

CDH/AUTOSPOT V1.1

December 2017

1. Introduction

CDH/AUTOSPOT version 1.1 has added the fourth type of nugget model (nmodel=4). This type nugget model is already available in SPOT version 4.5x, where it is referred as type newgrid 2. This type nugget model consists of a core part representing the nominal nugget and a support part, which surrounds the core part with a number of layers. The purpose of introduction of the support part is to address the loss of structural stiffness. The main feature of this type nugget model is that the support part has linearly reduced elastic modulus in its layers.

2. Usage

The parameters added in AUTOSPOT v1.1 for nugget model 4 are

In	Basic nugget circumferential edge length L_n in -nmodel=4 Default is 3.0
IrovlIn	Scaling factor to determine the layer dimension, L_r , of nugget in the radial direction. $L_r = L_n * IrovlIn$ Default is 1.0
nrsup	Number of layers in the support region for nugget model 4. Disable support region by setting nrsup to -1. Default is 0 (the actual layer is determined automatically by L_r)
rsovrn	Scaling factor to determine the radius of support zone R_s for nugget model 4 Default is 2.0
mesh_t	Number of layers in the thickness direction for nugget model 4 Default is 2
ym	Elastic modulus of nugget material data. Default is 210000
yms	Scaling factor of Young's modulus on the outer layer of support region. Default is 0

Other parameters added AUTOSPOT v1.1 are

inclisf	If inclisf is set to 1 AUTOSPOT adds a Nastran comment line (\$INCLUDE 'structure.dat') to the output file 'structure_spot_fem.dat'. By remove \$ symbol in this line, the output file 'structure_spot_fem.dat' gives the connected structure. Default is 0.
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sfligned If this is set to 1 autospot aligns spot nugget faces to flange planes.

3. Installation guide

Executable

AUTOSPOT is available for Linux and Windows platform. Download the latest AUTOSPOT release and unpack it to a folder. Edit the path definitions in the run script 'autospot.csh' in accordance with the requirements of your installation.

License

Download the latest CDH license server for AUTOSPOT. The following environmental variables are needed:

SPOT_SERVER	the license server
SPOT_SERVER_PORT	default 0

The run script 'autospot.csh' in the AUTOSPOT release includes an example for setting all required variables.

Note that existing CDH/SPOT licenses may be used with AUTOSPOT.

Contact Information

For any technical problems associated with CDH/SPOT program, please contact your local CDH office or CDH AG in Germany:

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