Matlab computer program summary and dependencies

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**main.m**

1. Set some of the parameters values and solver options for the simulation from line 63 in the main file

(Example : p.T0 = 30 + 273.15 (initial gaz temperature)

1. To set the dimension and thermal conductivities of a specific reservoir, the file **fcnSelectPhysicalPropertiesOfCavity.m** need to be edited. 4 examples of reservoirs are given in the file. This function is called at line 70 in main file with a number (1 to 4) given in argument to select the reservoir.
2. Injection scenario is set from line 119 in main file. The function in the file **fcnInjectStoraExtractScenarioFunction.m**  can be edited to add any injection rate function or pressure rate function (see comments in the file). Two arguments (p.Fie, p.Gie) are given to select the scenario
3. Line 170 : SOLVE\_EQ = 1; % %(0-> no; 1->yes)

Equations are solved if SOLVE\_EQ = 1

1. Output figures can be modified form line 279

**fcnSelectPhysicalPropertiesOfCavity.m(…)**

fcnParametersForSolver(p)

**fcnInjectStoraExtractScenarioFunctions(…)**

If ScatterInterpFunctions.mat is not in main directory:

If (FIGURE1)

Plot figure 1

Save /Figures/Figure1FileName

If (FIGURE2)

Plot figure 2

Save /Figures/Figure2FileName

:

If (SOLVE\_EQ)

fcnSolve\_dmdt or fcnSolve\_dmdt\_kRvariable

fcnSolve\_dPdt or fcnSolve\_dPdt\_kRVariable

fcnGenerateHydrogenPropertiesFunctions()

fncCp0 ()