ENGLISH SUMMARY

PENTTALA, VESA, Torsion of thick-walled box girders. Rakenteiden Meka-
niikka 9 (1976) 2 p. 1...16

   Torsion of thick-walled, straight box girders made of homogeneous
and isotropic material is discussed in the paper. A solution is
derived for the problem of restrained torsion. The theory is based
on the assumption that the transverse distribution of normal stresses
in restrained torsion is affine to the distribution of the axial dis-
placements of the same girder in Saint Venant torsion.
   The theory is applied to box beams of rectangular cross section,
and the results are compared with test results. The experiments were
performed with box beams made of polymethylmethacrylate.

MÄKELÄ, KARI, Rectangular reinforced beam loaded by temperature gradient.
Rakenteiden Mekaniikka 9 (1976) 2 p. 17...26

   The article concerns with author's study to develop an experimental
method to produce in a reinforced concrete beam with a rectagular cross
section a linear heat field and to measure internal forces and stresses
generated by the heat field. Also a simple mathematical model was tried
to develop for that kind of loading case. First the applied testing
system and the tested beams are introduced and then the conclusions from
the results and the simple mathematical model are presented.

STEFAN, HEISE, Statical formulae for closed circular rings under various
loading schemes. Rakenteiden Mekaniikka 9 (1976) 2 p. 27...35

   Expressions for force quantities of closed circular rings subjected to
various loadings have been worked out in order to facilitate the work of
practicing design engineers. Previously unpublished loading cases are
also included. The force method has been applied for solving the ring
as a three times statically indeterminate structure. Solutions have
been worked out applying the concept of elastic center.