BOSOR5 ABSTRACT

BOSOR5 performs axisymmetric collapse and nonsymmetric bifurcation
buckling including elastic-plastic material and creep. Does not
supersede BOSOR4 because BOSOR5 has no modal vibration or linear
nonsymmetric stress analysis capabilities. Segmented or branched
multi-material, layered shells. Smeared stringers permitted to go
plastic. Static analysis only. Self-correcting strategy for solution
of the nonlinear prebuckling problem provides reasonably accurate
answers independent of the size of the load or time step. Welding
distortions and residual stresses can be generated by application
of thermal cycles. Discrete rings of arbitrary cross section can go
plastic. Input is interactive with considerable on line "HELP", as
with BOSOR4. Plotting as with BOSOR4. Considerable exercise by
many users over many years has shaken out bugs. Program runs fast.
Developer maintains BOSOR5.

SCOPE OF BOSOR5

In BOSOR5 a complex, branched, stiffened shell of revolution is
treated as an assemblage of shell segments or branches, each with its
own geometry (flat, cylindrical, spherical, etc), loading, wall
construction, and material properties. In this version of BOSOR5 you
provide the input data in a "conversationally" interactive mode on a
segment-by-segment basis.

Before beginning an interactive session you should already have
decided how to divide the structure that you are analyzing into
segments and branches, and you should have available to you all
dimensions and material properties and loading. You should also
have decided what kind of analysis to perform. The type of analysis
is controlled by a parameter called INDIC, as follows:

INDIC =

     0= nonlinear axisymmetric stress (and collapse) analysis,
    -2= stability determinant calculated for increasing load,
        until an eigenvalue is or eigenvalues are detected between
        two successive load steps Then a sequence of eigenvalue
        problems is set up in order to find the critical circumferen-
        tial wavenumber and corresponding critical load.
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    -3= same as INDIC = -2, except that the prebuckling states for
        the series of load steps must have been determined in a

previous run with INDIC = 0 or INDIC = -2.

BOSOR5 COMMANDS

bush-> bosor5log

BOSOR5 commands have been activated.
Below are the BOSOR5 commands, listed in the order in which you
would probably use them.

input - interactive input of data for each segment
assemble - concatenates the segment data files
bosorread - runs BOSOR5 pre-processor
mainsetup - interactive input of data for main processor
bosormain - runs BOSOR5 main processor
postsetup - interactive input of data for post processor
bosorpost - runs BOSOR5 post processor
bosorplot - generates plot files from most previous run
cleanup - delete all case files except for .DOC file
getsegs - generate segment files from .DOC file
modify - interactively modify a segment or global data file

Please consult the following sources for more information about BOSOR5:
1. .../bosor5/doc/bosor5st.ory (good idea to print this file)
2. Documents listed under HELP5 OVERVIEW DOC