

Problem info

Problem type: Transient Heat Transfer (integration time: 3 s.)

Geometry model class: Plane-Parallel

Problem database file names:

- Problem: *THeat3.pbm*
- Geometry: *Theat3.mod*
- Material Data: *Theat3.dht*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *Temperature Field: Theat3_i.pbm*

Geometry model

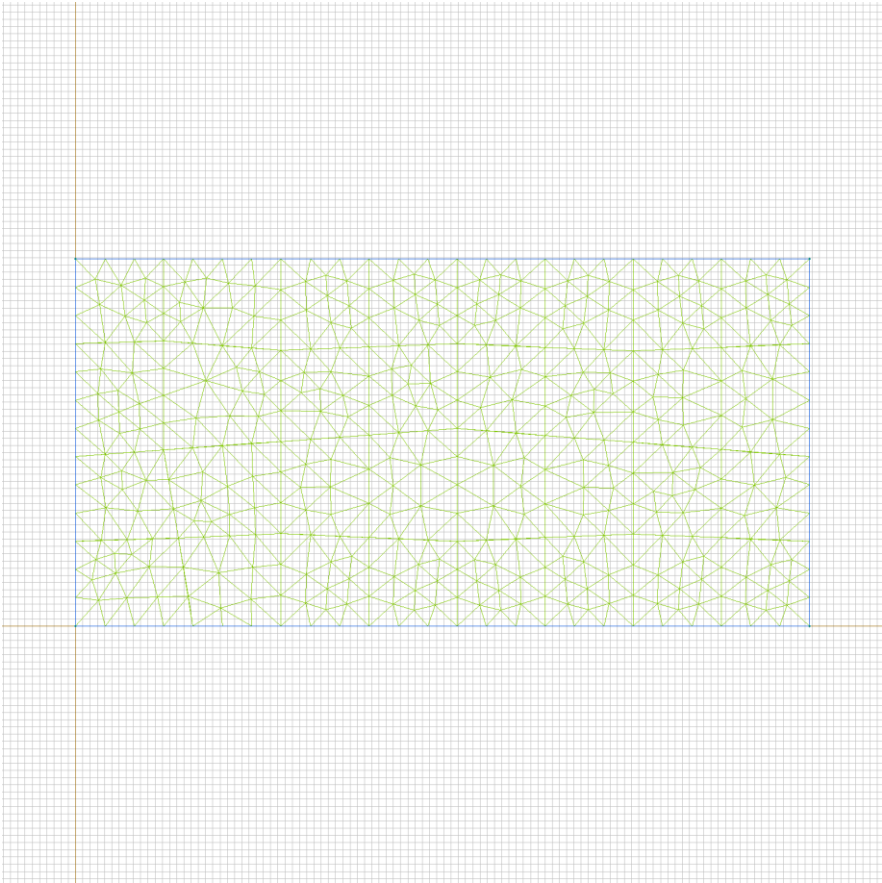


Table 1. Geometry model statistics

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

Number of nodes: 432.

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:

- [material](#)
-

Edges:

- [conv](#)
- [symm](#)
-

Vertices:

Detailed information about each label is listed below.

Labelled objects: block "material"

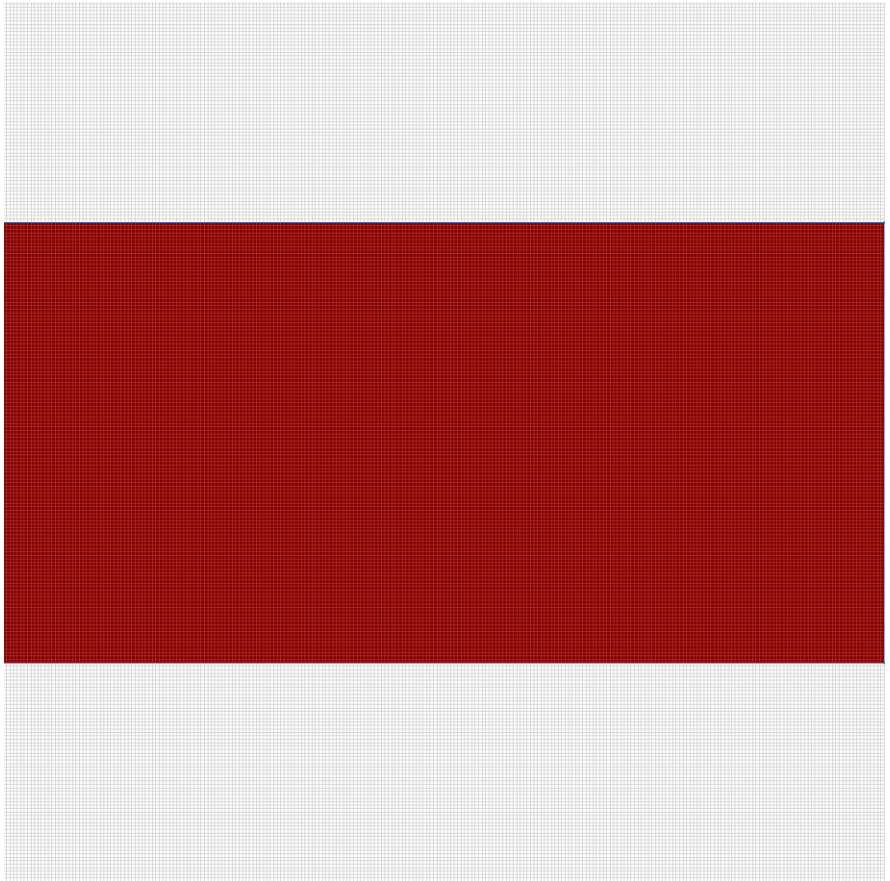
There are (1) objects with this label

Thermal conductivity: $\lambda_x=34.61$ [W/(K*m)],

$\lambda_y=6.237$ [W/(K*m)]

Specific heat: $C=37.69$ [J/(kg*K)]

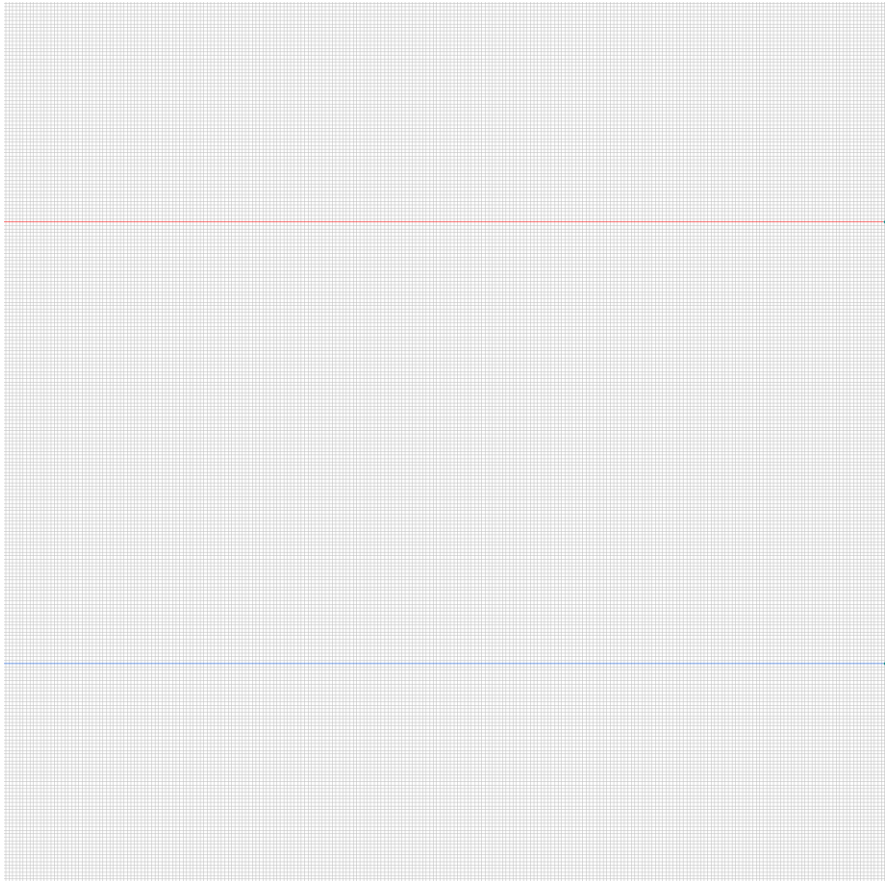
Mass density: $\rho=6407$ [kg/m³]



Labelled objects: edge "conv"

There are (2) objects with this label

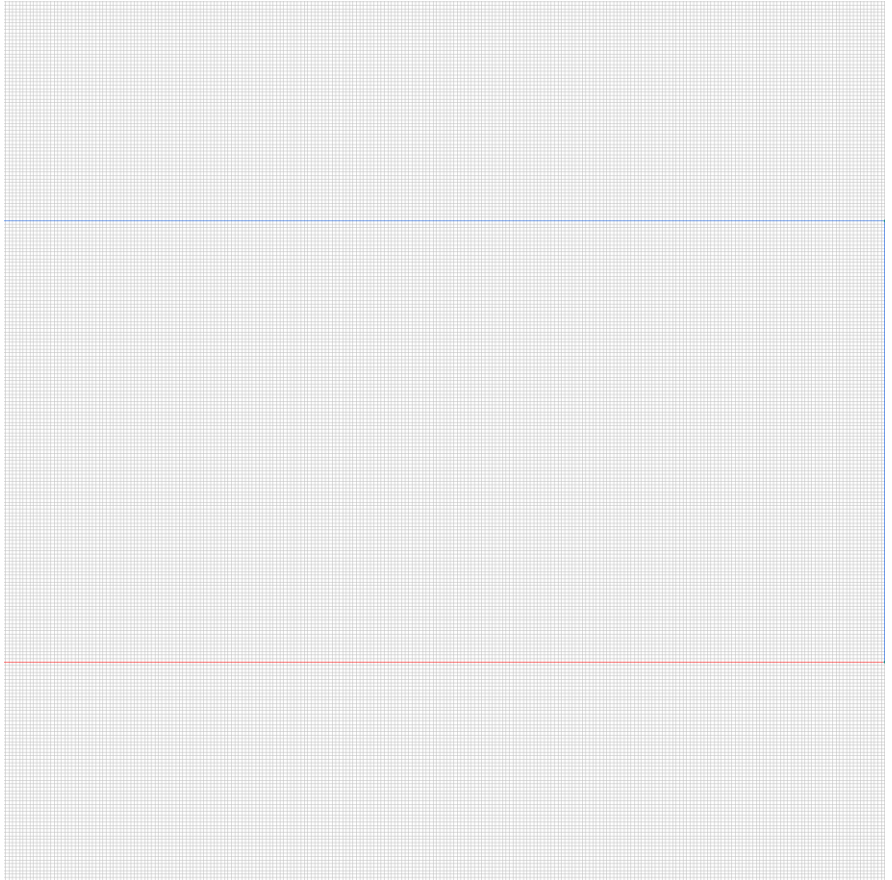
Convection: $\alpha=1361.7$ [W/(K*m²)], temperature $T_0=-235.37$ [K]



Labelled objects: edge "symm"

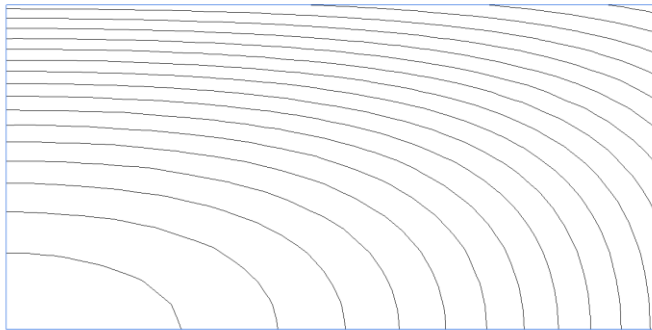
There are (2) objects with this label

Heat flux: $F=0$ [W/m²]



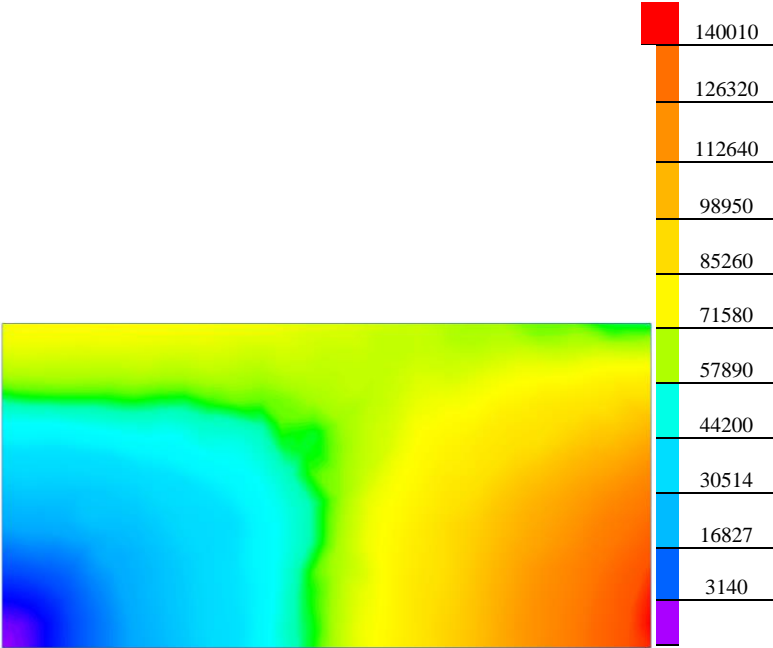
Results

Field lines



Results

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



Nonlinear dependencies

No non-linear dependencies are used in this problem data