Problem info

Problem type: Steady-State Heat Transfer
Geometry model class: Plane-Parallel
Problem database file names:

- Problem: *steel_tank.pbm*
- Geometry: *Steel_tank.mod*
- Material Data: *Steel_tank.dht*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *none*

Geometry model

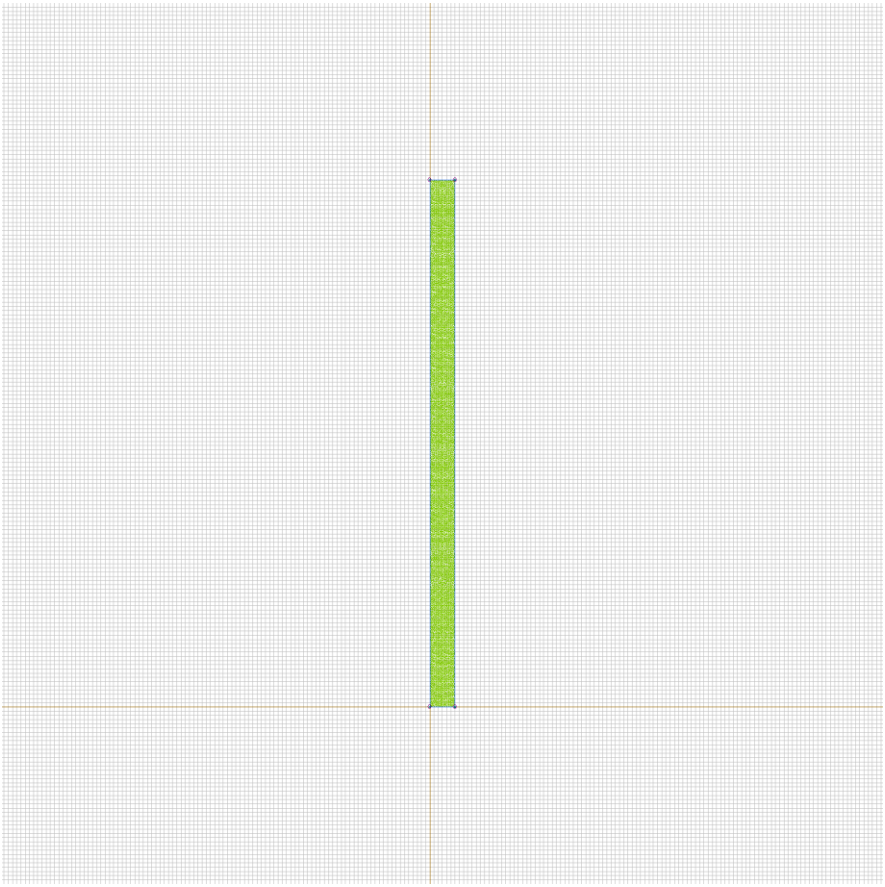


Table 1. Geometry model statistics

	With Label	Total
Blocks	1	1
Edges	2	4
Vertices	0	4

Number of nodes: 4248.

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)

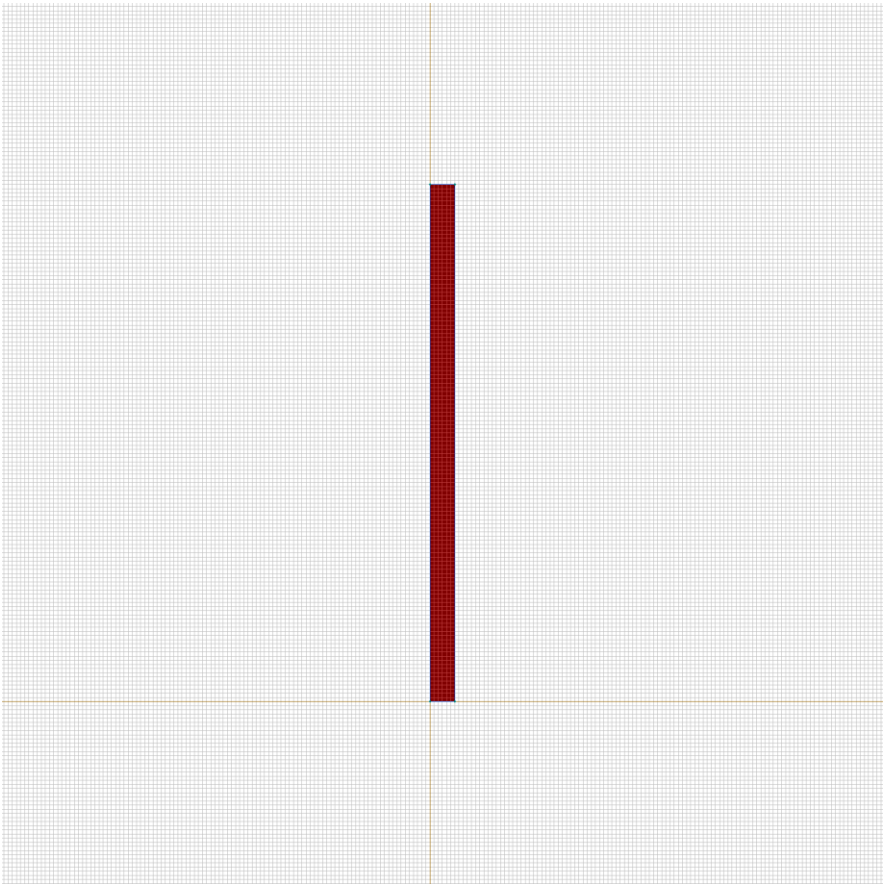
Blocks:	Edges:	Vertices:
• steel •	• inside • outside •	

Detailed information about each label is listed below.

Labelled objects: block "steel"

There are (1) objects with this label

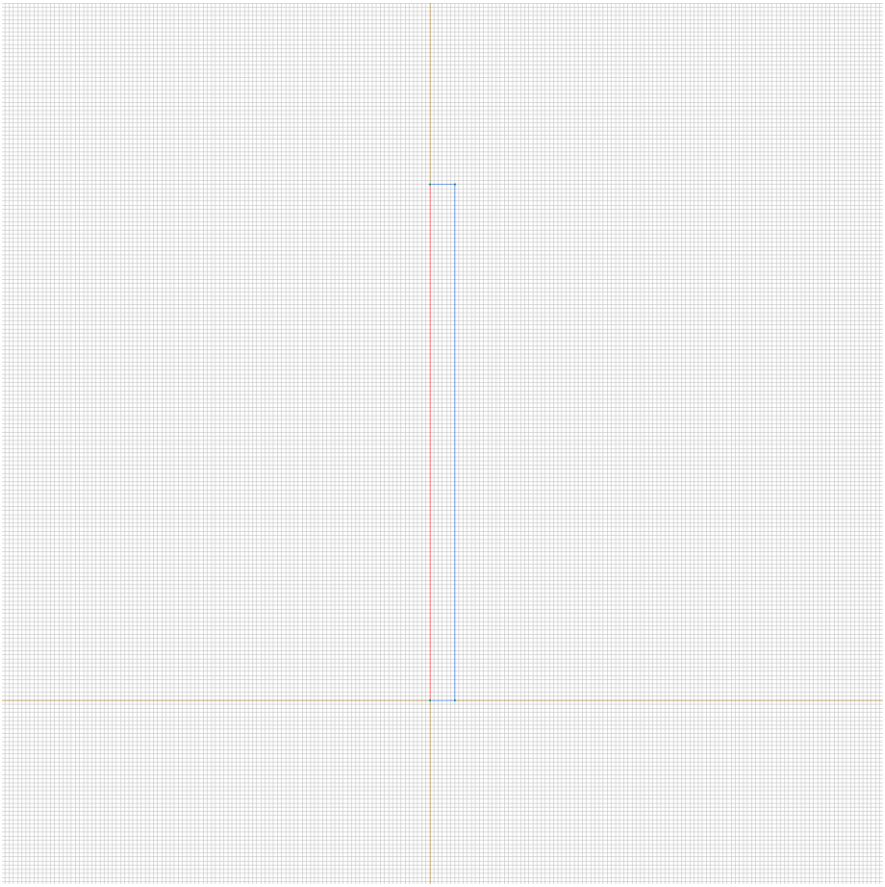
Thermal conductivity: lambda_x=50 [W/(K*m)], lambda_y=50 [W/(K*m)]



Labelled objects: edge "inside"

There are (1) objects with this label

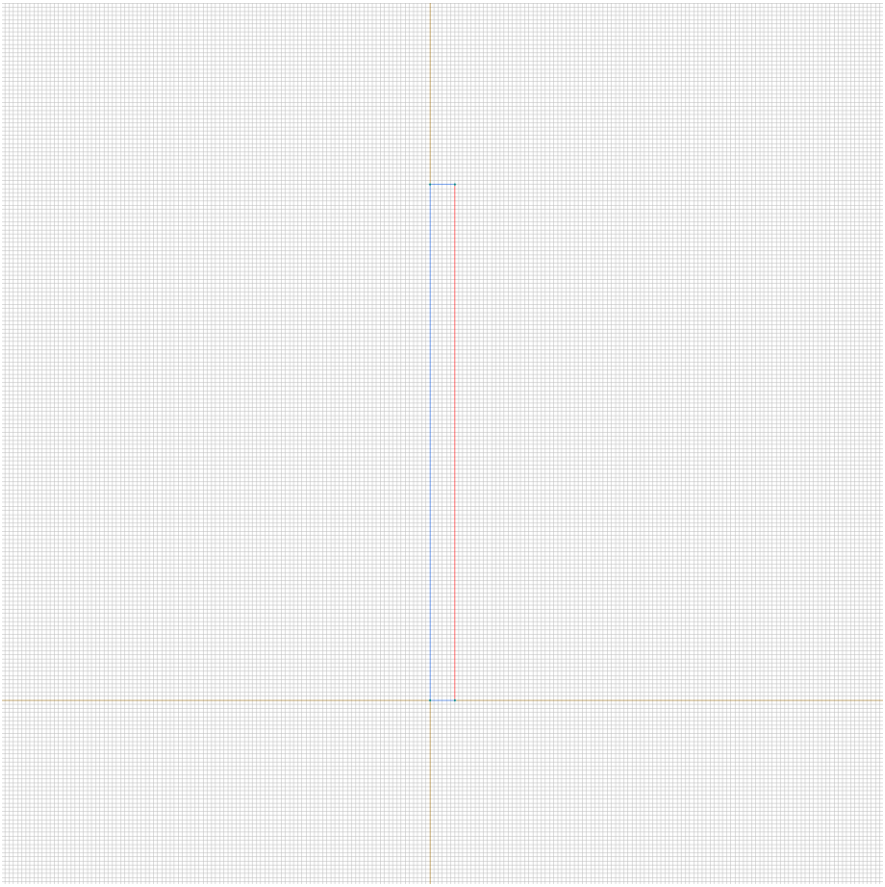
Convection: alpha=2850 [W/(K*m2)], temperature T0=273.15+95,K [K]



Labelled objects: edge "outside"

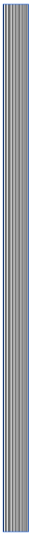
There are (1) objects with this label

Convection: alpha=10 [W/(K*m2)], temperature T0=273.15+15,K [K]



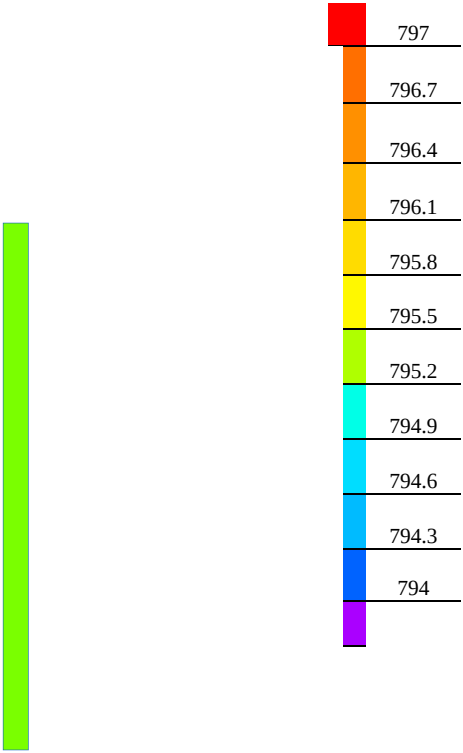
Results

Field lines



Results

Color map of Heat flux |F| [W/m2]



Nonlinear dependencies

No non-linear dependencies are used in this problem data