Namelist "Species_Wall_Boundary_Condition_Setup"

This data setup allow the user to handle the boundary conditions applied to the velocity components on walls. Walls are identified according to the orientation of their normal vector from the adjacent fluid-cell. They are named as :

- WEST : if the wall is located at the i-1 face-cell (in regard to a fluid-cell)
- EAST : if the wall is located at the i+1 face-cell.
- BACK : if the wall is located at the j-1 face-cell.
- FRONT : if the wall is located at the j+1 face-cell.
- SOUTH : if the wall is located at the k-1 face-cell.
- NORTH : if the wall is located at the k+1 face-cell.

For a sake of clarity, the data are defined for the the “WEST” wall only. The user can easily define the boundary conditions related to the other walls and velocity components by substituting the relevant character strings in the name of variables.
If the usual “zero mass flux” conditions are applied for all walls, this namelist could be omitted in the data file. The code use this boundary condition by default.
This namelist can be pooled with other ones of same type (for the temperature or velocity components) to form a wall boundary condition setup (see example … for more details). Don't forget to set the boolean data “End_of_Data_Block” at the end of the namelist. A “.true.” value means the end of the data block when several namelists are used to define several type of boundary conditions.

WEST_Species_BC_Option

- Type : integer value
- Select the type of the boundary condition applied to the species mass fraction and bounded to the WEST wall. The available options are :
  - 0 : Fixed value
  - 1 : Zero mass flux

WEST_Species_BC_Value

- Type : array of real values.
- The size of the array is defined by the species number. It constains the reference value of the species mass fraction. These data are only relevant whether WEST_Species_Option= 0.

End_of_Data_Block

- Type : boolean value
- Specify the end of the namelist or a group of this type of namelist (if true).

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