

ZZZZ341 - Validation of the following pressure function of Summarized

space:

This test validates the application of a following pressure whose intensity is function of the variables of space (X Y , Z) in 2D and in 3D:

- A cube, whose Poisson's ratio is null, is initially put in uniform compression following Y by a following pressure function of space;
- Then a rigid rotation is applied to the cube around one of its edges. The multiplying function of the loading of pressure is null at this time, the cube is thus slackened.
- Finally to the last moment of computation, the following loading of pressure is again applied. This loading is function of space so that the new position of the cube makes that the pressure applied is now according to X .

One raises the reaction of bearing on the level of the clamped face. The solution is analytical.

One will note the characteristic of processing of the loading of following pressure function of space:

-initially, the geometry is reactualized to take account of the change of norm

-in the second time, the intensity of the pressure is calculated **starting from the reactualized variables of space**

This test comprises two modelizations:

- modelization a: D_PLAN
- modelization b: 3D

This documentation is voluntarily brief.