

## ZZZZ284 - Validation of options CHAR\_MECA\_HYDR\_R and Summarized

---

### CHAR\_MECA\_SECH\_R:

This test is a data-processing test. It validates elementary computation options CHAR\_MECA\_SECH\_R and CHAR\_MECA\_HYDR\_R by analogy with option CHAR\_MECA\_TEMP\_R

There exists only one modelization (A).

## 1 Principle of the test

---

- 1) One carries out an unspecified thermal computation, from where a field of temperature.
- 2) One uses this field of temperature like “source” of strain:
  - thermal :  $\text{eps} = + \text{ALPHA} * (\text{TEMP} - \text{VALE\_REF})$
  - 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) which 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 strain.*
- 1) One solves 3 mechanical problems with the 3 preceding loadings. One must obtain the same field of displacement for 3 computations.

## 2 Reference solution

---

the 1st computation (with the temperature) gives the solution of “reference” for two other computations.  
Two other computations validate CHAR\_MECA\_HYDR\_R and CHAR\_MECA\_SECH\_R.