Temporary Works forum

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Stability of Reinforcement Cages Prior to Concreting

Document: TWf2013: 01 (Published: October 2013)
http://twforum.org.uk/publications/public-twf-documents/

Addendum

3.2.1 Spacing of mats

"… It is suggested that the effective length of the strut is considered as 1.5 times the distance between the mats. Table 2 and 3 are based on using grade 500 reinforcing steel and a factor on load of 1.5 …".

Query

A query has been raised seeking clarification of Table 3 in TWf2013: 01.

Comment

There is the potential that the failure mechanism is the failure of the top horizontal section of the reinforcing bar with a centrally placed distribution bar. The bending moment needs to be considered in this section based upon the length (dimension A on shape code 98) and a moment, taken as PL/8 for an encastré member with a mid-span point load.

Accordingly, the guidance note will be updated when next revised.

Table 3. Working capacity of chair elements – 2 legs (kN)

Based on Shape Code 98, A, C, D = 500mm, B to suit cage. Capacity is 2 x Pult / 1.5.

Depth between mats (mm)	250	500	750	1000	1250	1500
H12 leg	16.9	4.6	X	X	X	X
H16 leg	49.1	14.1	6.5	X	X	X
H20 leg	105.8	33.6	15.6	8.9	X	X
H25 leg	Y	78.8	37.3	21.5	14.0	X
H32 leg	Y	Y	101.9	58.7	38.0	26.5

Notes: *X indicates an element that is too slender , Y indicates a dimension that is too small to bend*

Dimension A to suit bending capacity of chair reinforcement under load applied from distribution reinforcing bar(s) (Typically 150-500mm)

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