



Simulation setup

Case name: Templates - Static billet heating
 Frequency: 15 kHz
 Current: 2.00 kA (Amplitude)

Total time: 10 s
 Time step: 2s
 Number of elements: 0
 Computation time: 0 h 1 min

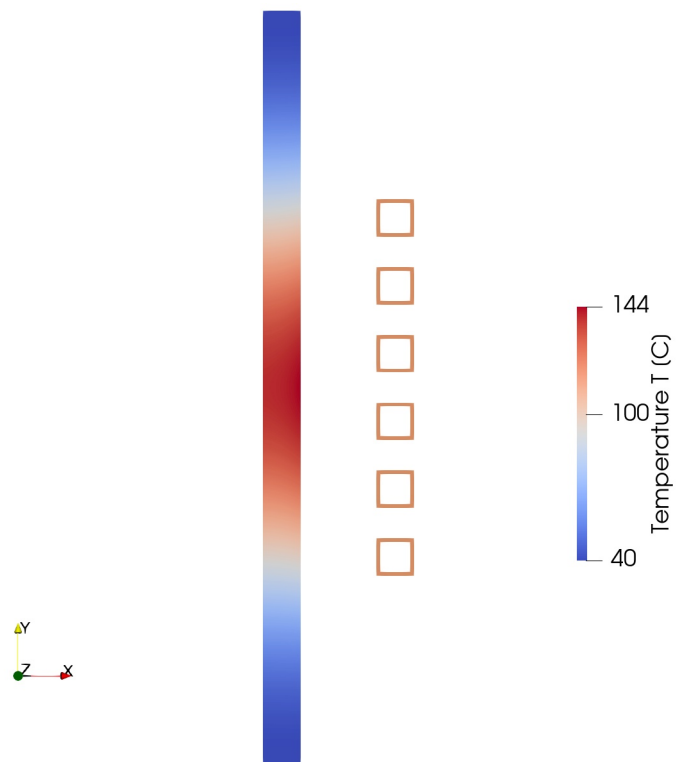
Materials

Domain	Material
Workpiece	Aluminum
Winding_2	Copper
Winding_4	Copper
Winding_0	Copper
Winding_1	Copper
Winding_3	Copper
Winding_5	Copper

Boundary conditions

Boundary	Type	Value
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Result visualization



Default image has been used. You can modify it in ParaView, save the state (File → Save state) and re-generate the report

Results

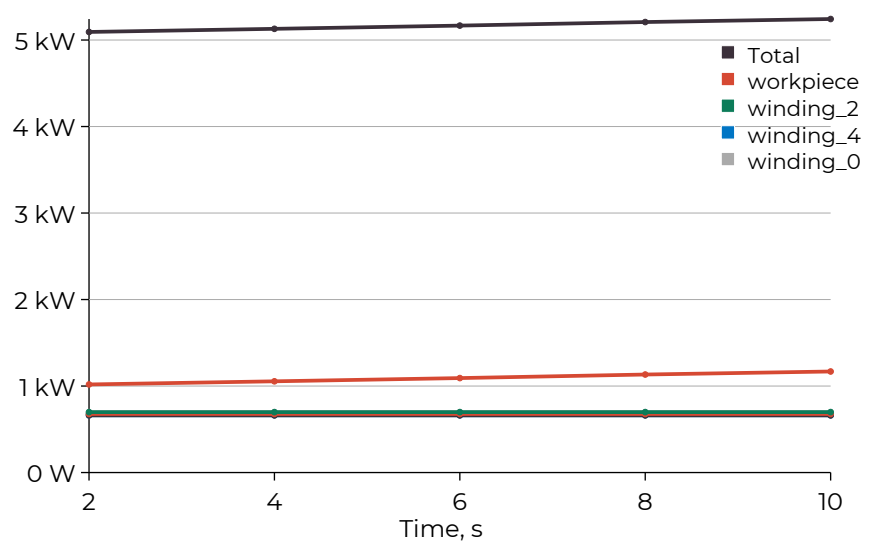
Average values over time:

Total power: 5.17 kW
 All workpiece powers: 1.09 kW
 All inductor powers: 4.07 kW

Efficiency: 21.2%
 Inductance: 894.77 nH
 Total energy: 4.5J / 16.1 kWh

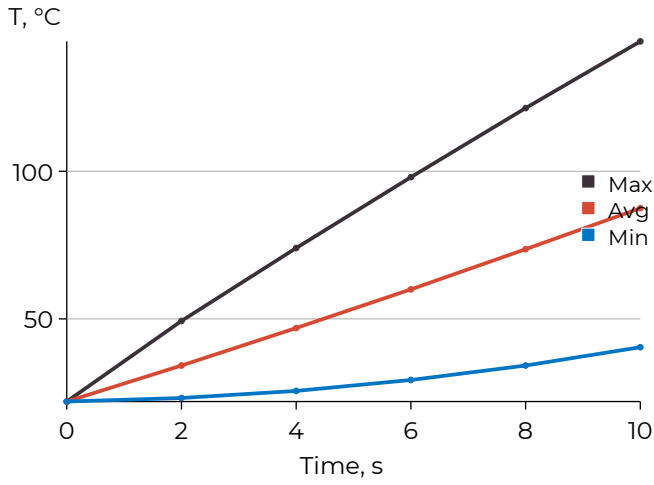
Workpiece end temperature:
 Maximum: 144.0°C
 Minimum: 40.4°C

Domain powers over time





Workpiece temperature range over time



Workpiece temperature range over time

Time, s	Min, °C	Avg, °C	Max, °C
0.00	22.0	22.0	22.0
2.00	23.2	34.2	49.3
4.00	25.6	46.9	74.0
6.00	29.3	60.0	98.0
8.00	34.2	73.6	121.4
10.00	40.4	87.5	144.0

Domain powers over time

Time, s	workpiece power	Inductor power
2.00	1.02 kW	4.07 kW
4.00	1.05 kW	4.07 kW
6.00	1.09 kW	4.07 kW
8.00	1.13 kW	4.07 kW
10.00	1.17 kW	4.07 kW

Inductor parameters over time

Time, s	Current (RMS)	Voltage (RMS)	Inductance	Apparant Power
2.00	1.41 kA	119.20V	894.34 nH	168.6 kVA
4.00	1.41 kA	119.23V	894.55 nH	168.6 kVA
6.00	1.41 kA	119.26V	894.77 nH	168.7 kVA
8.00	1.41 kA	119.29V	895.01 nH	168.7 kVA
10.00	1.41 kA	119.32V	895.21 nH	168.7 kVA

No plots were detected in ParaView. You can create them in ParaView, save the state (File → Save state) and re-generate the report