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NASA TECH BRIEF

Marshall Space Flight Center

Computer Design of Extension Springs

The problem:

Tension spring requirements were previously calculated by hand for various sets of input parameters. The design of such springs is a long and tedious operation, with the final selection often being the first spring to fit within the allowable limits.

The solution:

A computer program speeds up the design process of tension springs and simultaneously optimizes the design by varying the input.

How it's done:

The program is used in calculations for extension springs with hook ends. Input parameters consist of the maximum load limit, spring rate, material physical data, hook radius, and selected spring and wire diameters.

Notes:

1. This program is written in FORTRAN IV for use on the IBM-360 computer.
2. Requests for further information may be directed to:

   COSMIC
   112 Barrow Hall
   University of Georgia
   Athens, Georgia 30601
   Reference: B71-10473

Patent status:

No patent action is contemplated by NASA.

Source: D.R. Moore of
North American Rockwell Corp.
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