Mathematical model for computing parameters of a longitudinally corrugated conical shell supported by frames

© A.A. Dudchenko, V.N. Sergeev

Moscow Aviation Institute, Moscow, 125993, Russia

The paper investigates the stress-strain state of a thin shell using a mathematical model according to which a longitudinally corrugated shell may be represented by a continuous set of stringers oriented along the generatrices of a conical surface. The stringers are only linked longitudinally, each of them undergoing just tension-compression and bending in the axial section plane of the rotational shell. A conical shell supported by a discrete set of frames is a discrete-continuous system studied by means of the generalised function approach. The authors derived integrodifferential conical shell equilibrium equations in terms of generalised displacements, which are of interest for those specialising in calculating thin shell structure parameters.

Keywords: *mathematical model, conical shell, discrete set of frames, generalised function approach*

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Dudchenko A.A., Dr. Sc. (Eng.), Professor, Department of Moscow Aviation Institute.
e-mail: a_dudchenko@mail.ru

Sergeev V.N., Cand. Sc. (Eng.), Assoc. Professor, Department of Moscow Aviation Institute. e-mail: k603sergeev@mai.ru