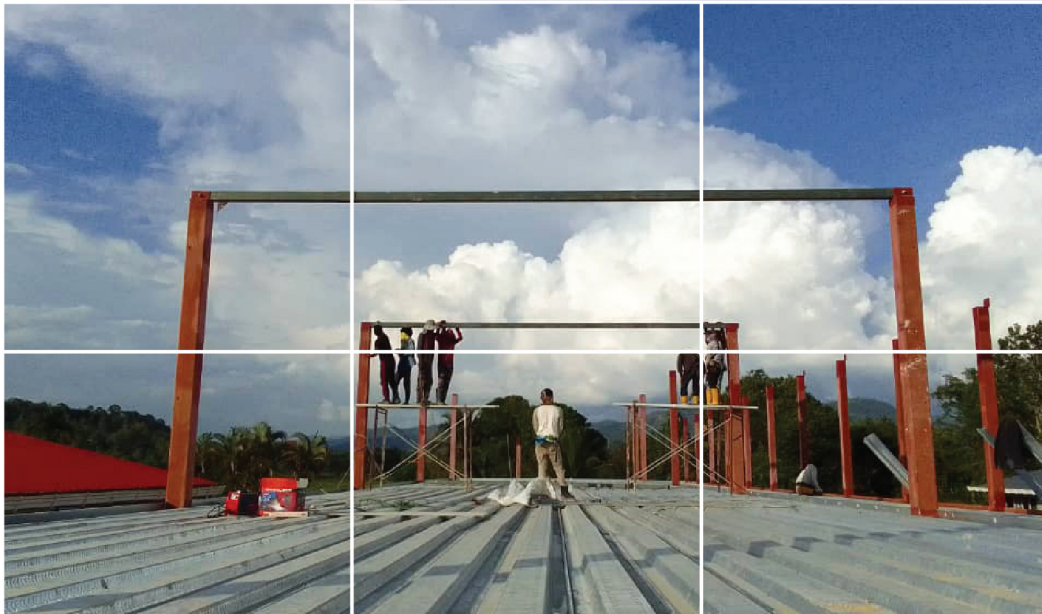
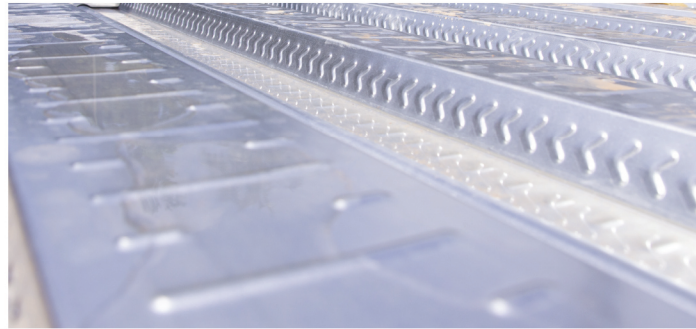


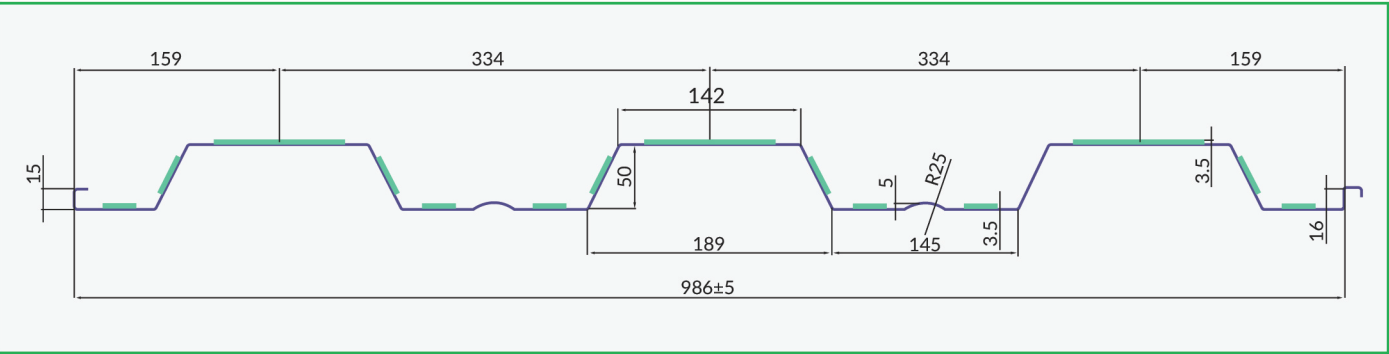
# BrisDeck 51



Composite Floor Deck



STANDARD MATERIAL SPECIFICATION



Material

Base Steel

Thickness

Yield Strength

: Hot Dipped Galvanized Steel Sheet

: 0.75 mm, 1.0 mm, 1.20 mm

& 1.50 mm

: 550 Mpa (High Tensile)

Zink Coating

Cover Width

Rib Height

: 275 g/m<sup>2</sup>

: 986 mm

: 51 mm

Length

Cover Width

Thickness

: ±10 mm

: ±5 mm

: ±0.02 mm

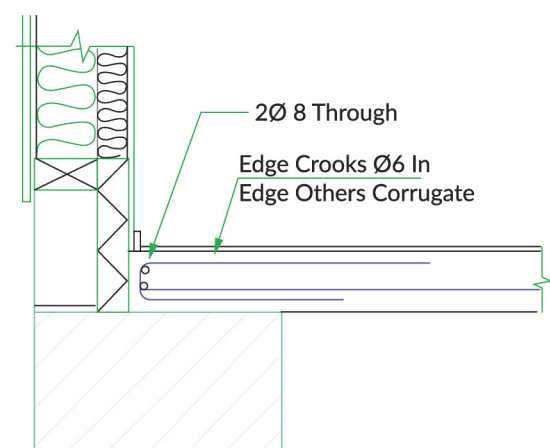
TEMPORARY PROPPING TABLE

t = 0.8 mm	Maximum Span L (mm)							
Slab Depth	100	120	140	160	180	200	220	240
One Span								
Unpropped	1507	1420	1349	1278	1207	1175	1136	1097
1 Row Prop	3116	2935	2753	2572	2477	2335	2248	2154
2 Row Prop	4868	4497	4229	4039	3763	3668	3487	3306
Two or More Span								
Unpropped	1554	1459	1373	1278	1231	1183	1112	1065
1 Row Prop	3211	2935	2753	2659	2477	2382	2288	2201
2 Row Prop	4781	4497	4134	3945	3763	3582	3392	3306

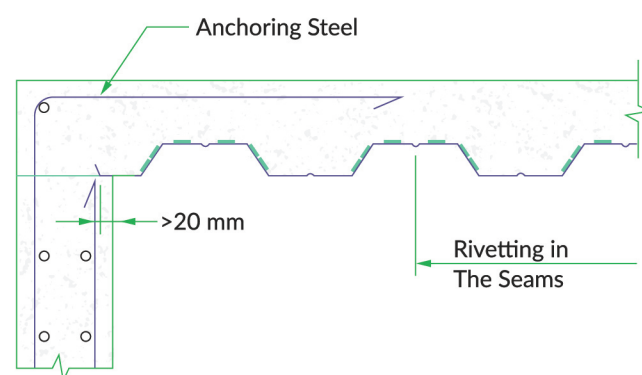
t = 1.0 mm	Maximum Span L (mm)							
Slab Depth	100	120	140	160	180	200	220	240
One Span								
Unpropped	1641	1530	1436	1325	1325	1254	1231	1183
1 Row Prop	4781	4457	4229	4000	3858	3629	3582	3487
2 Row Prop	7171	6714	6343	5908	5791	5514	5333	5191
Two or More Span								
Unpropped	2382	2248	2248	2012	1925	1854	1783	1736
1 Row Prop	4781	4457	4457	3992	3858	3676	3582	3487
2 Row Prop	7171	6714	6714	5980	5791	5514	5333	5191

\*Information provided are for reference only. Please ensure that all design are checked by professional engineers.

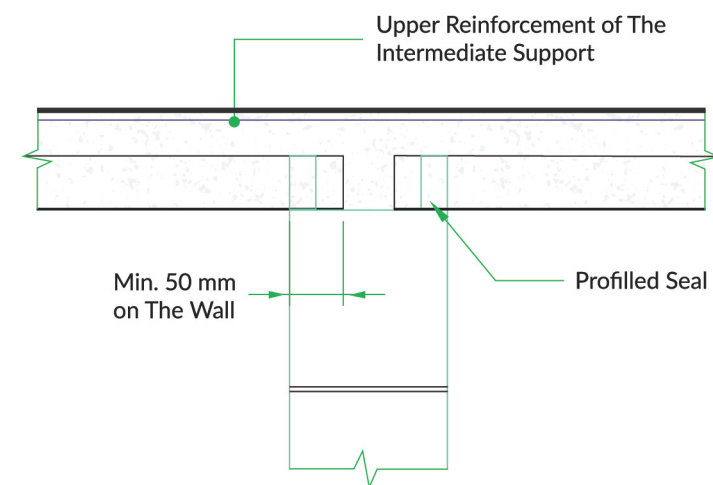
## CONSTRUCTION DETAILS



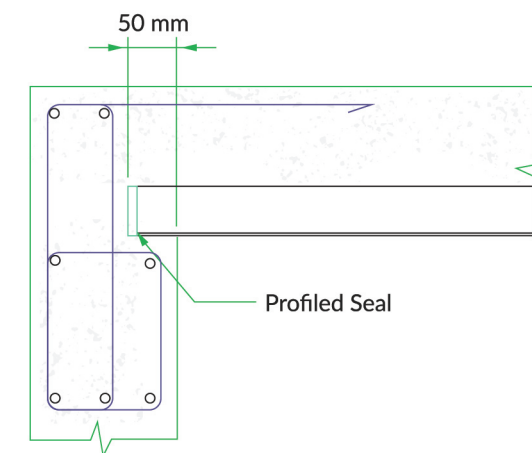
**FIXING TO THE OUTER  
WALL OF CELLAR**



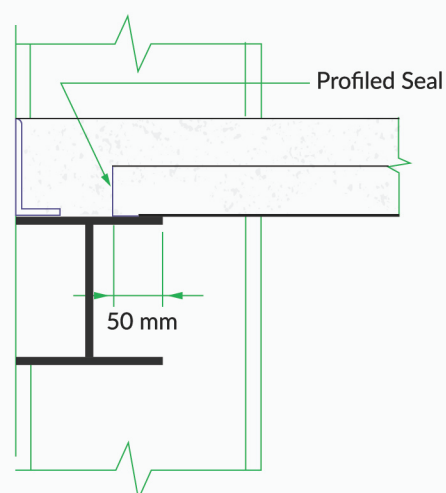
**EDGE SUPPORT:  
CONCRETE WALL**



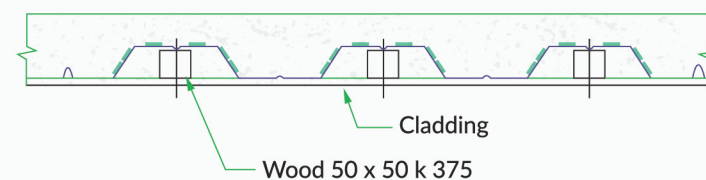
**FIXING TO A SUPPORTING  
PARTITION WALL**



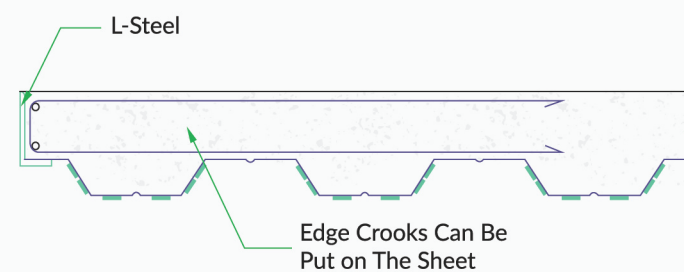
**FIXING TO A REINFORCED  
CONCRETE BEAM**



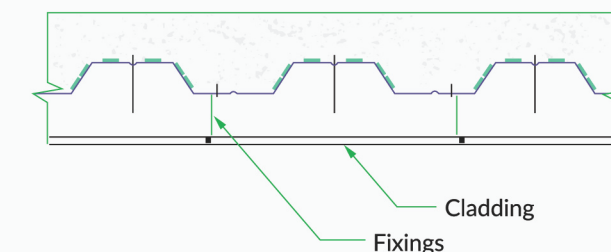
**FIXING TO A  
STEEL FRAME**



**FIXING CLADDING TO  
A SEPARATE FRAME**



**EDGE SUPPORT: FREE EDGE**



**SUSPENDED CEILING**



LOAD/SPAN TABLES (NORMAL WEIGHT CONCRETE)

This tables give the maximum span (m) for different thickness of BrisDeck 51 composite slabs.  
The weight pf the steel sheet and concrete have been taken into account.  
Concrete Garde: C25 (25 MN m²) and C35 (35 MN/m²)

Imposed Load: 2.5 kN/m²

Slab Depth (mm)	Steel Thickness (mm)	Single Span		Two Spans		Three Spans		Four Spans	
		C25	C35	C25	C35	C25	C35	C25	C35
100	0.8	3.2	3.2	2.5	3.1	2.8	3.4	2.7	3.3
100	1.0	3.2	3.6	2.5	3.1	2.8	3.4	2.7	3.3
120	0.8	3.3	3.4	3.2	3.7	3.5	4.0	3.4	3.9
120	1.0	3.6	3.8	3.2	3.7	3.5	4.0	3.4	3.9
140	0.8	3.5	3.6	3.7	4.3	4.1	4.3	3.9	4.3
140	1.0	3.8	3.9	3.7	4.3	4.1	4.7	3.9	4.6
160	0.8	3.6	3.7	4.2	4.6	4.3	4.4	4.4	4.5
160	1.0	3.9	4.0	4.2	4.8	4.6	4.9	4.4	5.0
180	0.8	3.7	3.8	4.5	4.7	4.4	4.5	4.5	4.6
180	1.0	4.1	4.2	4.5	5.1	4.9	5.0	4.8	5.0
200	0.8	3.8	3.9	4.7	4.7	4.5	4.6	4.6	4.6
200	1.0	4.2	4.3	4.9	5.2	5.0	5.0	5.0	5.0
220	0.8	3.9	3.9	4.7	4.8	4.5	4.6	4.6	4.7
220	1.0	4.3	4.3	5.1	5.3	5.0	5.0	5.0	5.1
240	0.8	3.9	3.9	4.8	4.8	4.6	4.7	4.7	4.7
240	1.0	4.3	4.3	5.3	5.4	5.0	5.1	5.1	5.2

\*Information provided are for reference only. Please ensure that all design are checked by professional engineers.

Imposed Load: 5.0 kN/m²

Slab Depth (mm)	Steel Thickness (mm)	Single Span		Two Spans		Three Spans		Four Spans	
		C25	C35	C25	C35	C25	C35	C25	C35
100	0.8	2.7	2.8	2.1	2.7	2.3	2.9	2.9	2.3
100	1.0	2.8	3.0	2.1	2.7	2.3	2.9	2.9	2.3
120	0.8	2.9	3.0	2.8	3.2	3.0	3.5	3.5	2.9
120	1.0	3.2	3.3	2.8	3.2	3.0	3.5	3.5	2.9
140	0.8	3.1	3.2	3.3	3.8	3.6	3.8	3.8	3.5
140	1.0	3.4	3.5	3.3	3.8	3.6	4.1	4.1	3.5
160	0.8	3.2	3.3	3.7	4.1	3.9	3.9	3.9	3.9
160	1.0	3.6	3.6	3.7	4.3	4.0	4.3	4.3	3.9
180	0.8	3.3	3.4	4.1	4.3	3.9	4.0	4.0	4.0
180	1.0	3.7	3.8	4.1	4.7	4.4	4.5	4.5	4.3
200	0.8	3.5	3.5	4.3	4.3	4.1	4.2	4.2	4.2
200	1.0	3.8	3.9	4.5	4.8	4.6	4.6	4.6	4.6
220	0.8	3.6	3.6	4.4	4.4	4.2	4.3	4.3	4.3
220	1.0	3.9	3.9	4.8	4.9	4.7	4.7	4.7	4.7
240	0.8	3.6	3.6	4.5	4.5	4.3	4.3	4.3	4.3
240	1.0	4.0	4.0	4.9	5.0	4.7	4.8	4.8	4.8

\*Information provided are for reference only. Please ensure that all design are checked by professional engineers.



LOAD/SPAN TABLES (NORMAL WEIGHT CONCRETE)

Imposed Load: 10.0 vkN/m²

Slab Depth (mm)	Steel Thickness (mm)	Single Span		Two Spans		Three Spans		Four Spans	
		C25	C35	C25	C35	C25	C35	C25	C35
100	0.8	2.2	2.3	1.7	2.2	1.8	2.3	1.8	2.2
100	1.0	2.2	2.4	1.7	2.2	1.8	2.3	1.8	2.2
120	0.8	2.4	2.5	2.3	2.7	2.4	2.8	2.4	2.8
120	1.0	2.6	2.8	2.3	2.7	2.4	2.8	2.4	2.8
140	0.8	2.6	2.7	2.8	3.2	2.9	3.1	2.8	3.2
140	1.0	2.8	2.9	2.8	3.2	2.9	3.4	2.8	3.3
160	0.8	2.8	2.8	3.2	3.4	3.2	3.2	3.2	3.3
160	1.0	3.0	3.1	3.2	3.7	3.4	3.6	3.3	3.7
180	0.8	2.8	2.9	3.5	3.6	3.4	3.4	3.4	3.5
180	1.0	3.2	3.2	3.5	4.0	3.7	3.8	3.7	3.9
200	0.8	3.0	3.0	3.6	3.7	3.6	3.6	3.6	3.6
200	1.0	3.3	3.4	3.9	4.2	3.9	3.9	3.9	4.0
220	0.8	3.1	3.2	3.8	3.9	3.6	3.6	3.6	3.7
220	1.0	3.4	3.5	4.0	4.3	4.0	4.1	4.1	4.1
240	0.8	3.1	3.2	3.9	3.9	3.7	3.8	3.8	3.8
240	1.0	3.6	3.6	4.0	4.4	4.1	4.2	4.1	4.3

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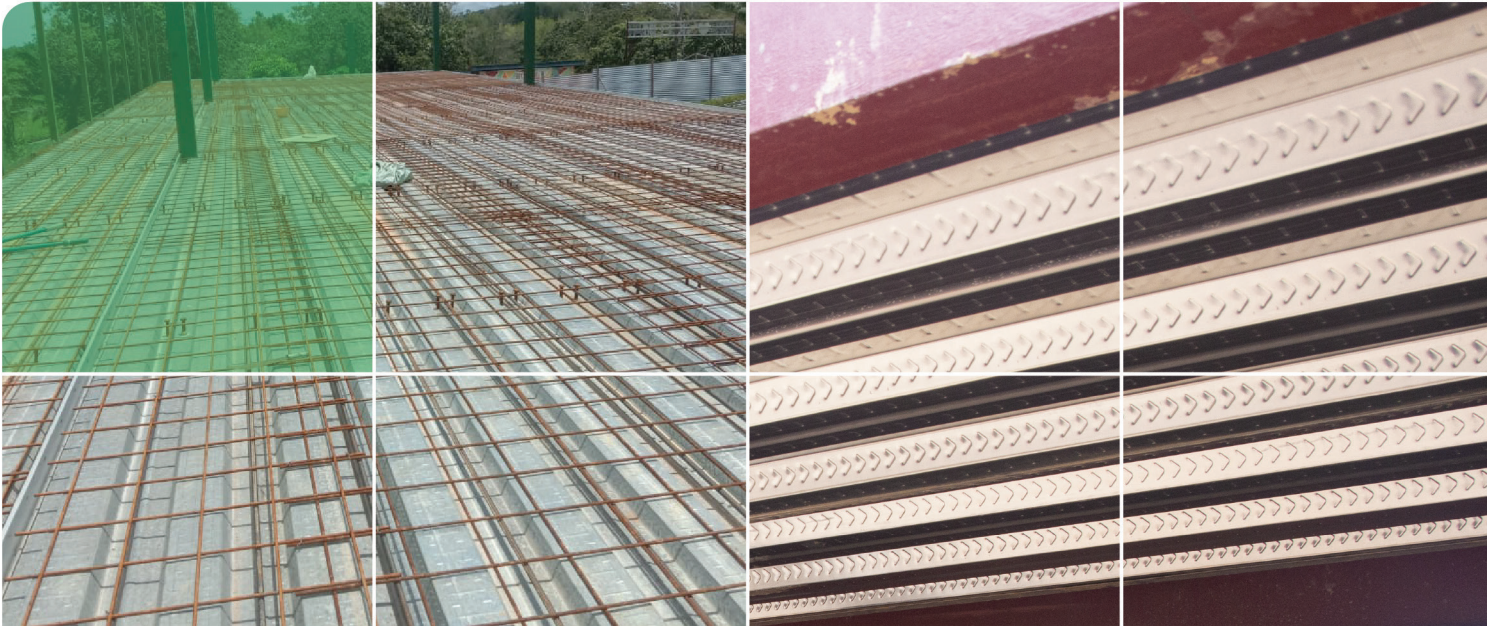
The Design and Installation of  
BrisDeck 51 Composite Slab

The conventional design principles for reinforced concrete slabs can be used in designing composite slabs. The area of steel sheet is usually enough for underside reinforcement.

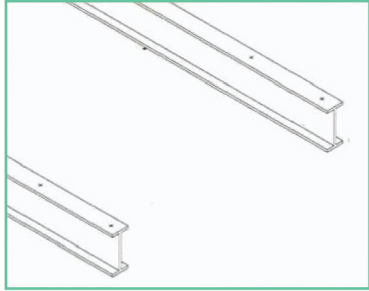
Transverse reinforcement is not needed if the load can be considered even and 1.5 - 2.5 kN/m². If transverse reinforce is needed it can be put straight on the steel sheets.

In the edges of the slabs normal reinforcement used. If the slab is a continuous structure upper reinforcement is used in the area above the support. The bearing of the Bristeel BrisDeck 51 composite slab should be at least 50 mm along the supporting walls and intermediate supports. The thickness of the composite slab should be at least 100 mm. Laying the profiled steel sheet from is quick and easy. The sheets are delivered cut to size.

The sheets are set to their places, the seams are fixed with rivets distrubuted along the seam with a spacing not exceeding 500 mm, the ends of the sheets are closed with profiled seals, steel strips or an angle head roll grinder. Thinner sheets can be cut with shears.

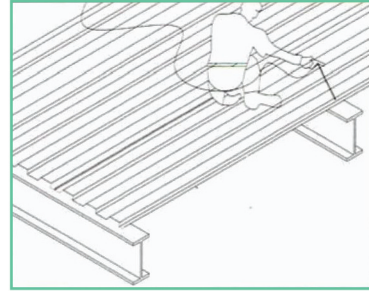


## INSTALLATION PROCEDURES



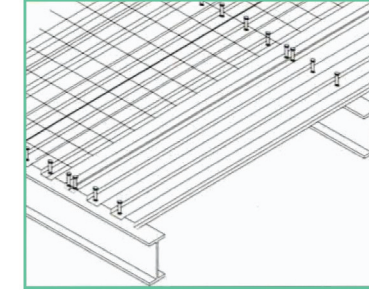
### STEP 1

Clean the floor steel structure and execute marking as per installation drawings.



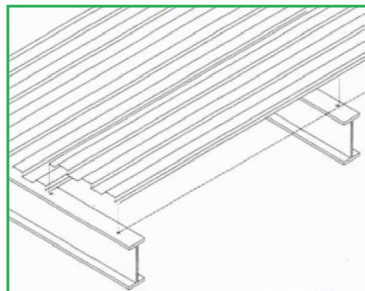
### STEP 3

Perform penetrating puddle weld to join deck plates and beams. Welding instructions and procedures must be strictly followed.



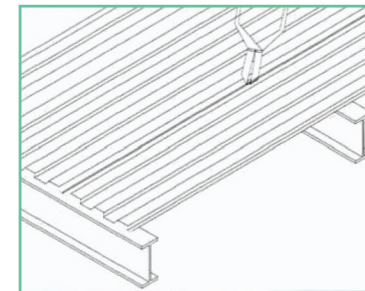
### STEP 5

Once the installation of deck plates is completed, shear studs are fixed to form composite beam, followed by placing reinforcement bars over the deck.



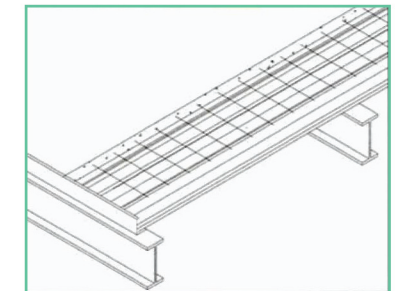
### STEP 2

By following installation drawings and marking lines, place Deck Plate BSC-51 side by side and tack weld.



### STEP 4

Male lip and female lip of deck plates are punched with button punching tool at 600 mm interval.



### STEP 6


Secure all necessary accessories and reinforcing member and pour mixture concrete over the floor decking to the required thickness.



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