2.2.1 FLOORS

2.2.1.5 TEE-BEAMS

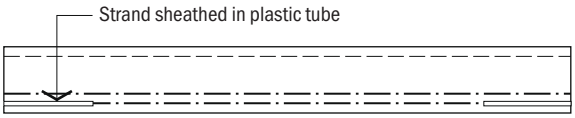
TYPICAL IMPOSED-ACTION CAPACITY

The Charts show indicative imposed-action capacities in flexure for units with 60-mm topping. Permanent actions should be converted to equivalent imposed actions using ultimate load combination factors. Two quantities of prestress are shown for each depth, at a typical eccentricity. The two curves, for each depth, define a zone of capacity verses span. Shear reinforcement, in addition to the minimum required by AS 3600 Section 8, may be required for these loadings.

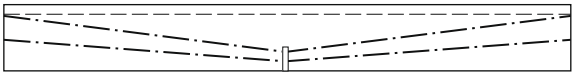
Deflection or debonding of the strands is usually required to control transfer stresses as illustrated adjacent. Higher capacities can be achieved by closer grouping of the strand. As a guide, the maximum eccentricity using deflected strands is about 1.75 times the lower kern distance of the unit. This should keep the transfer strength within the preferred range of 25 to 35 MPa. The graphs are curtailed for those sections that require a minimum span for a transfer strength of 35 MPa in the central quarter. The long-term camber depends on location and amount of prestress and the permanent action. It must be assessed for each application.

Highly-stressed or shallow units may exceed serviceability requirements. In particular, long-term hog growth can affect internal finishes and partitions. Vibration response should be checked for the particular application.

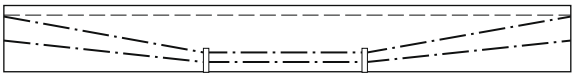
STRESS CONTROL METHODS (In Order of Preference)



1 Debonded Strand

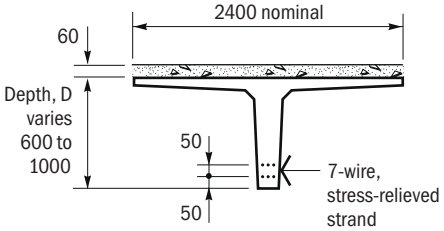


2 Single-Point Deflection



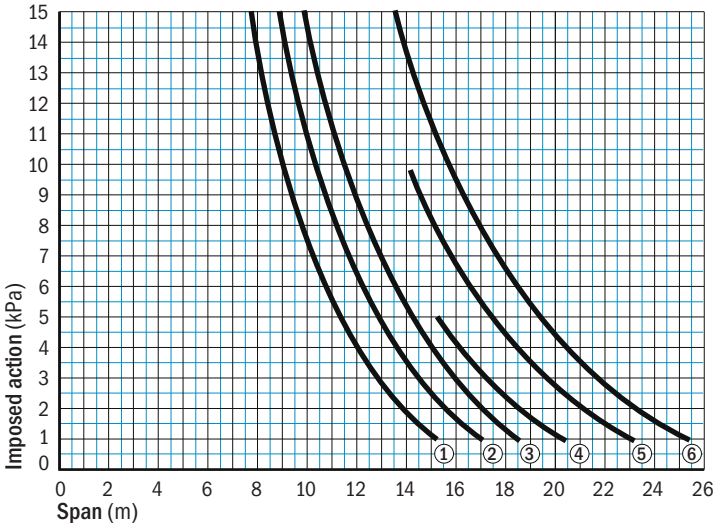
3 Double-Point Deflection

SINGLE-TEES WITH 60-mm TOPPING

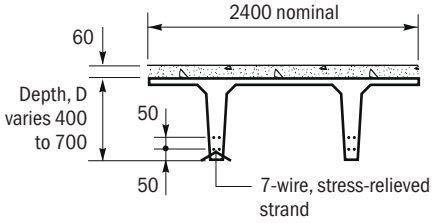


Key to Curves in Live Load Capacity Chart

CURVE	'D'	STRANDS	CURVE	'D'	STRANDS
①	600	6 x 12.7 dia	④	600	12 x 12.7 dia
②	800	6 x 12.7 dia	⑤	800	12 x 12.7 dia
③	1000	6 x 12.7 dia	⑥	1000	12 x 12.7 dia



DOUBLE-TEES WITH 60-mm TOPPING



Key to Curves in Live Load Capacity Chart

CURVE	'D'	STRANDS	CURVE	'D'	STRANDS
①	400	4 x 12.7 dia	⑤	400	10 x 12.7 dia
②	500	4 x 12.7 dia	⑥	500	10 x 12.7 dia
③	600	4 x 12.7 dia	⑦	600	10 x 12.7 dia
④	700	4 x 12.7 dia	⑧	700	10 x 12.7 dia