



Building
Solutions
Sdn. Bhd.
200301014320 (616740-X)

CHY TRUSS DECK



AYS VENTURES BERHAD
201001041243 (925171-T)

ALLIANCE • YIELD • SUSTAINABILITY

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EXCELLENT SAVING GAINS

CHY TRUSS DECK presents an innovative product for slab construction. It provides an optimum solution between the traditional propping formwork and the metal decking system normally seen in the current construction environment.

CHY TRUSS DECK removes on-site formwork construction as well as the massive propping requirement. It reduces on site labour requirement and substantial time saving in the slab construction for multi-storey buildings.

CHY TRUSS DECK is an integrated prefabricate slab structure system that supports in-situ slab construction. Steel reinforcement bar needed for the floor slab is configured and processed into steel lattice trusses and welded to a galvanized profiled deck to form an integrated panel. The panels are tailor made to specific span lengths required and transported to the job site for installation.

CHY TRUSS DECK is lifted into position on site during construction and integrated into the building frame. There is no need for extra propping support underneath the deck as it already has sufficient structural strength to be self-supported and carry the concrete and other extra construction weight of the slab.



FEATURES



Flexibility

Excellent span capability of unpropped construction while maintaining flexibility and efficiency of in-situ slab design.



Sustainability

Sustainable construction with reduced construction site debris due to avoidance of formwork, propping and other temporary material handling.



Quality Assurance

Quality assured with offsite prefabrication under a controlled manufacturing environment using fully automated production equipment.



Cost Saving

Gain from saving in labour and benefit of shorter construction duration.



Eco Products

Sustainable ECO product of mass production with minimum wastage and labour input.



Health & Safety

Assured health and safety manufacturing environment with predictable productivity to collaborate site construction progress.



Efficiency

CHY TRUSS DECK construction method reduced health and safety concerns on site and thus site work expedition can be better managed.



Documentations

Assured Quality traceability with full documented production records in standardized process manufacturing.



Customisation

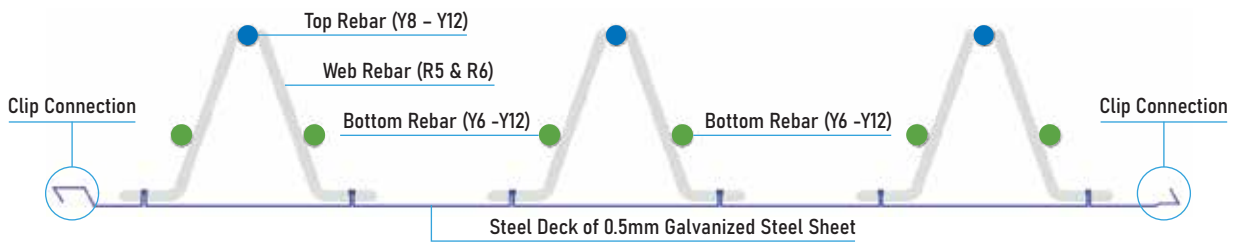
Tailor made product to suit specific project requirement.



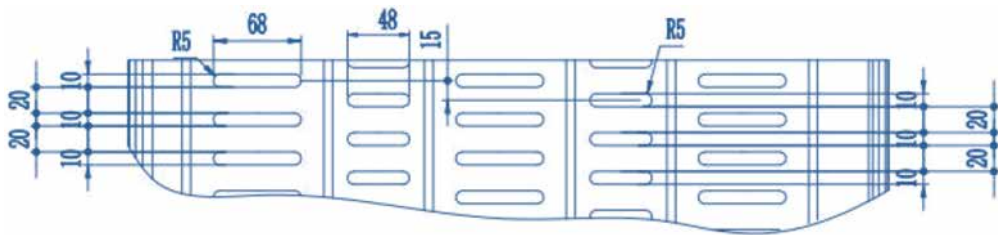
Reliability

CHY TRUSS DECK is the most reliable conforming product for Slab Construction.

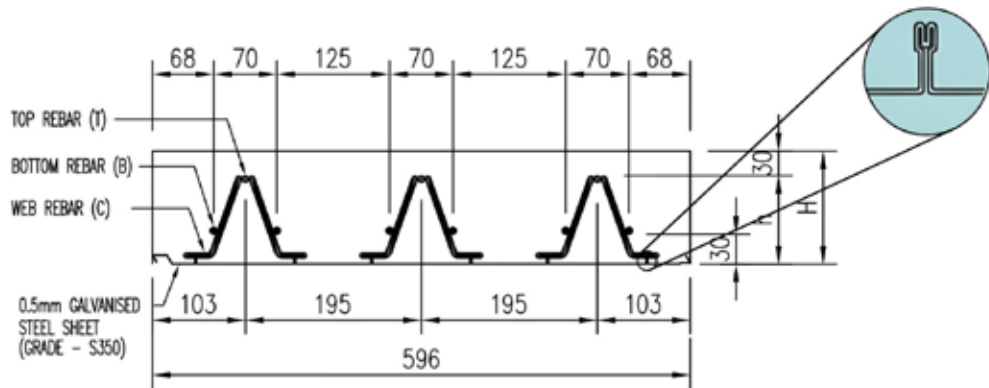
PRODUCT CONFIGURATION



STEEL DECK PROFILE WITH PREFAB. REBAR TRUSS



STEEL DECK PLAN VIEW WITH EMBOSSMENT



CHY TRUSS DECK SECTION





MATERIAL SPECIFICATION

1. Steel Deck

- ▼ Rolled-formed from hot dipped, zinc-coated, high tensile steel
- ▼ 0.5mm Base Metal Thickness
- ▼ Grade = 350N/mm² to MS 2660:2020
- ▼ The coating is minimum Z80 (80g/m² minimum coating mass) on both sides.
- ▼ Embossments on the deck provide better bonding between the steel and concrete.

2. Reinforcement

- ▼ Top/Bottom Rebar : Grade B500B to MS 146:2014 ($f_y = 500\text{N/mm}^2$)
- ▼ Web Rebar : Grade B500A to MS 146:2014 ($f_y = 500\text{N/mm}^2$)

3. Concrete

All Design Tables have been developed for the C25/30 (concrete strength class) with normal density of 25 kN/m³ (wet density). For other concrete grades, please consult our team for further structural analysis and design recommendation if needed.



PRODUCT TABLE

Product Model	Bar Diameter			Slab Thickness	Truss Height
	Top	Web	Bottom		
125-0806	Y8	R5	Y6	125	95
125-0808	Y8	R5	Y8	125	95
125-1008	Y10	R5	Y8	125	95
125-1010	Y10	R5	Y10	125	95
150-0808	Y8	R5	Y8	150	120
150-1008	Y10	R5	Y8	150	120
150-1010	Y10	R5	Y10	150	120
150-1210	Y12	R5	Y10	150	120
150-1212	Y12	R6	Y12	150	120
175-1008	Y10	R5	Y8	175	145
175-1010	Y10	R5	Y10	175	145
175-1210	Y12	R6	Y10	175	145
175-1212	Y12	R6	Y12	175	145
200-1010	Y10	R6	Y10	200	170
200-1210	Y12	R6	Y10	200	170
200-1212	Y12	R6	Y12	200	170

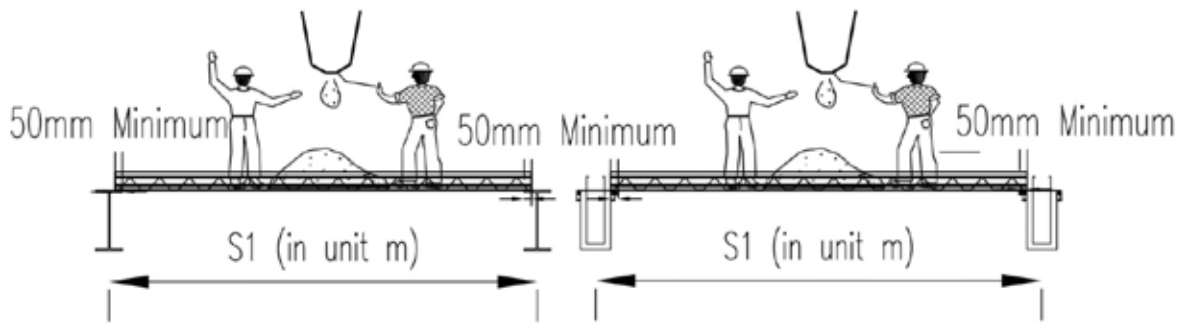
Notes:

1. All 16 product models are designed according to EC4 requirements.
2. The product description example: 125-0806 represent 125mm slab thickness with 8mm Rebar as Top chord and 6mm Rebar as the bottom chords of the triangular lattice truss.
3. Please contact us if you wish to explore trusses outside of the above range. Our equipment has capability to produce truss height up to 350 mm.
4. Our structural engineer can be of help if you need to have detail structural calculation support.

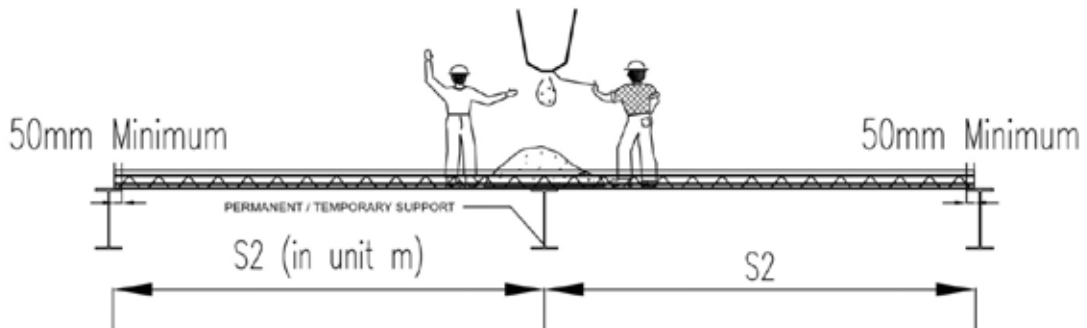
SPAN CAPABILITY UNDER CONSTRUCTION LOAD

FORMWORK TABLES							
Product Model		SF0806	SF0808	SF1008	SF1010	SF1210	SF1212
A	Overall Slab Thickness = 125mm						
	Unpropped Span, S1(m)	2.2	2.4	2.8	3.0	-	-
	Single Propped Span, S2 (m)	2.6	2.8	3.4	3.6	-	-
B	Overall Slab Thickness = 150mm						
	Unpropped Span, S1(m)	-	2.6	3.0	3.2	3.6	3.8
	Single Propped Span, S2 (m)	-	3.0	3.6	3.8	4.4	4.6
C	Overall Slab Thickness = 175mm						
	Unpropped Span, S1(m)	-	-	3.4	3.4	4.0	4.2
	Single Propped Span, S2 (m)	-	-	3.8	4.0	4.8	5.0
D	Overall Slab Thickness = 200mm						
	Unpropped Span, S1(m)	-	-	-	3.6	4.2	4.4
	Single Propped Span, S2 (m)	-	-	-	4.2	4.8	5.2

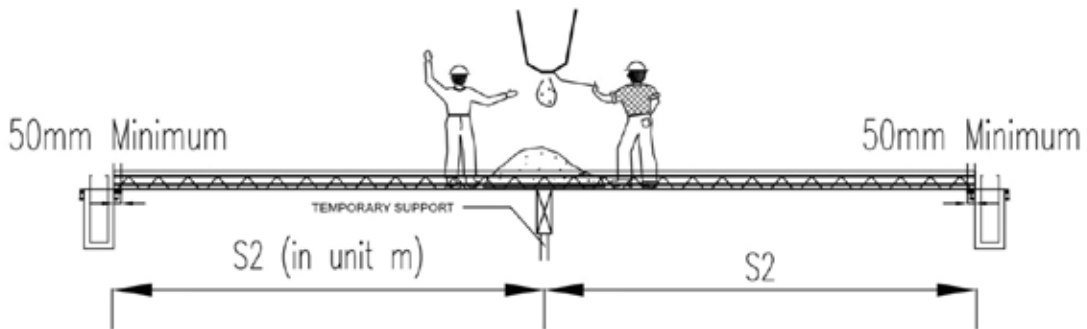
CONSTRUCTION DETAILS



UNPROPPED RC / STEEL CONSTRUCTION FOR SINGLE SPAN TRUSS DECK



PROPPED STEEL CONSTRUCTION FOR CONTINUOUS SPAN TRUSS DECK



PROPPED RC CONSTRUCTION FOR CONTINUOUS SPAN TRUSS DECK

Notes:

1. S1 denotes as single span
2. S2 denotes as continuous span



1. Material Specification References

MS 146: 2014	Steel for the reinforcement of concrete - Weldable reinforcing steel Bar, coil and de-coiled products - Specification (Fourth revision)
MS 145: 2014	Steel fabric for the reinforcement of concrete - Specification (Fourth revision)
MS 144: 2014	Steel wire for the reinforcement of concrete products -Specification (Fourth revision)
MS EN 10080: 2013	Steel for the reinforcement of concrete - Weldable reinforcing steel - General
MS 2660: 2020	Continuous hot-dip zinc-coated and zinc-iron alloy-coated carbon steel sheet and strip

2. Structural Design Code of Practices

MS EN 1990	Eurocode 0: Basis of Structural Design
NA to MS EN 1990-1-1	Malaysia National Annex to Eurocode 0: Basis of Structural Design
MS EN 1991	Eurocode 1: Actions on Structures
NA to MS EN 1991-1-1	Malaysia National Annex to Eurocode 1: Actions on Structures
MS EN 1992	Eurocode 2: Design of Concrete Structures
NA to MS EN 1992-1-1	Malaysia National Annex to Eurocode 2: Design of Concrete Structures
MS EN 1993	Eurocode 3: Design of Steel Structures
NA to MS EN 1992-1-1	Malaysia National Annex to Eurocode 3: Design of Steel Structures
MS EN 1994	Eurocode 4: Design of Composite Steel & Concrete Structures

3. Technical Guides for Structural Design

IStructE Manual	Manual for the design of concrete building structures to Eurocode 2
SCI Publication No. 300	Composite Slabs and Beams using Steel Decking: Best Practice for Design and Construction
SCI Publication No. 359	Composite Design of Steel Framed Buildings
Concrete Society TR 58	Deflection in Concrete Slabs and Beams

