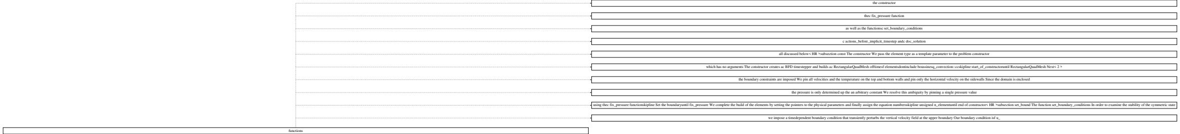
the constructor
thec fix_pressure function
as well as the functionsc set_boundary_conditions
c actions_before_implicit_timestep andc doc_solution
all discussed below< HR >subsection const The constructor We pass the element type as a template parameter to the problem constructor
which has no arguments The constructor creates ac BFD timestepper and builds ac RectangularQuadMesh offtimesf elementsdontinclude boussinesq_convection::ccskipline start_of_constructoruntil RectangularQuadMesh Next< 2 >
the boundary constraints are imposed We pin all velocities and the temperature on the top and bottom walls and pin only the horizontal velocity on the sidewalls Since the domain is enclosed
the pressure is only determined up the an arbitrary constant We resolve this ambiguity by pinning a single pressure value
using thec fix_pressure functionskipline Set the boundaryuntil fix_pressure We complete the build of the elements by setting the pointers to the physical parameters and finally assign the equation numbersskipline unsigned n_elementuntil end of constructor< HR >subsection set_bound The function set_boundary_conditions In order to examine the stability of the symmetric state
we impose a timedependent boundary condition that transiently perturbs the vertical velocity field at the upper boundary Our boundary condition isf u_
functions