Problem info

Problem type: AC Magnetics , frequency: 60 Hz,
Geometry model class: Axisymmetric
Problem database file names:

- Problem: *cup_FCL.pbm*
- Geometry: *Cup_fcl.mod*
- Material Data: *Cup_fcl.dhe*
- Material Data 2 (library): *none*
- Electric circuit: *cup_FCL.qcr*

Results taken from other problems:

- *none*

Geometry model

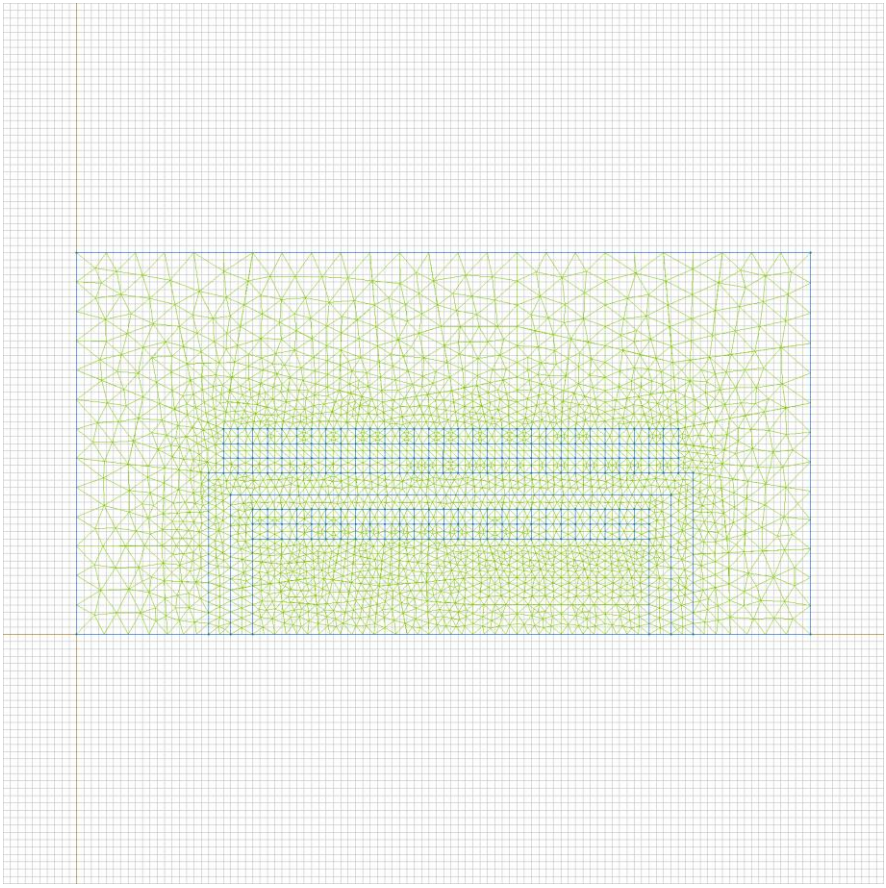


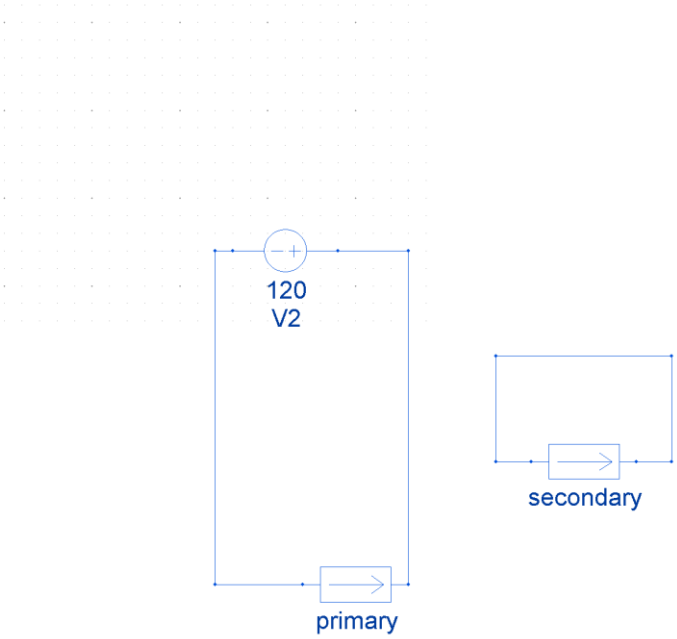
Table 1. Geometry model statistics

	With Label	Total
Blocks	5	151
Edges	1	376
Vertices	0	226

Number of nodes: 2747.

Electric circuit

Coupled electric circuit



Circuit elements:

QuickField block 'primary'
Voltage source V2=120 [V] 0 [deg]
QuickField block 'secondary'

Labelled objects

There are following labelled objects in the geometry model (Material Data file could contain more labels, but only those labels that assigned to geometric objects are listed)

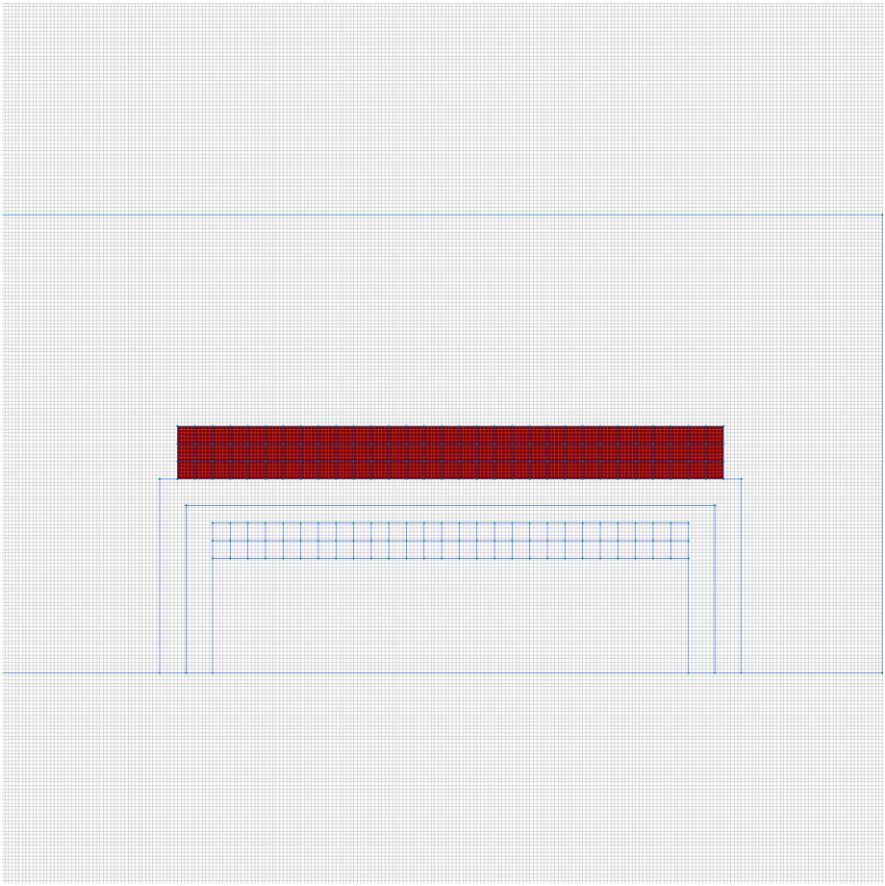
Blocks:	Edges:	Vertices:
• primary • secondary • air • mumetal • sup2 •	• sides •	

Detailed information about each label is listed below.

Labelled objects: block "primary"

There are (93) objects with this label

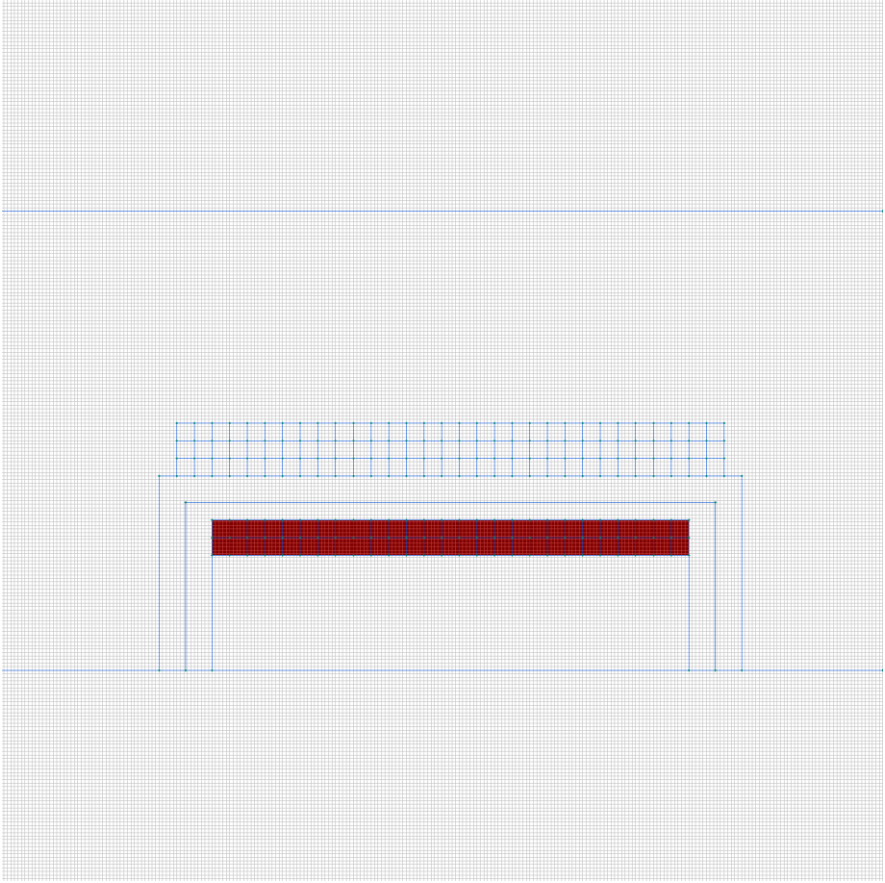
Relative magnetic permeability: mu_x=1, mu_y=1
Electric conductivity: sigma=59600000 [S/m]
Current density: j=0 [A/m2], phase 0 [deg]
Conductor's connection: in series



Labelled objects: block "secondary"

There are (54) objects with this label

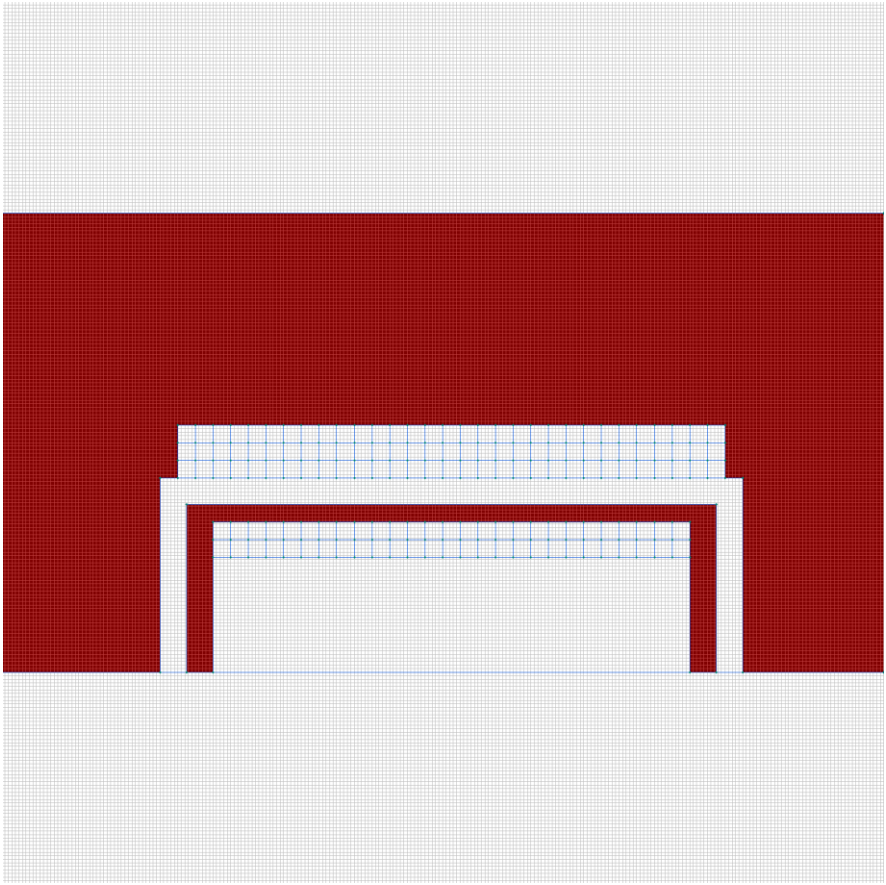
Relative magnetic permeability: mu_x=1, mu_y=1
Electric conductivity: sigma=56000000 [S/m]
Current density: j=0 [A/m2], phase 0 [deg]
Conductor's connection: in series



Labelled objects: block "air"

There are (2) objects with this label

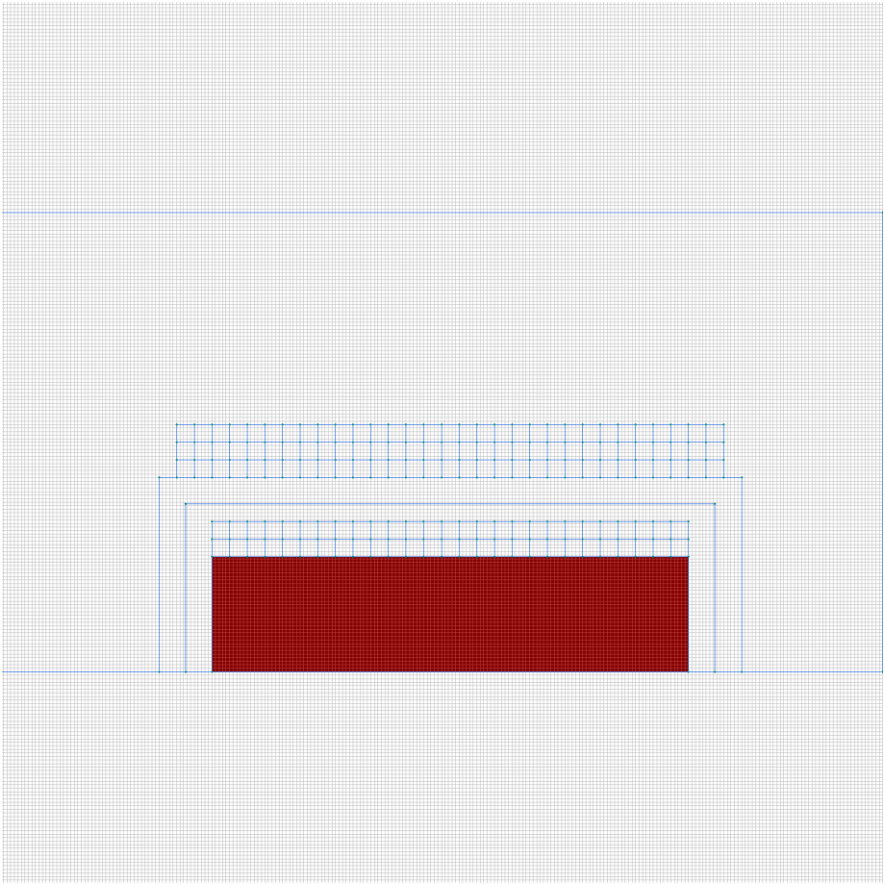
Relative magnetic permeability: mu_x=1, mu_y=1
Electric conductivity: sigma=0 [S/m]
Current density: j=0 [A/m2], phase 0 [deg]
Conductor's connection: in parallel



Labelled objects: block "mumetal"

There are (1) objects with this label

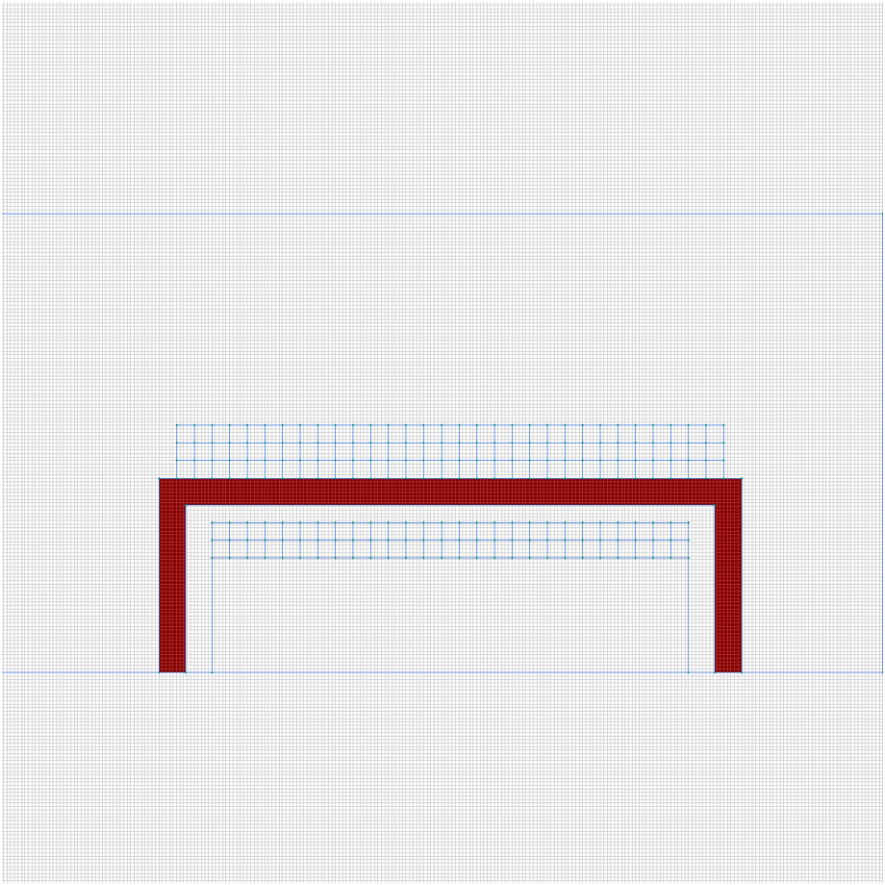
Relative magnetic permeability: mu_x=10000, mu_y=10000
Electric conductivity: sigma=0 [S/m]
Current density: j=0 [A/m2], phase 0 [deg]
Conductor's connection: in parallel



Labelled objects: block "sup2"

There are (1) objects with this label

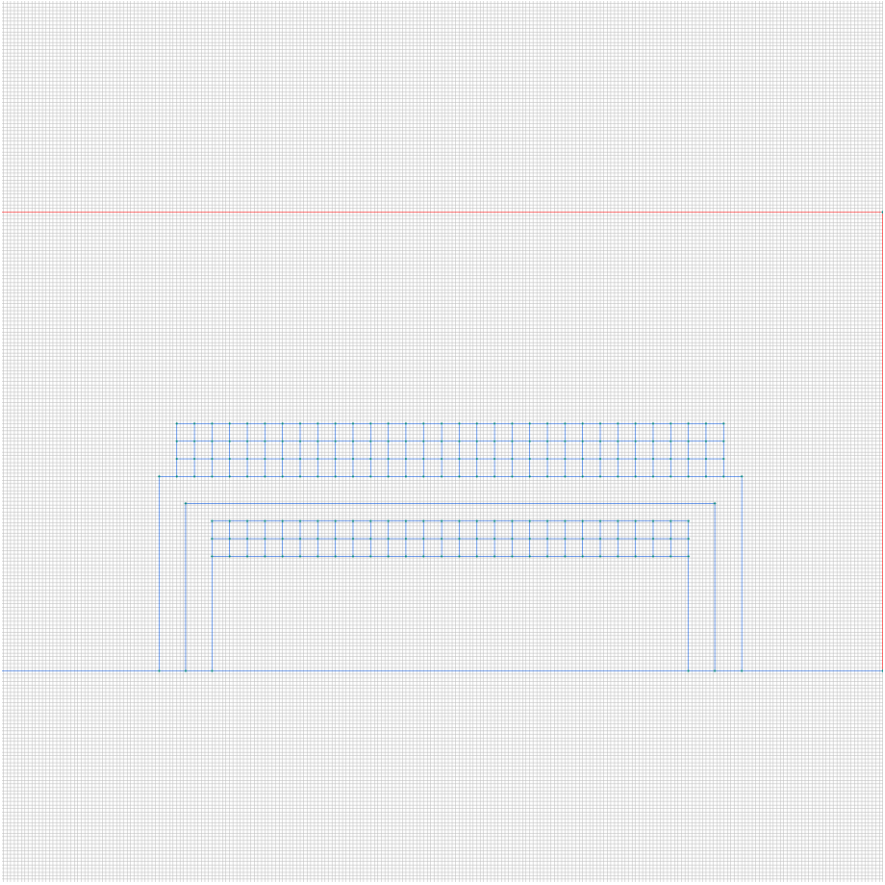
Relative magnetic permeability: mu_x=0.00001, mu_y=0.00001
Electric conductivity: sigma=0 [S/m]
Current density: j=0 [A/m2], phase 0 [deg]
Conductor's connection: in parallel



Labelled objects: edge "sides"

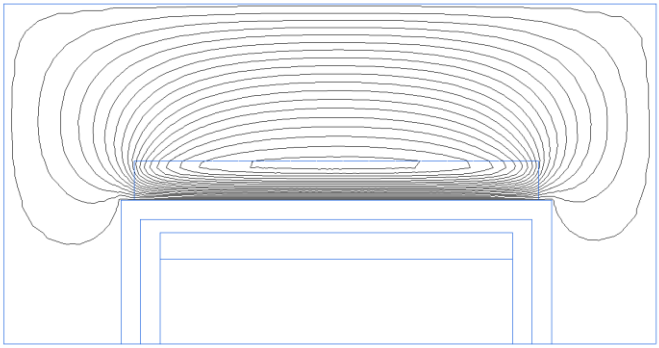
There are (3) objects with this label

Magnetic potential: A=0 [Wb/m], phase 0 [deg]



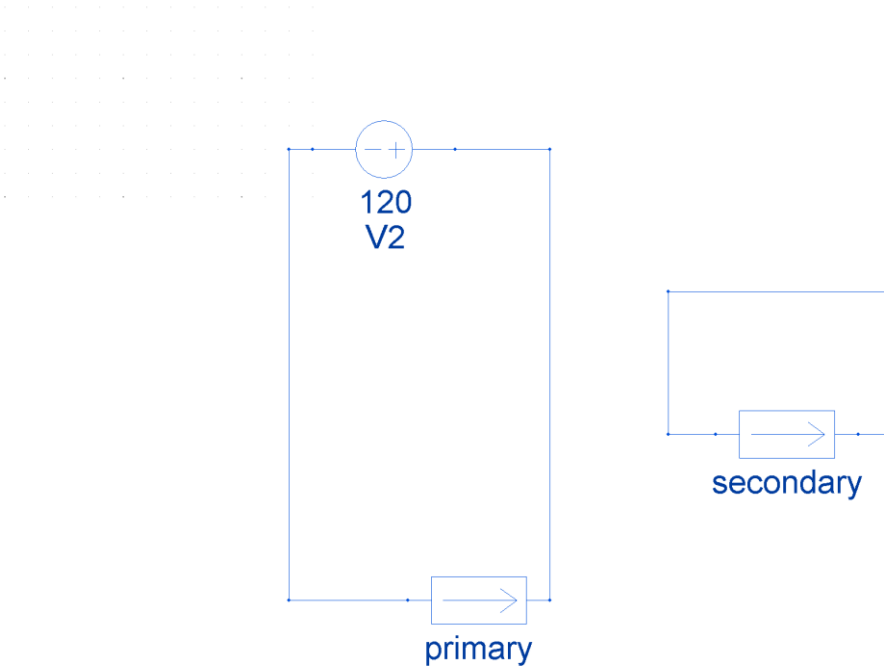
Results

Field lines



Results

Electric circuit currents



Circuit elements:

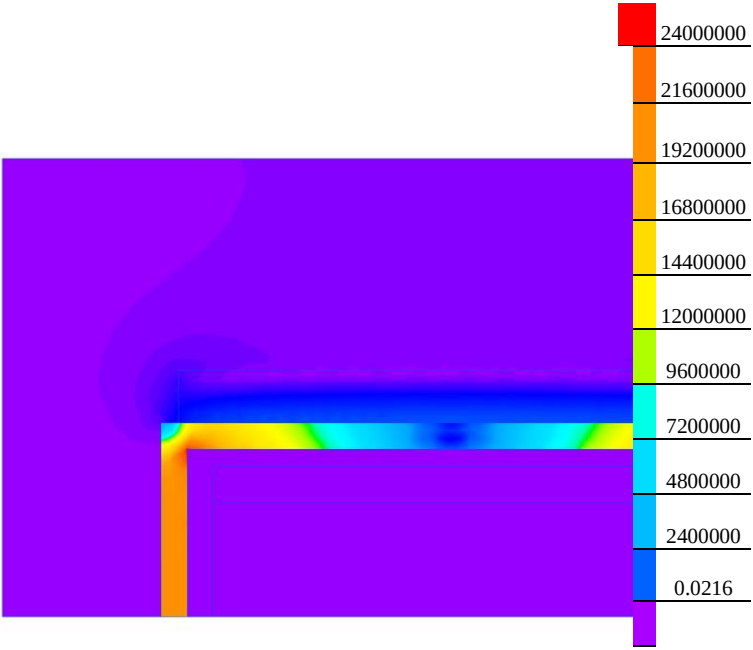
primary. I=977.7 [A], phase=176.3 [deg]

V2. I=977.7 [A], phase=-3.701 [deg]

secondary. I=0.09827 [A], phase=81.12 [deg]

Results

Color map of Strength |H| [A/m]



Nonlinear dependencies

No non-linear dependencies are used in this problem data