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## **HUATRACO SCAFFOLD SDN BHD** (240510-T)

a wholly-owned subsidiary of HIAP TECK VENTURE BERHAD (421340-U)  
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# Types of Scaffold

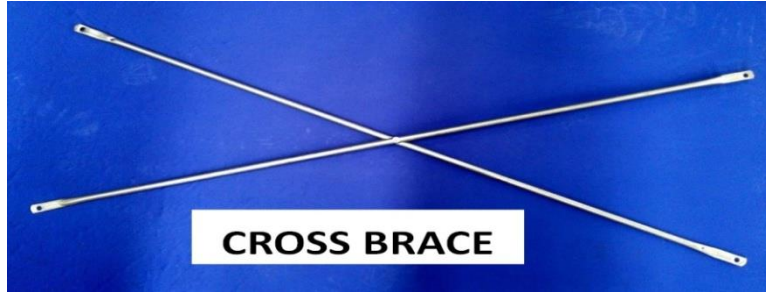
**FRAME**

**TUBULAR**

**MODULAR**



# FRAME



- JIS
  - MS 1462
- Part 1



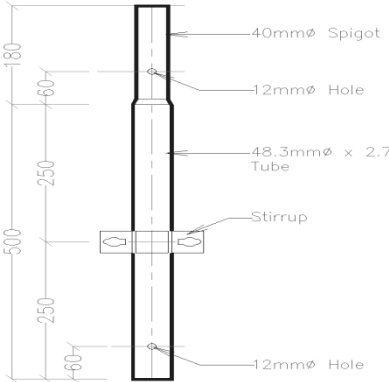
# TUBULAR



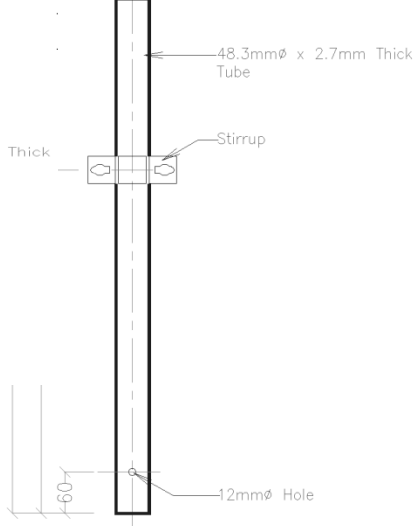
- “Tube/Pipe and Coupler/Clamp” system
- BS 1139 / BS EN 39
- MS 1462 Part 2



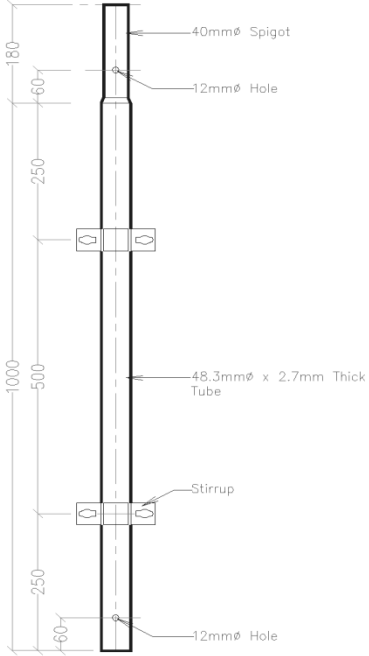
# MODULAR



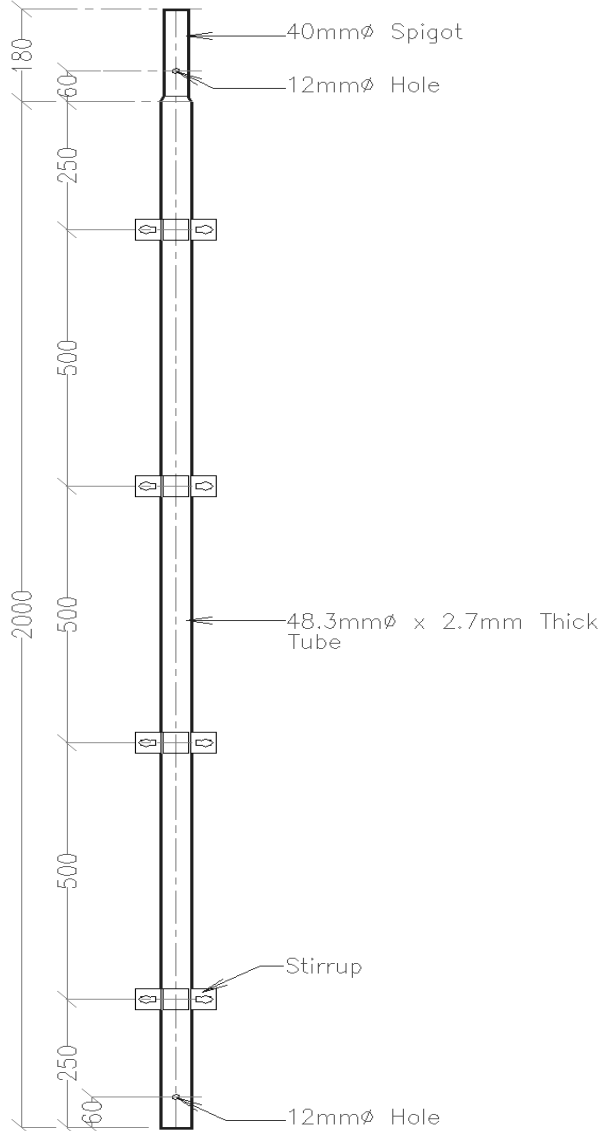
**STANDARD 0.5m C25**



**STANDARD 0.75m C25**



**STANDARD 1.0m C25**



**STANDARD 2.0m C25**

- BS EN 12810
- MS 1462 Part 3



**CRAB LEDGER 0.35m**



**CRAB LEDGER 0.50m**



**CRAB LEDGER 0.70m**



**CRAB LEDGER 1.00m**



**CRAB LEDGER 1.50m**



**CRAB LEDGER 1.80m**



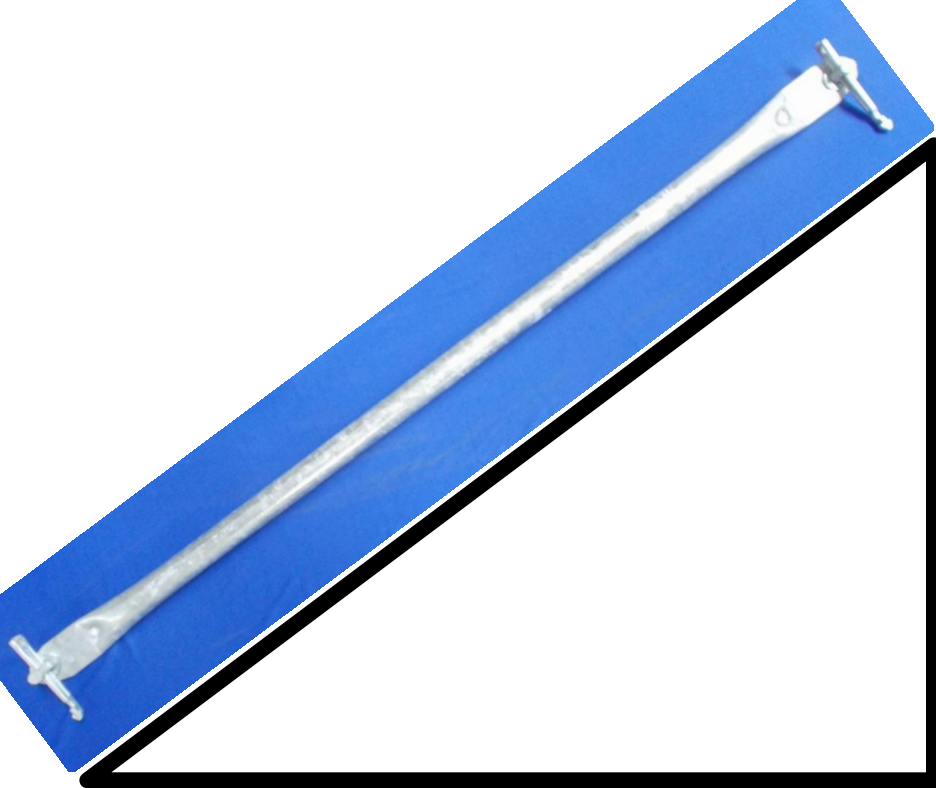
**CRAB LEDGER 2.00m**



**CRAB LEDGER 2.50m**



**CRAB LEDGER 3.00m**



H2.0m

(L)

## CRAB BRACE H2.0m x (L)

CRAB BRACE H2.0m x **L0.7m**

CRAB BRACE H2.0m x **L1.0m**

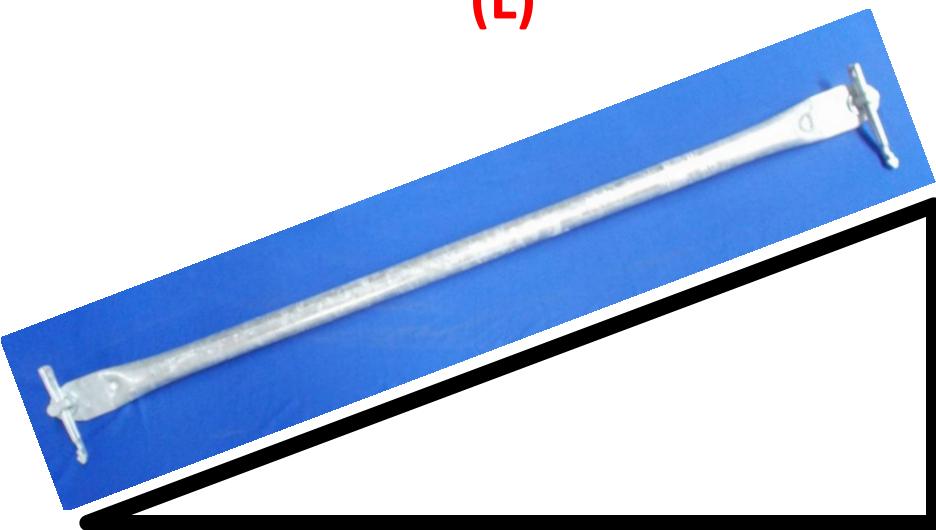
CRAB BRACE H2.0m x **L1.5m**

CRAB BRACE H2.0m x **L1.8m**

CRAB BRACE H2.0m x **L2.0m**

CRAB BRACE H2.0m x **L2.5m**

CRAB BRACE H2.0m x **L3.0m**



H1.0m

(L)

## CRAB BRACE H1.0m x (L)

CRAB BRACE H1.0m x **L0.7m**

CRAB BRACE H1.0m x **L1.0m**

CRAB BRACE H1.0m x **L1.5m**

CRAB BRACE H1.0m x **L1.8m**

CRAB BRACE H1.0m x **L2.0m**

CRAB BRACE H1.0m x **L2.5m**

CRAB BRACE H1.0m x **L3.0m**



# CRAB JACK BASE C25



**CRAB U-HEAD C25**



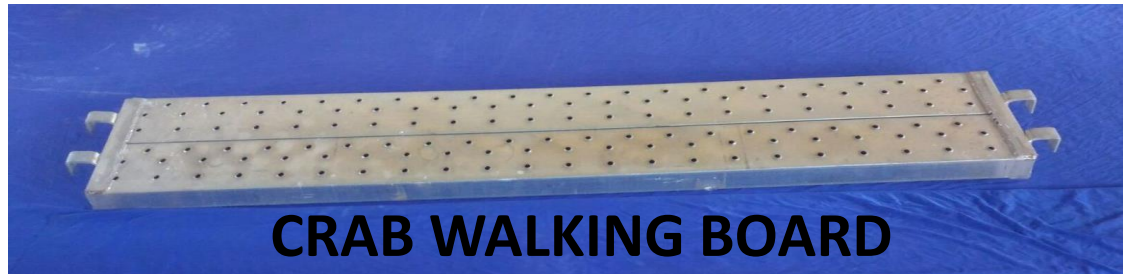
**CRAB CASTOR WHEEL**



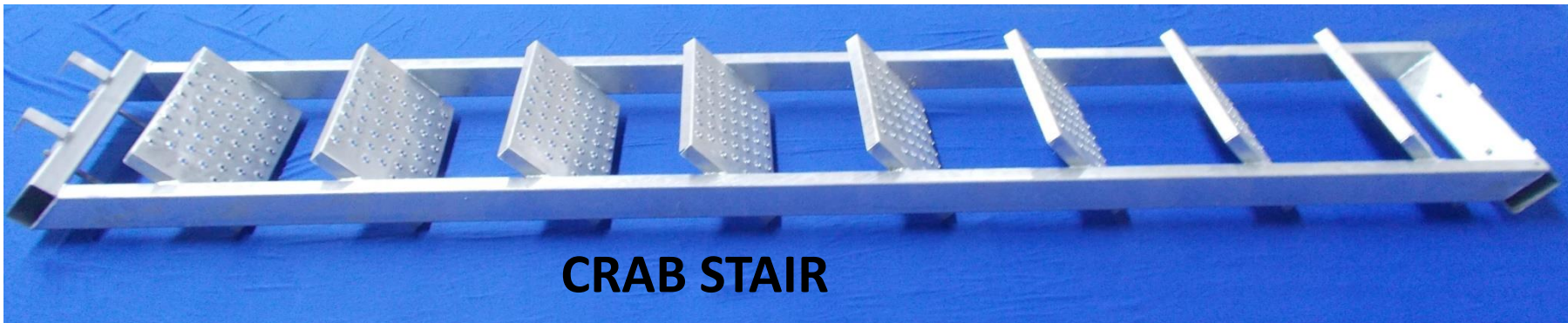
**CRAB S-PIN C25**



**CRAB TOE BOARD**



**CRAB WALKING BOARD**

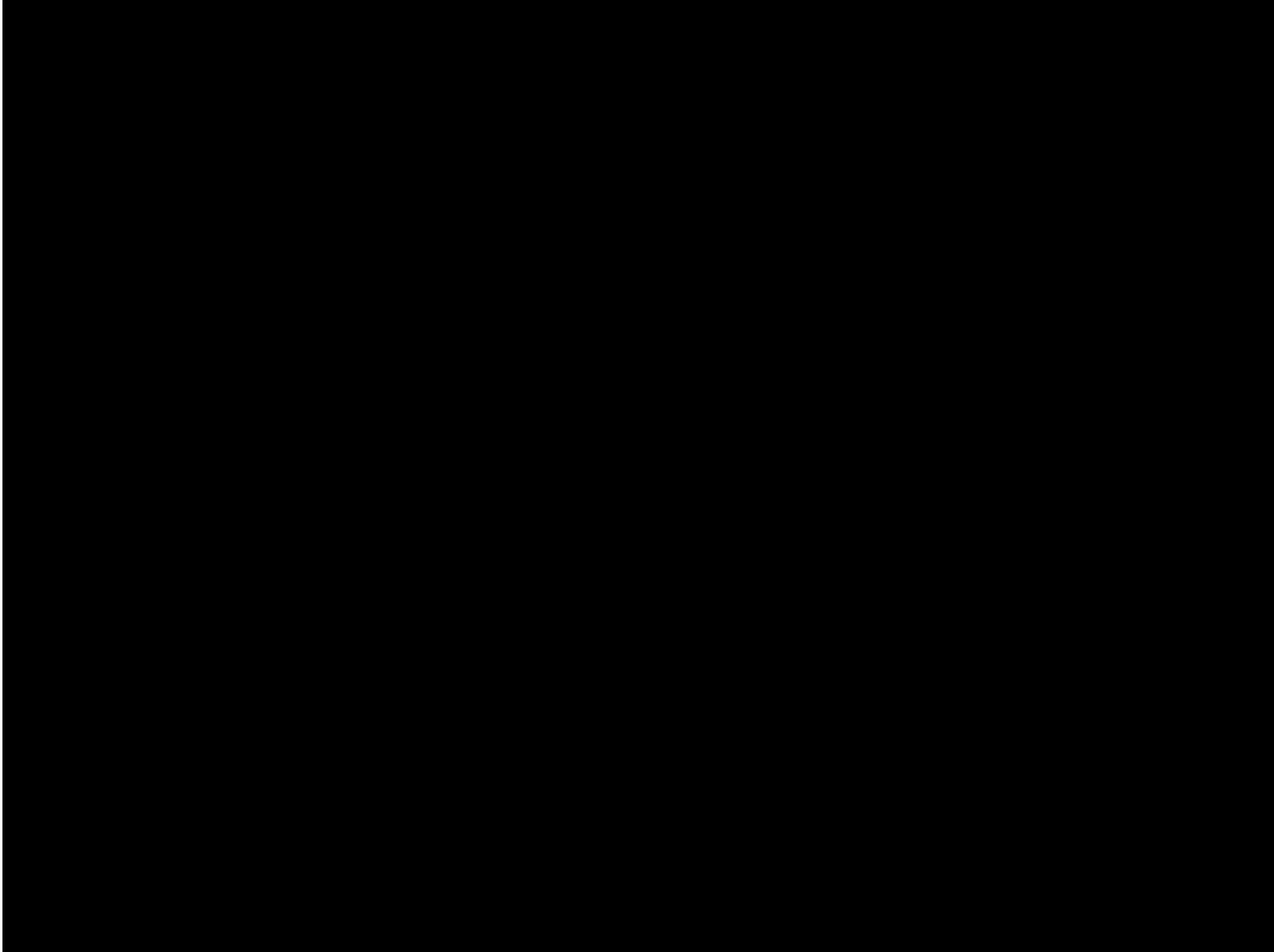


**CRAB STAIR**

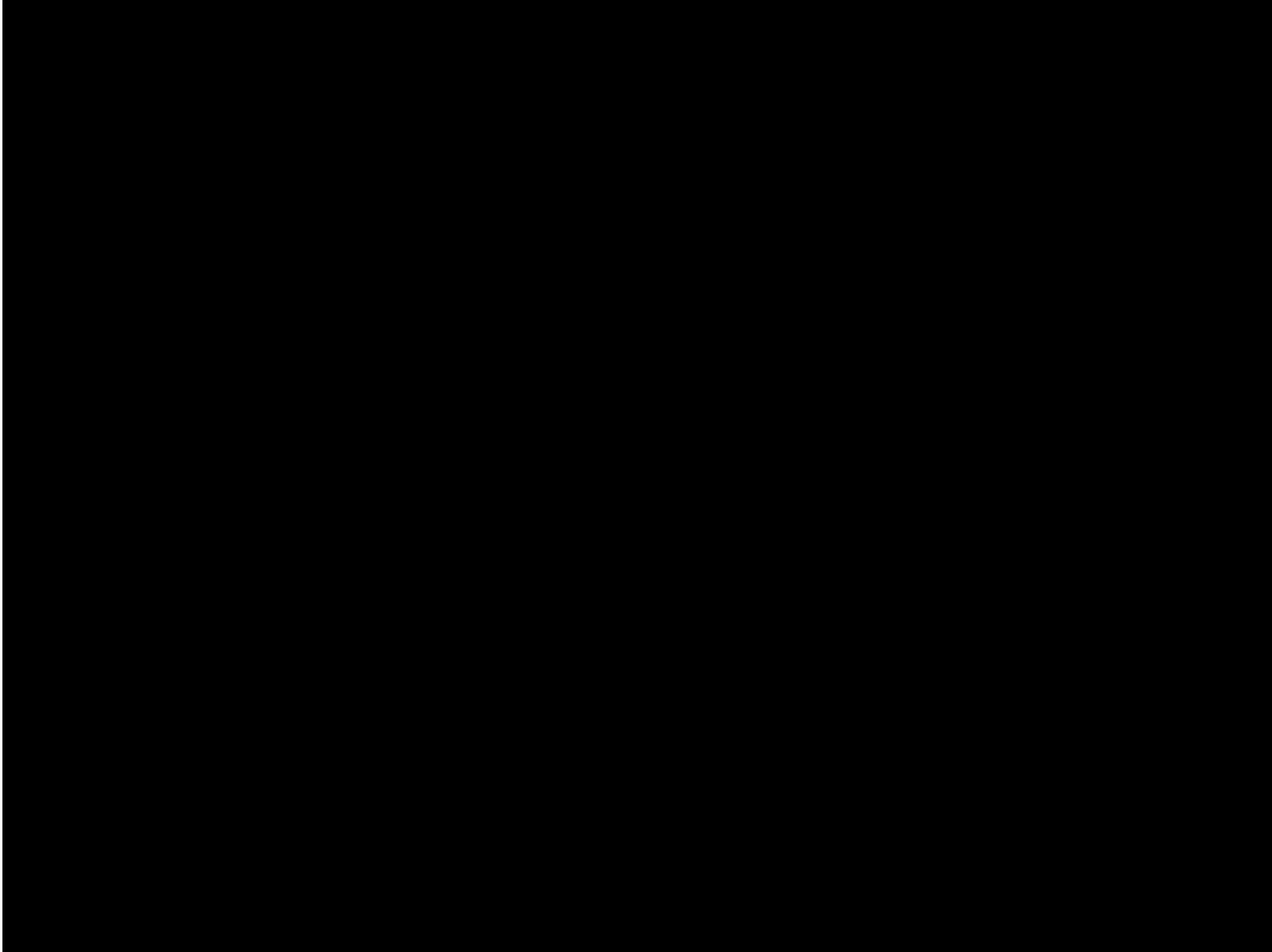




# HUATRACO<sup>®</sup> C60 SHORING SYSTEM



# HUATRACO<sup>®</sup> C25 MODULAR SYSTEM





## Function of Scaffold

- 1. Shoring ( Loading Support ) /  
Falsework / Backprop**
- 2. Temporary Working Platform /  
Access Tower**

# CONSTRUCTION PROJECTS

## CRAB 60 SHORING SYSTEM

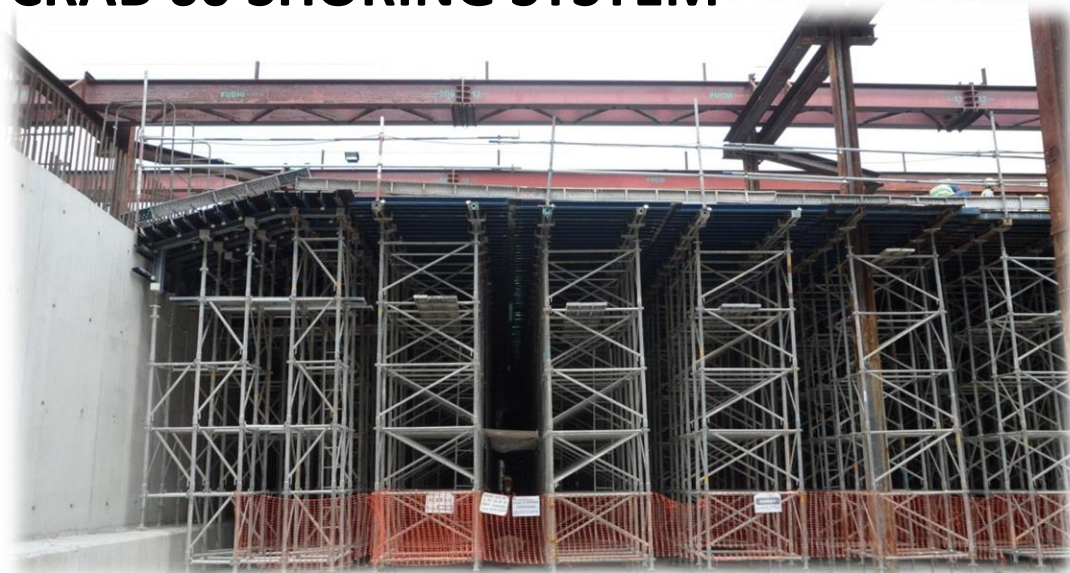




# CONSTRUCTION PROJECTS



**CRAB 60 SHORING SYSTEM**





# CONSTRUCTION PROJECTS



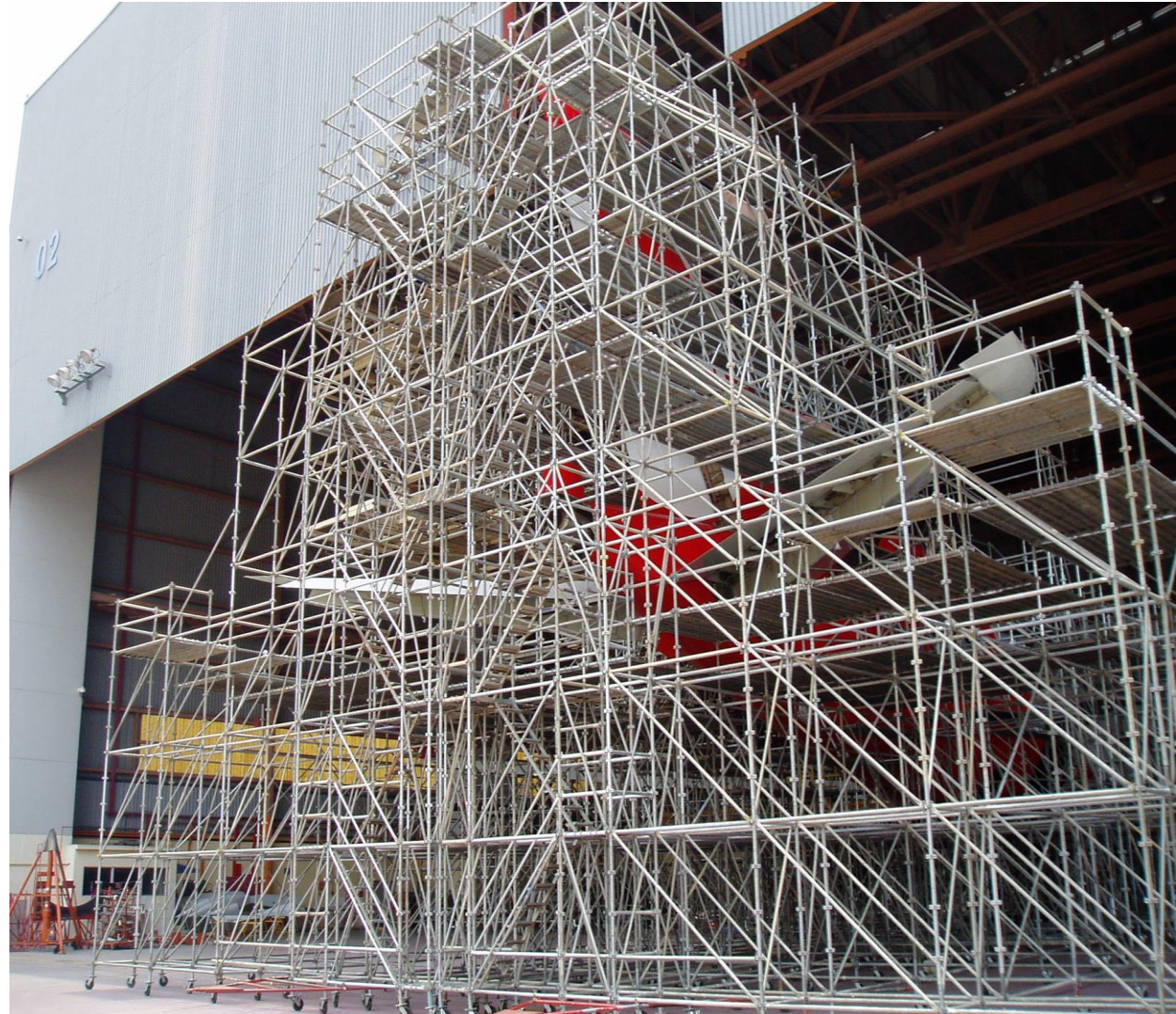
## CRAB 25 MODULAR SYSTEM



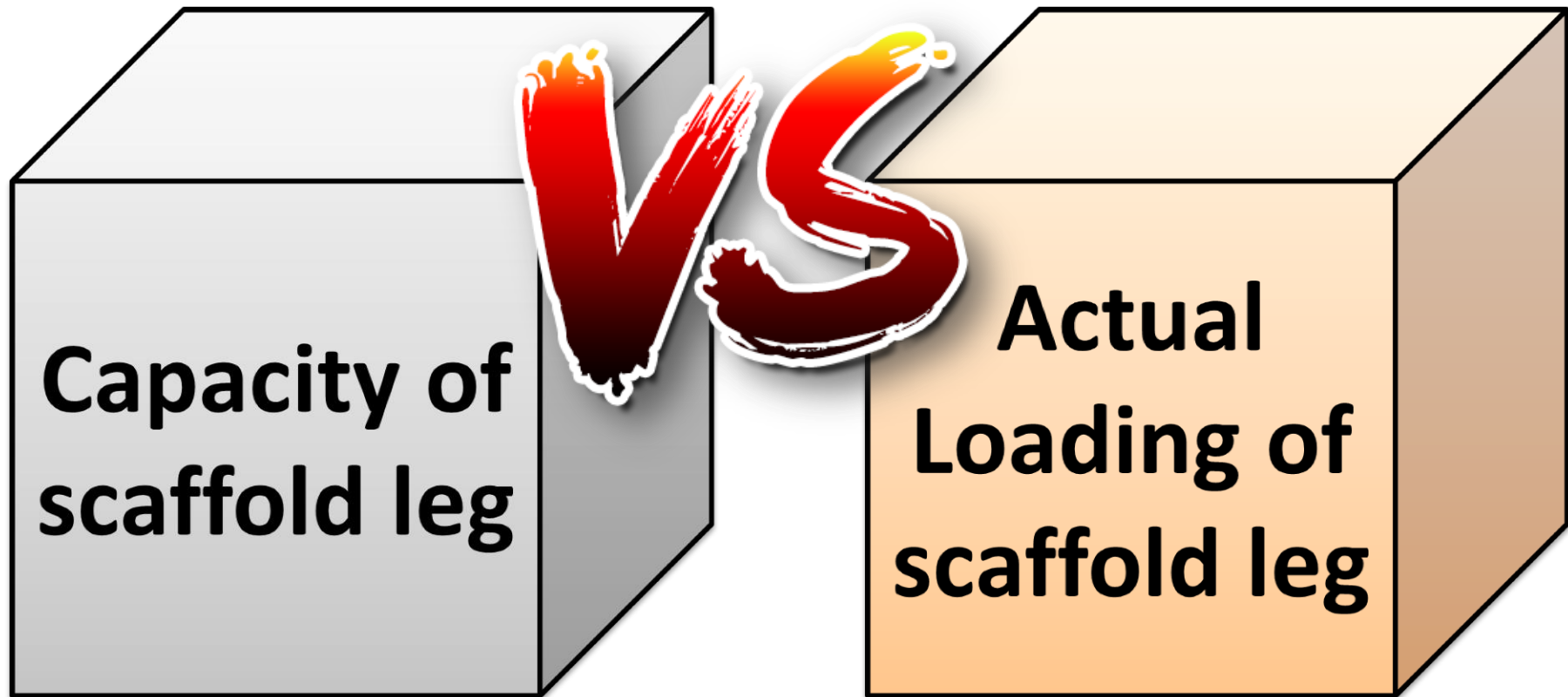


# CONSTRUCTION PROJECTS

## CRAB 25 MODULAR SYSTEM

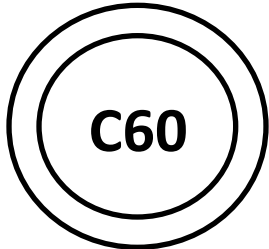


# Design of Scaffold





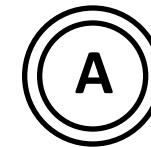
# Estimated Capacity of Scaffold Leg



Ø 60.3mm  
3.2mm thick



Ø 48.3mm  
2.7mm thick



Ø 42.7mm  
2.5mm thick

Crab 60 Shoring System	6 tonne
Crab 25 Modular System	2.5 tonne
Frame MS 1462	1.5 tonne
Frame CQ	1 tonne



(Ahli Kumpulan IKRAM Sdn Bhd)

**Product Test Report**

Report No.	F/006/07	Date	12/11/2007			
Total No of Pages	3	Page No.	1 of 3			
Name And Address Of Recipient (As Given By Applicant)	HUATRACO SCAFFOLD SYSTEM SDN. BHD Lot 6088, Jalan Haji Abdul Manan, Batu 51/2, Jalan Meru 41050, Klang, Selangor.					
Title Of The Report (As Given By Applicant)	Load test for CRAB 25 modular system scaffold.					
Applicant's Reference	Mr. KB Lee - Huatraco Scaffold System Sdn. Bhd.					
Job Number	FS9B02/198/07					
Application Number	ML/A/18407	Application Date	06/04/2007			
Testing Fees References	04373					
<b>Particulars Of Sample (As Given By Applicant)</b>						
No.	Material (s)	Grade	Size	Model	Quantity	Sample References
1	Crab 25 Modular System Scaffold	-	-	Type 1	1	S5
2	Crab 25 Modular System Scaffold	-	-	Type 2	1	S6
<b>Testing (s)</b>						
Test Carried Out	Test Method (s)					
Load test	Non-Standard Method As Agreed With The Applicant.					
Remarks	Testing Method : Vertical load was applied to ultimate capacity on full scale tower using hydraulic jack located at the top center of the tower. The loading was applied manually until ultimate load was reached and the tower began to unload.  Note: Tests were done at UiTM heavy structure laboratory in Shah Alam. Loadings and recording of results were conducted by the UiTM officers and witnessed by IKRAM QA personnel and representative of Huatraco Scaffold System Sdn. Bhd.					

Approved Signatory,  
IKRAM QA Services Sdn. Bhd.

*[Signature]*  
HAJI YAHYA BIN HAJI ARIFFIN  
Pengarah Persijilan  
Ikram QA Services Sdn. Bhd

THIS REPORT IS ONLY FOR SAMPLES/PRODUCTS SELECTED BY THE APPLICANT FOR TESTING ONLY AT THE APPLICANT AGREED PREMISES/FACTORY AND THIS REPORT IS NOT AN APPROVAL CERTIFICATE.  
THIS REPORT, EXCEPT IN FULL, SHALL NOT BE REPRODUCED WITHOUT WRITTEN APPROVAL FROM THE DIRECTOR OF IKRAM QA SERVICES SDN. BHD.

REPORT NO: F/006/07	APPLICATION NO: ML/A/18407
Job No: FS9B02/198/07	Date Of Report : 12/11/2007
PAGE NO : 3/3	
Title of the report: Load test fo crab 25 modular system scaffold	

**Test Result**

Sample No	Sampel References	Material	Model	Testing Date	Maximum Load (kN)	Typical arrangement of the testing
6	S6	Crab 25 Modular System Scaffold	Type 2	17/08/2007	237	Refer to Appendix B

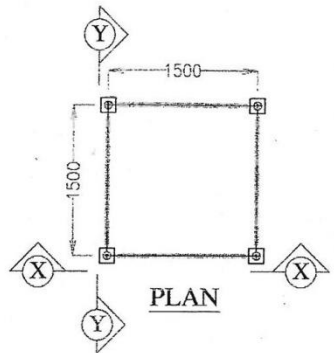


Type 2: Load – Displacement Curve

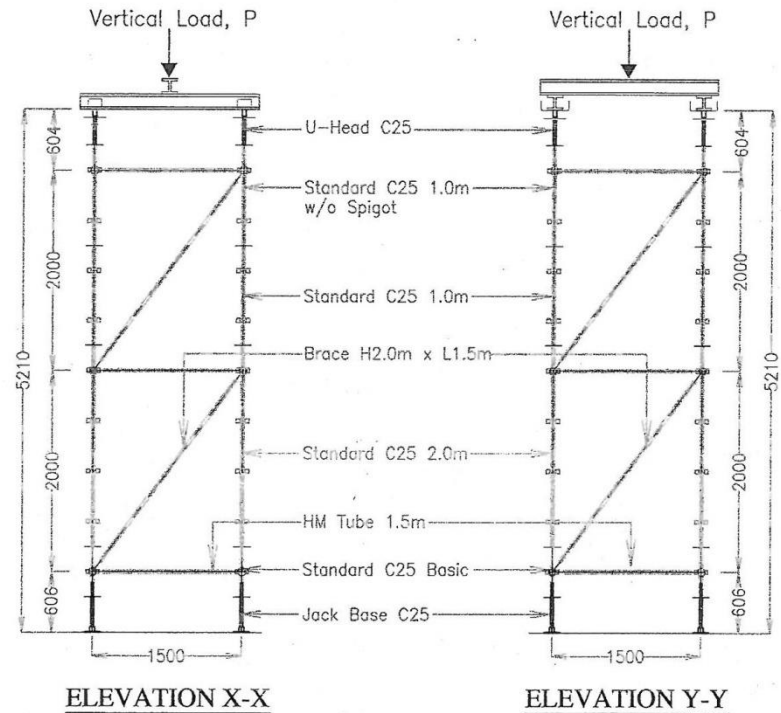
Prepared by	Verified by
Asnizam B. Che Ani	Sabarkah Bin Selamat Ansoni
<i>[Signature]</i>	<i>[Signature]</i>

**C25 (CRAB 25) MODULAR SYSTEM SCAFFOLD**

DESCRIPTION (S)  
 1.5m x 1.5m TOWER (TYPE 2)



NOTE : All Jack Bases and  
 U-Heads are  
 fully extended







Picture 01: Load test on CRAB 25 modular system scaffold tower (Type 2).  
21



Picture 02: Buckling on the tower leg.

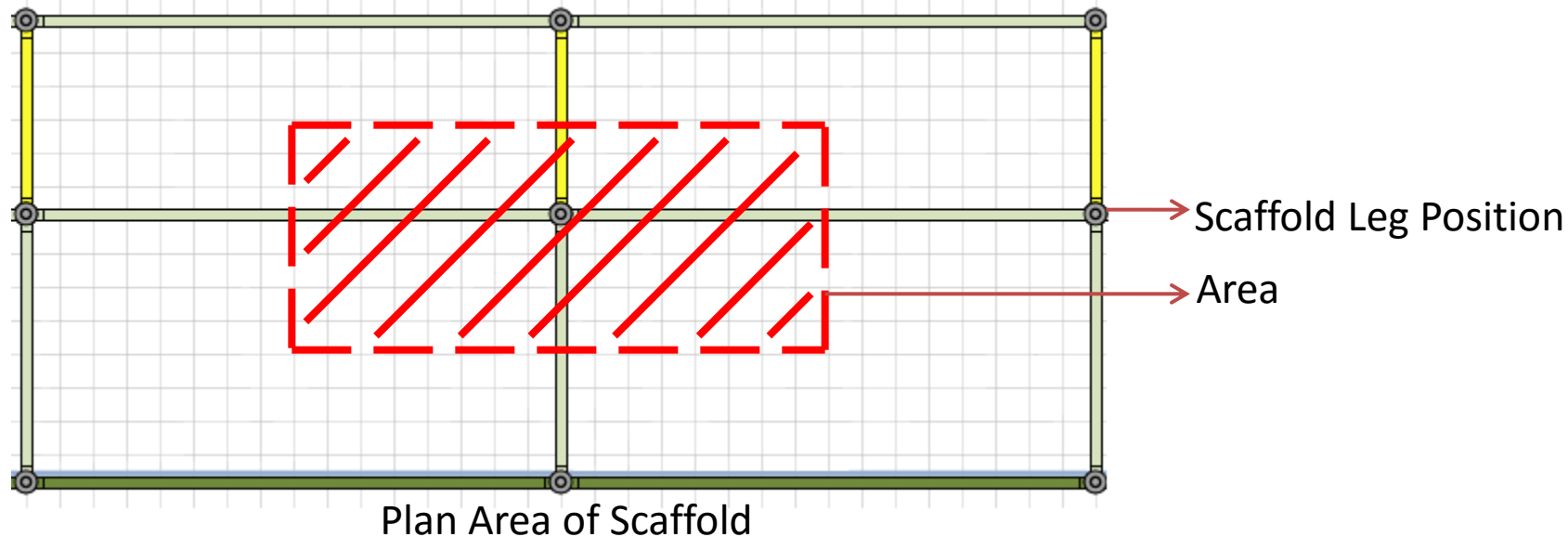
## **Estimated Capacity of Scaffold Leg**

Working Load Capacity of Scaffold Leg =

Total Ultimate Load Applied ÷ 4 Scaffold Legs ÷ 2  
Times Safety Factor

# Actual Loading of Scaffold Leg

\* Area method



Dead Load – Concrete load, Formwork, Falsework  
Live Load – Labour Weight



Type of Density	Tonne/m <sup>3</sup>
Density of timber(softwood)	0.60 to 0.80 tonne/m <sup>3</sup>
Density of water	1 tonne/m <sup>3</sup>
Density of Reinforced Concrete	2.50 tonne/m <sup>3</sup>
Density of Aluminium	2.70 tonne/m <sup>3</sup>
Density of Steel	7.85 tonne/m <sup>3</sup>

# History of Scaffold

Once upon a time.....



Japanese International Standard (JIS)  
**\*thickness 2.50mm**



**Supplier A**



**Supplier B**



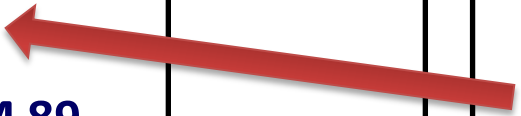
2.5mm thk  
Cost RM 80  
Selling Price RM 89

2.3mm thk  
Cost RM 70  
Selling Price RM 79

2.0mm thk  
Cost RM 60  
Selling Price RM 69

1.8mm thk  
Cost RM 50  
Selling Price RM 59

1.6mm thk  
Cost RM 40  
Selling Price RM 49



# Thank You!!

