN, $\Delta \leq 12\text{mm}$	Pass

Note:

1. Please see Annex A for details of test results

Annex A Details of test results

Bending test

Specimens	P=7.5kN, deflection(mm)
1	7.16
2	9.09
3	9.66
4	9.13
5	10.10
6	7.15

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

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

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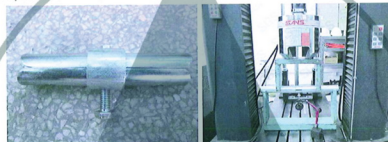
48.3 mm.



TEST REPORT

No. : SHCCM140400662
Date : Apr. 17, 2014
Page: 3 of 3

Test photos:



Sample photo

Test arrangement for the bending test

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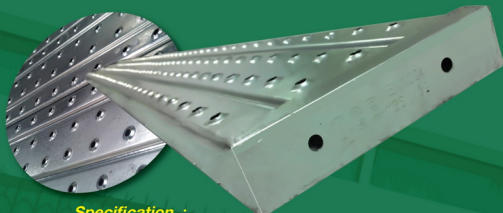
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STANDARD : EN 1004 : 2004 Refer to BS 1139



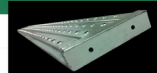
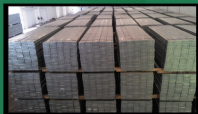
Specification :

- 210 x 45 x 1.2 x 1000 mm. weight 3.45 kg.
- 210 x 45 x 1.2 x 1500 mm. weight 5.2 kg.
- 210 x 45 x 1.2 x 2000 mm. weight 7 kg.
- 210 x 45 x 1.2 x 3000 mm. weight 10.4 kg.
- 210 x 45 x 1.2 x 4000 mm. weight 13.8 kg.

Packing : 100 pcs. / bundle

แผ่นปูพื้นนํ้าหนักเบา รวดเร็ว ทนทาน ง่ายต่อการรื้อถอน

Pre-Galvanized steel scaffolding planks are lightweight sturdy non-slip working surface. Modern techniques have been carefully applied in order to manufacture our world class products.



TEST REPORT

No. : SHCCM140300587
Date : Apr. 14, 2014
Page : 1 of 3

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

- Sample Name : STEEL PLANK
- Sample Number : SHCCM140300587
- Test Required : Please see the next page(s)
- Test method : EN 1004:2004
- Product specification : 210MM*45MM*1.2MM*2000MM; 210MM*45MM*1.2MM*3000MM; 210MM*45MM*1.2MM*4000MM;
- Date of Receipt : Mar. 25, 2014
- Test Period : Mar. 25, 2014 to Apr. 09, 2014
- Test result(s) : For further details, please refer to the following page(s)

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

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TEST REPORT

No. : SHCCM140300587
Date : Apr. 14, 2014
Page: 2 of 3

Test Conducted: EN 1004:2004 Mobile access and working towers made of prefabricated elements – Materials, dimensions, design loads, safety and performance requirements

Test Result:

1. Sample specification: 2000mm x 210mm x 45mm x 1.2mm (Length x Width x Height x Thickness)

Test Item	Value of Loads	Deformation(mm)	Client's Requirement(mm)	Conclusion
Uniformly distributed load (Class 2)	1.5kN/m ²	0.32	≤1.25	Pass
Concentrated load	1.0kN	3.49	≤4.8	Pass
Remark	Test span: 1500mm.			

2. Sample specification: 3000mm x 210mm x 45mm x 1.2mm (Length x Width x Height x Thickness)

Test Item	Value of Loads	Deformation(mm)	Client's Requirement(mm)	Conclusion
Uniformly distributed load (Class 2)	1.5kN/m ²	0.54	≤1.35	Pass
Concentrated load	1.0kN	2.85	≤5.52	Pass
Remark	Test span: 1500mm.			

3. Sample specification: 4000mm x 210mm x 45mm x 1.2mm (Length x Width x Height x Thickness)

Test Item	Value of Loads	Deformation(mm)	Client's Requirement(mm)	Conclusion
Uniformly distributed load (Class 2)	1.5kNm ²	0.88	≤1.65	Pass
Concentrated load	1.0kN	3.96	≤6.81	Pass
Remark	Test span: 1600mm.			

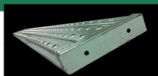
***** To be continued*****

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TEST REPORT

No. : SHCCM140300587
Date : Apr. 14, 2014
Page: 3 of 3

Note:

- 1) The test span is set as per client's requirement.
- 2) EN 1004 does not prescribe the requirements for the items.

Uniformly distributed load	Class 2	1.5kN/m ²
Concentrated load	Concentrated on an area of 200mm X 200mm in the most unfavourable position on the platform.	1.0kN
	Concentrated on an area of 500mm X 500mm in the most unfavourable position on the platform. If the width of the decking component is less than 500mm, the load shall not be reduced.	1.5kN

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

Sample Photo:



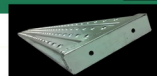
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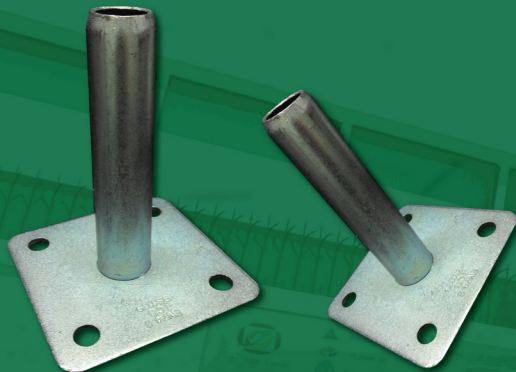
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44 BASE PLATE

STANDARD : EN 74-3 : 2007 Refer to BS 1139



Specification : 35 x 2.1 x 150 mm.
Plate : 130 x 130 x 5 mm.

ใช้รองรับน้ำหนักได้ทุกขนาด ควรใช้ในทุกสภาพพื้นที่เพื่อป้องกันการจมของเสานั่งร้าน

Base plates supports framework of all sizes. They are recommended to be used at all times, no matter the conditions, due to their ability to prevent the sinking of scaffolding towers.



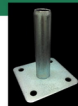
TEST REPORT BASE PLATE

45

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TEST REPORT

No. : SHCCM140400663
 Date : Apr. 18, 2014
 Page : 1 of 2



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

Sample Name : SCAFFOLD BASE PLATE
 Sample Number : SHCCM140400663
 Test Required : Load test
 Test method : EN 74-3:2007
 Product specification : 35*2.1*150mm
 Material and Mark : Q235
 Date of Receipt : Apr. 02, 2014
 Test Period : Apr. 02, 2014 to Apr. 18, 2014
 Test result(s) : For further details, please refer to the following page(s)
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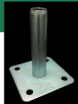
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TEST REPORT

No. : SHCCM140400663

Date : Apr. 18, 2014

Page: 2 of 2



Test Conducted: EN 74-3:2007 Couplers, spigot pins and baseplates for use in falsework and scaffold-
Part 3: Plain base plates and spigot pins-Requirements and test procedures

Test Results:

Sample No.	Test Requirement	Test Result	Verdict
1	When loaded until a load of P=30kN, no central deflection f shall exceed 5mm.	When P=30kN, f=4.65mm	Pass
2		When P=30kN, f=3.69mm	Pass
3		When P=30kN, f=3.92mm	Pass

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

Test photos:



Sample photo

Test arrangement

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

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THAI CONST & BUILDING MANUFACTURING PUBLIC CO., LTD
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SAMUTPRAKAN 10290 THAILAND
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The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name : SCAFFOLD JACK BASE
Sample Number : SHCCM140300586
Test Required : Please see the next page(s)
Test method : AS/NZS 1576.2:2009
Product specification : 38"600mm 150x150x5.75mm
Date of Receipt : Mar. 25, 2014
Test Period : Mar. 25, 2014 to Apr. 02, 2014
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.

Vivien Zhang
Vivien Zhang
Authorized signatory

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Test conducted: AS/NZS 1576.2:2009 Scaffolding Part 2: Couplers and accessories Appendix H test for adjustable leg, adjustable baseplate and adjustable swivel baseplate

Test procedure:

1. Set the nut of the adjustable leg or baseplate to the maximum working extension of the shank below the nut. Check the straightness of the shank in three position 45° apart and record any deviation.
2. Fit the tube over the adjustable leg or baseplate and place the assembly on the tapered plate between the testing machine platens.
3. Apply a force of 60kN progressively over a period of 3min and hold it for a period of 15min.
4. Remove the force.
5. Measure and record the straightness of the shank in the same positions as before the test.
6. Determine and record the ease with which the adjustable nut can be turned by hand for the full depth of the nut, downwards from the test position and returned upwards to the test position. If it is not possible to turn the nut, freely by hand, this is to be regarded as failure.
7. If the adjustable base passes this load test, re-test the adjustable base with an increasing load until failure. This load is to be recorded as the ultimate failing load.

Requirement:

When tested in accordance with Appendix H at a load of 60kN, an adjustable leg or adjustable baseplate shall not have a change in straightness of the shank exceeding 2mm and it shall be possible to turn freely by hand the nut downwards from the test position

A minimum of three components shall be tested as follow:

- a. Components that have passed the 60kN test load shall be tested to failure at which load the component is unable to support an increase in load or there is a slip between the thread of the nut and thread of the stem. This load shall be ultimate load.
- b. A component whose ultimate test load deviates from the mean result by more than 10% shall be discarded and an additional component shall be tested.

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

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c. The test result shall satisfy the following:

Strength = $(\Sigma P)/2.5 \geq 30kN$

Where

P = individual ultimate load, in kilonewtons

n = number of tests

NOTE: This is not the working load limit (WLL) of adjustable legs or adjustable baseplates.

Test result:

Sample No.	Test result of each sample after 60kN applied for 15min	Conclusion
1	The change in straightness of the shank: 0.19mm, 0.09mm, 0.10mm. Adjustable nut can be turned by hand for the full depth of the nut upwards and downwards.	Pass
2	The change in straightness of the shank: 0.10mm, 0.19mm, 0.12mm. Adjustable nut can be turned by hand for the full depth of the nut upwards and downwards.	Pass
3	The change in straightness of the shank: 0.36mm, 0.46mm, 0.09mm. Adjustable nut can be turned by hand for the full depth of the nut upwards and downwards.	Pass

Sample No.	Failure mode	Ultimate load	Strength	Conclusion
1	The shank is bended	142.2 kN	63.0 kN	Pass
2	The shank is bended	170.3 kN		
3	The shank is bended	160.3 kN		

Note: The adjustable nut height in test is 200mm as per client's requirement.

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

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

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Sample photo:



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52 PLANK CLAMP



Specification : 48.3 mm.

Packing : 50 pcs. / bag

เป็นอุปกรณ์เสริมเพื่อความปลอดภัยสำหรับล็อก steel plank secured locking of the steel plank

BOARD RETAINING COUPLER (BRC)



Specification : 48.3 mm.

Packing : 40 pcs. / bag

เป็นอุปกรณ์เสริมในการจับยึดแผ่นรองบันไดเข้ากับท่อ

We offer top quality pressed Board Retaining Coupler, which is widely demanded for immediate and secured locking of the boards in its proper position. These couplers are zinc plated and have drop forged caps and boron steel bolt.

SCAFFOLDING RATCHET-WRENCH

53



Material used in the Making : 45 carbon drop forged steel, with heat treat and black surface. Surface treatment : black coated, chrome plated and nickel plated.

LVL SCAFFOLD BOARD



Specification :

Standard : OSHA / AS 1577 / BS 2482

Width : 225 / 235 mm. or customized

Thickness : 38 / 42 mm. or customized

Lenght : 1 - 4 m. or customized



1. Sawing

2. Rotary Peeling

3. Clipping

4. Drying

5. Gluing

6. Layup

7. Hot Press

8. Cross-cutting

9. Rip-sawing

10. Dispatching

54 STEEL & ALUMINIUM LADDER

Packing : 4 pcs. / bundle



Item	Type	Steps	Height	Holding Capacity	Weight
1	TCB-300A	10	3 m.	150 kg.	5.13 kg.
2	TCB-420A	14	4 m.	151 kg.	7.33 kg.
3	TCB-600A	21	6 m.	150 kg.	10.25 kg.



Item	Type	Total Length	Approx.Cu.Ft. Per. Unit	Approx.Shipping Wt.Lbs.
1	510-1	10'	3.6	20.0
2	512-1	12'	4.3	24.0
3	514-1	14'	5.0	27.5

LADDER CLAMP

55

Specification : 48.3 x 48.3 mm.



PROTECTION CAP



Specification :
12.5 x 23.6 mm.

Specification :
48.3 x 32 mm.



Holder



Insert

SCAFFOLD SAFE TAG INSPECTION RECORD		
REF. NO.:		
Location:		
STRUCTURE TO BE INSPECTED		
LOAD CLASS 1 100 kN/m² 100 kN/m²	LOAD CLASS 2 150 kN/m² 150 kN/m²	LOAD CLASS 3 200 kN/m² 200 kN/m²
LOAD CLASS 4 250 kN/m² 250 kN/m²	LOAD CLASS 5 300 kN/m² 300 kN/m²	LOAD CLASS 6 350 kN/m² 350 kN/m²
If last inspection exceeds 7 days return insert and inform supervisor		
Inspected and approved by:		
TIME	DATE	SIGNATURE
Please be aware of the following hazards		
FURTHER INFORMATION ON REVERSE		

Front

SCAFFOLD SAFE TAG ERECTION & INSPECTION RECORD	
REQUESTED BY:	
BUILT BY:	
DATE ERECTED:	
SIGNATURE:	
TO BE COMPLETED BY INSPECTOR AFTER ERECTION BEFORE USE	
INSPECTOR'S NAME:	
SIGNATURE:	
DATE:	TIME:
DECOMMISSIONED DATE	
If you have any queries regarding this scaffold structure please contact	
NAME	TELEPHONE
Warning	
Unauthorized removal or interference with this tag could make you liable to prosecution and fines	
FURTHER INFORMATION ON REVERSE	

Back

Holder Specification :

Height : 306 mm.
Width : 90 mm.
Depth : 6 mm.
Top hole Dia. : 54 mm.
Material : Super
Polypropylene

Insert Specifications :

Height : 195 mm.
Width : 81 mm.
Depth : 0.5 mm.
Material : Super PVC
Printing can be changed to
customized design and language

Scaffolding should always be inspected at regular intervals during its use to follow its initial erection, exposure to weather conditions that may affect its stability/strength, or significant alterations. The unique THAI CONST shaped design allows the fitting to be preassembled to suit all types of scaffolding. Its large top hole of holder allows it to be suitable for MOST scaffolding tube regardless of its diameter. The nylon mixed construction of the holder is durable, flexible and UV resistant.



Positioning Harness Back and Hip D-Rings, Tongue Buckle Legs

DECOIL TIE-BACK



Decoil Twinleg Lanyard (1" Web, Snaphook And Rebar Hook) - 6' W/ T