TN 135

DISCUSSION

Prestressed beams on elastic foundations

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I have recently been interested in finding the moments induced in a foundation which was transferring a horizontal thrust to the ground, but have been unable to get a value of $M_{\max}$ from the Author's formula for M and V . Could the Author please explain in detail the necessary steps entailed? His method should then be very useful to designers working on thick foundation slabs.

Dr Scarlat

A general expression of the maximum moment would be very complicated and for that reason I have solved the problem in two stages: by first finding the section where the maximum moment occurs (equation (20a)) and then calculating the corresponding bending moment (equation (19a)).

27. Solving equation (20a) involves a trial and error procedure and here the tables of the auxiliary functions f_2 may be a great help. Unfortunately it is not feasible to reproduce them in full in a Technical Note.