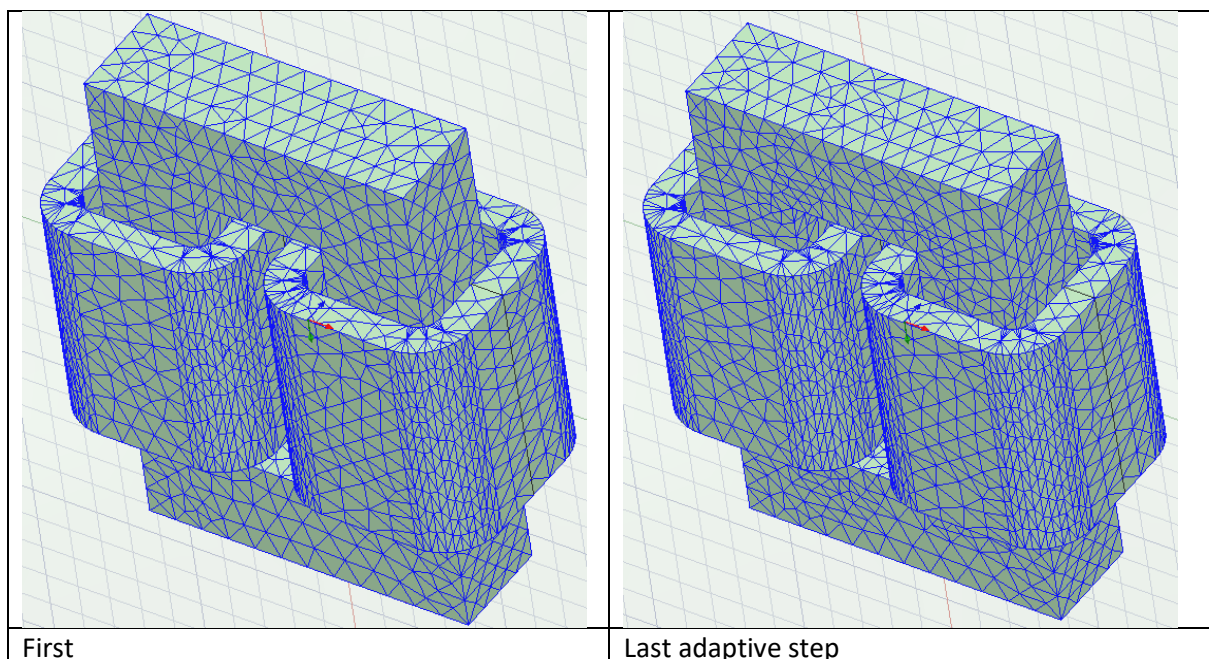
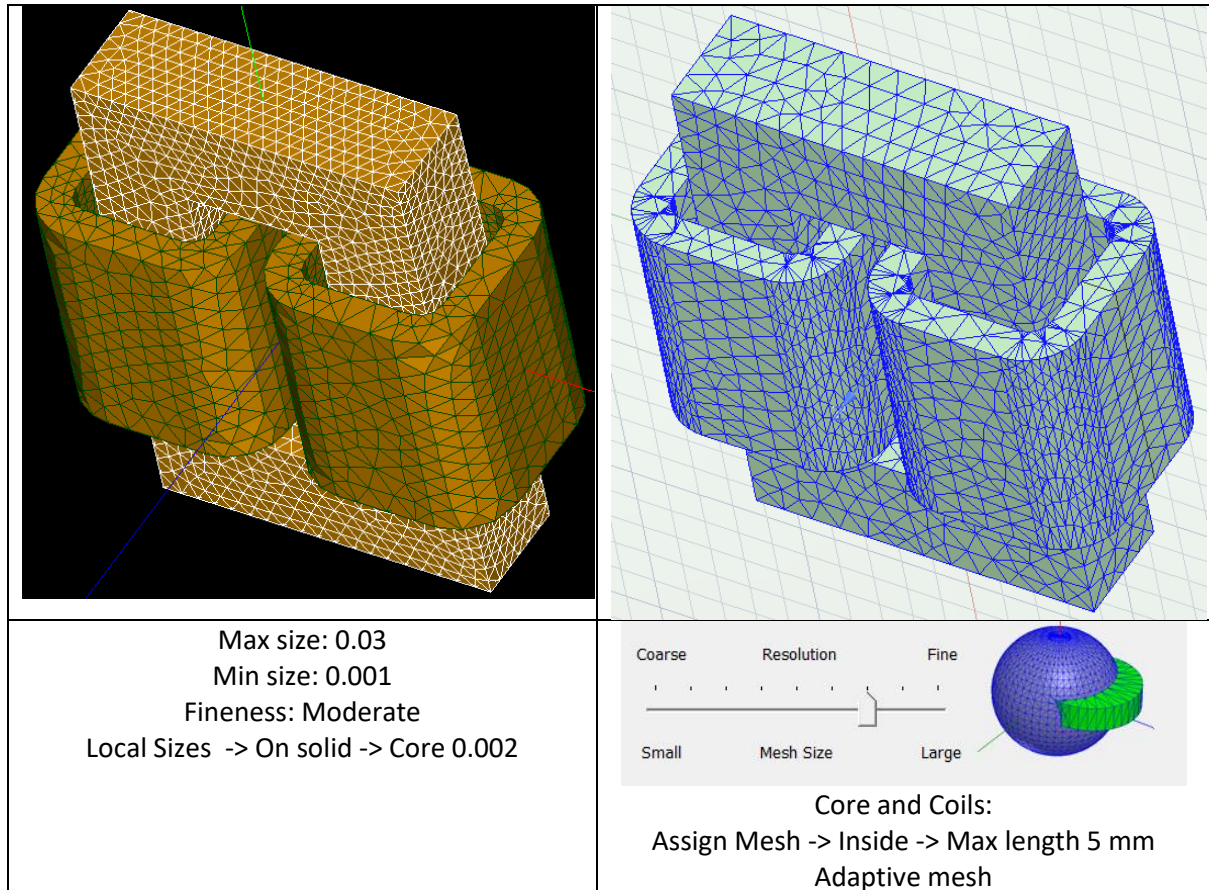
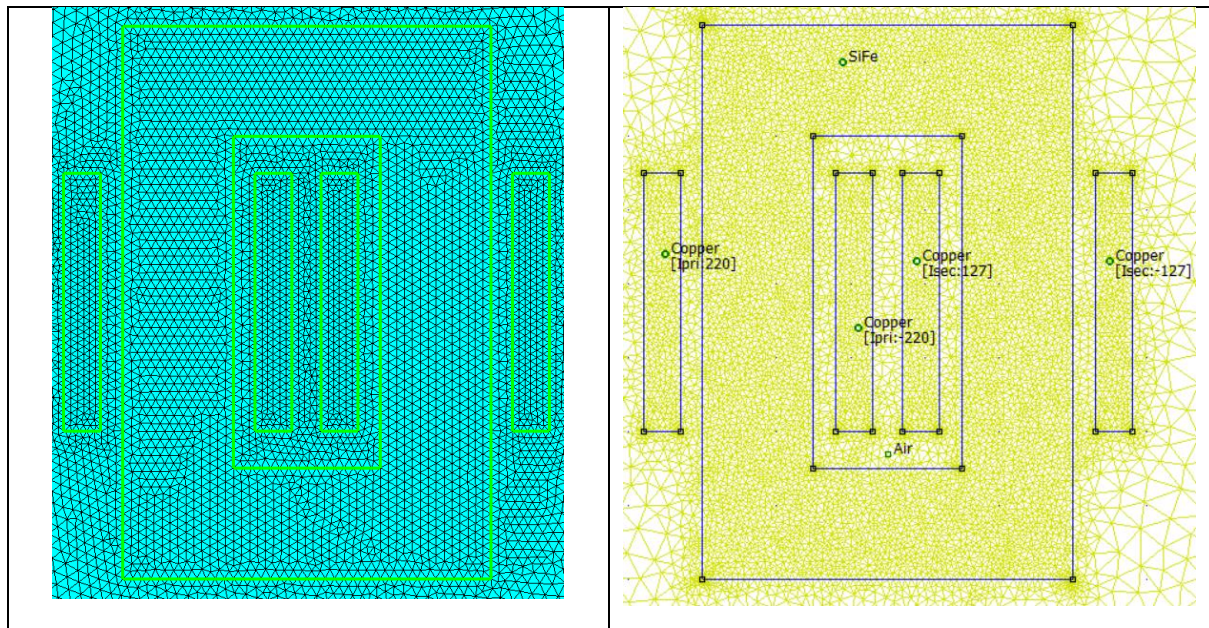


All results have the same range, these are not presented as the intention with the images is to give a qualitative idea.

Refining the mesh:



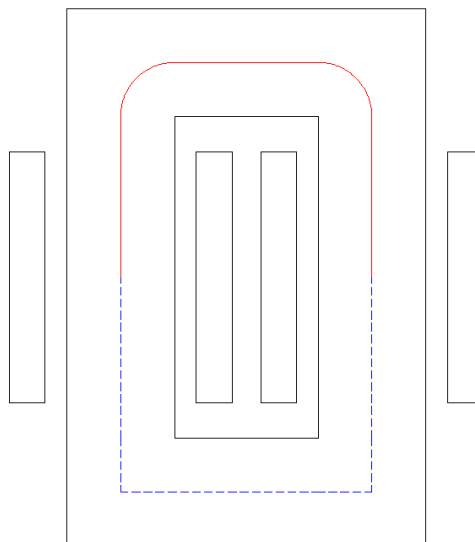
For 2D case:



With this mesh refinement, the results from Ansys Maxwell and Elmer FEM are in accordance. For two dimensional case, the mesh is presented as above.

The comparison against analytical calculations is carried considering the following approximations.

Mean core length calculated from two different approaches (red, round corners, and blue, straight corners).

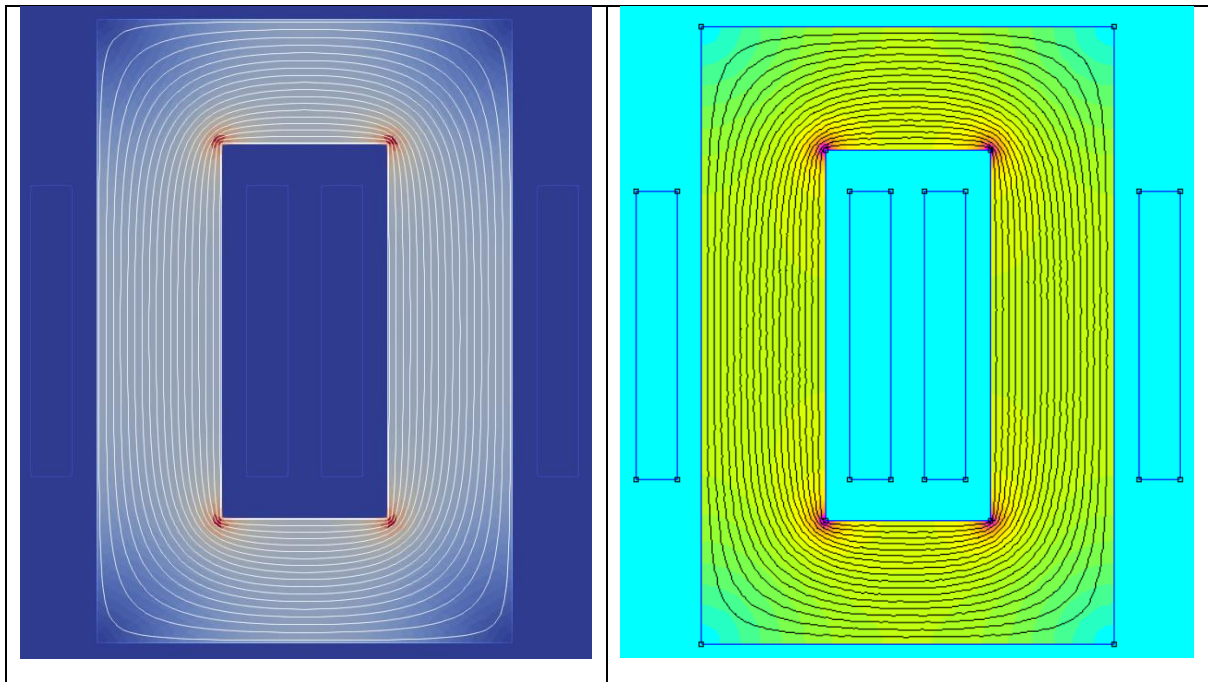


With this, we get the following parameters (mean length with round corners):

	Analytical (square) [mH]	Analytical (round) [mH]	Elmer [mH]	FEMM [mH]
Primary inductance	720.2	772.5	834.7	836.9
Primary leakage			0.621	0.622

Secondary inductance	240.0	257.4	278.2	278.9
Secondary leakage			0.207	0.207
Mutual inductance	415.7	446.0	481.5	482.7

Results for 2D simulation with primary current of 1 A.



For 3d case (only round corners, with better results)

	Analytical (round) [mH]	Elmer [mH]	FEMM [mH]
Primary inductance	772.5	840.2	840.1
Primary leakage		3.673	3.695
Secondary inductance	257.4	280.0	280.0
Secondary leakage		1.183	1.237
Mutual inductance	446.0	483.0	482.8

