

ZZZZ315 – Validation of the command PROD_MATR_CHAM (real matrix)

Summarized:

The goal of the test is to validate of the command programming PROD_MATR_CHAM for the real matrixes (routine `mrmult.f`). One

checks 3 cases for nonhomogeneous **boundary conditions** : Eliminated

- 1) boundary conditions (AFFE_CHAR_CINE) dualized
- 2) Boundary conditions (AFFE_CHAR_MECA + DDL_IMPO + LIAISON_DDL) Mixture
- 3) between boundary conditions dualized and eliminated Principle

1 from the test

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each case: One solves

- (commands TO FACTORIZE + TO SOLVE) a linear system with $K \times U = F$ and known K F . One obtains. One U carries out
- then the product with $FF = K \times U$ command PROD_MATR_CHAM and one checks that is equal FF to. Validation F

2 When

the boundary conditions all are dualisées, one checks that is quite FF equal to on all the F degrees of freedom. On the other hand

, when there exist eliminated boundary conditions, is FF equal to only on F the not eliminated degrees of freedom. On the eliminated degrees of freedom, is null FF .