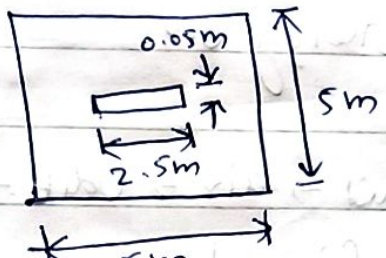
Quenching

Geometry:

XY plane → Sketch → Rectangles → dimensions



Operation: add frozen

Concept → Surface from sketches → Select sketch 1 → Generate

Sketch 2 → Draw a rectangle coinciding with inner rectangle

Concept → Surface from sketches → Select Sketch 2 → Operation = add frozen → Generate

Select Body selection and select the two bodies → Right click → Form new part.

Click share Topology.

Mesh

Generate Mesh

Select the top & bottom edges of the inner rectangle → Mesh → insert → sizing → No. of divisions 200 → Update mesh

→ Create named selection for solid & fluid by body selection

Setup:

General : Transient

~~Eno~~ Models : Energy on

Materials → Flui → air → Edit → Fluent Database
→ Water liquid → Copy → Close
→ Change/Create → Close

Cell zone conditions → Fluid → Material Name to
water liquid → OK

Report Definition → New → Volume average → Temperature
→ Solid → change Name to solid temperature
→ New → Volume average → Temperature
→ Fluid → change name to fluid temperature

Graphics → Contours → Temperature → ~~Volume average~~
→ Save and Display

Calculation activities → solution Animation
→ Select contour-1 → OK

Initialization : Standard initialization → Temperature 300K

Patch : Solid → Temperature = 500K → Patch

Run Calculation