

ZZZZ284 - Validation of the options CHAR_MECA_HYDR_R and CHAR_MECA_SECH_R

Summary:

This test is a data-processing test. It validates the elementary options of calculations CHAR_MECA_SECH_R and CHAR_MECA_HYDR_R by analogy with the option CHAR_MECA_TEMP_R

There exists only one modeling (A).

1 Principle of the test

- 1) An unspecified thermal calculation is carried out, from where a field of temperature.
- 2) One uses this field of temperature like "source" of deformation:
 - thermics : $\text{eps} = + \text{ALPHA} * (\text{TEMP} - \text{VALE_REF})$
 - of hydration : $\text{eps} = - \text{B_ENDOGE} * \text{HYDR}$
 - of drying : $\text{eps} = + \text{K_DESSIC} * (\text{SECH} - \text{VALE_REF})$

Note:

- *It is the same field of temperature ($TEMP$) who plays the part of $TEMP$, $HYDR$ and $SECH$.*
- *Coefficients $ALPHA$, B_ENDOGE , K_DESSIC , $TEMP_REF$ and $VALE_REF$ (temperature and drying) are selected to obtain the same deformation.*

- 3) One solves 3 mechanical problems with the 3 preceding loadings. One must obtain the same field of displacement for 3 calculations.

2 Reference solution

The 1st calculation (with the temperature) gives the solution of "reference" for two other calculations. Two other calculations validate CHAR_MECA_HYDR_R and CHAR_MECA_SECH_R.