3 Dimensional Hg Jet Simulation Using Implicit LES Method

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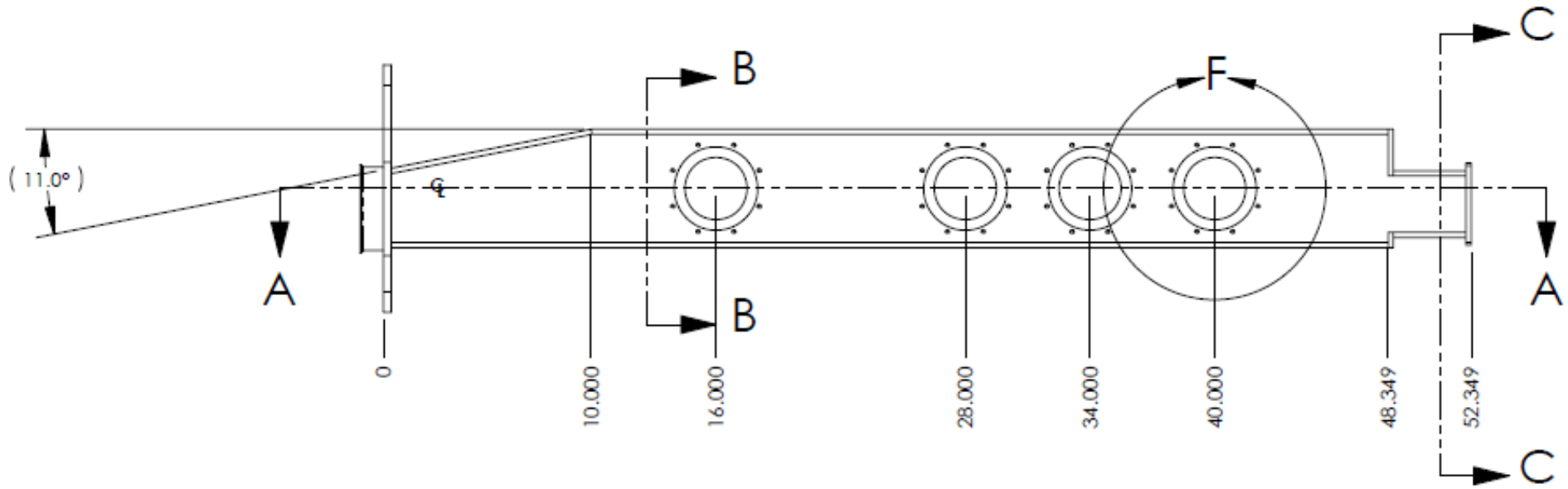
Schematics of Target System_ V GRAVES



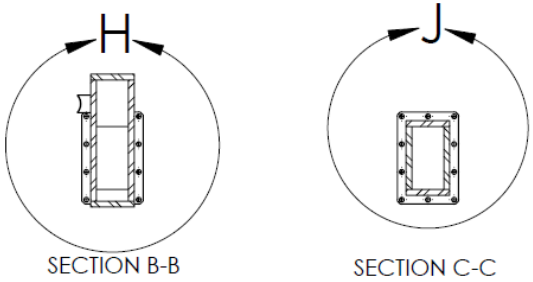
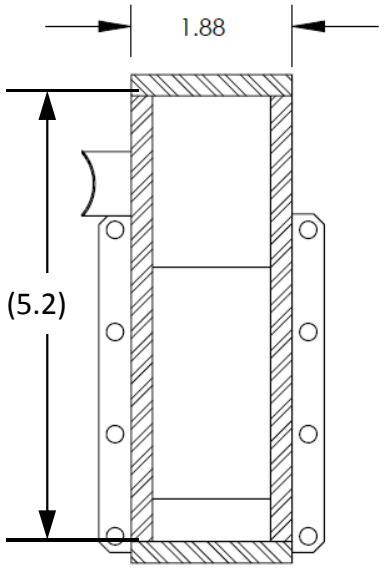
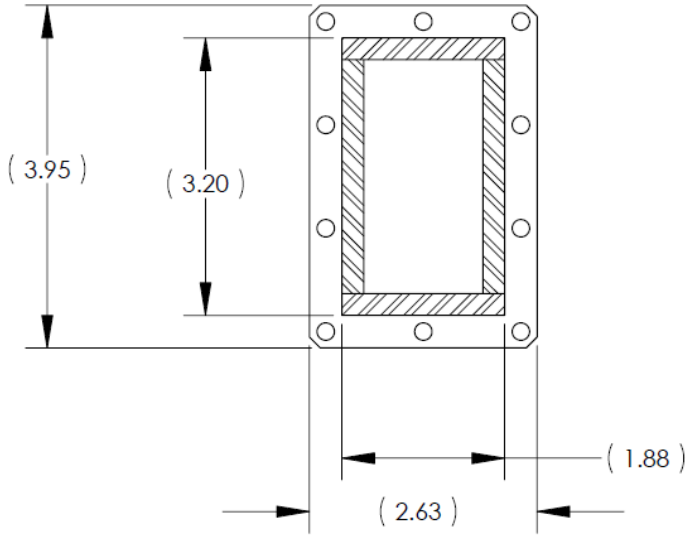


Plate thickness: 0.25”

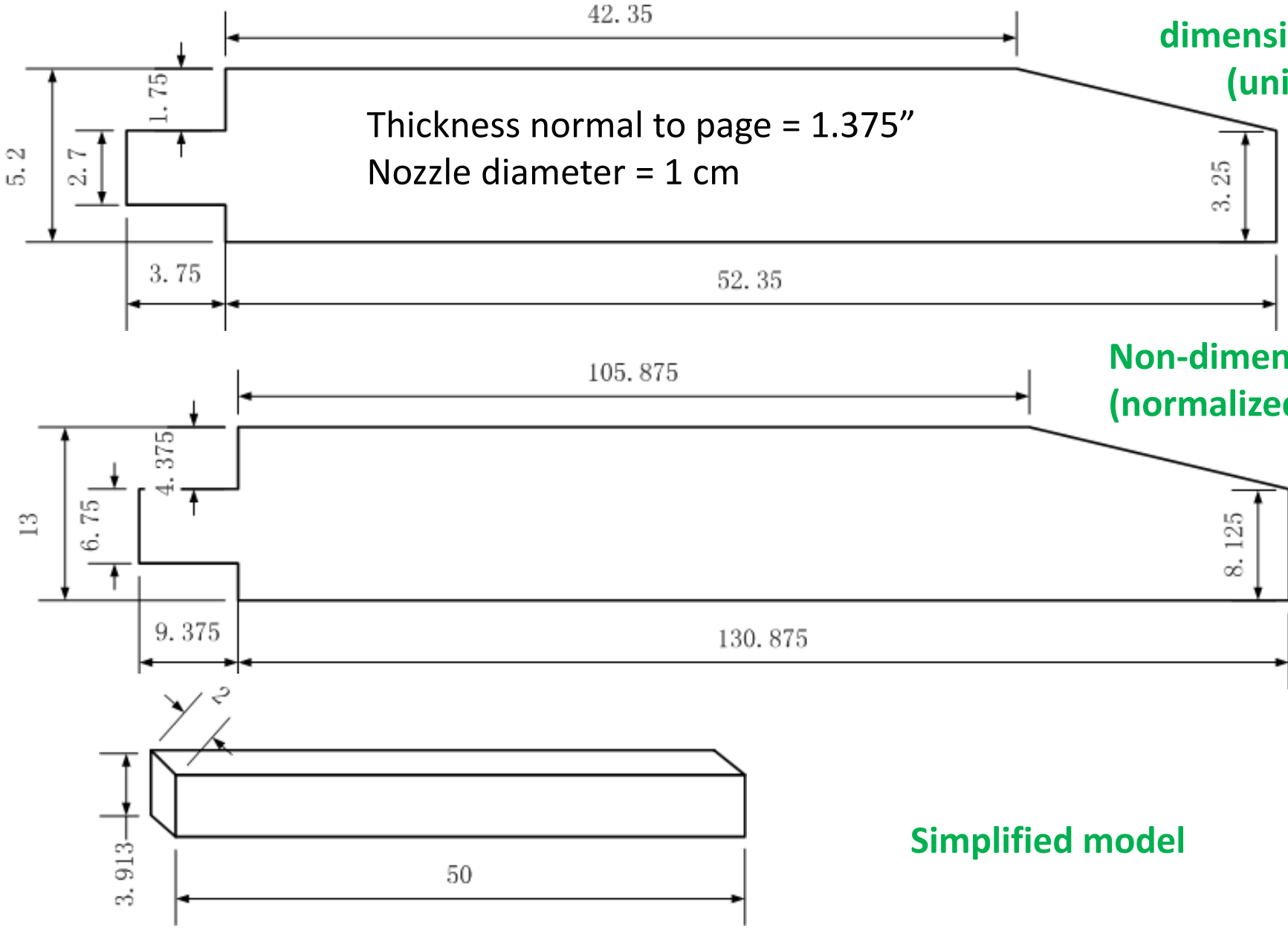


DETAIL H



DETAIL J

Simplification Of The 3D Hg Jet



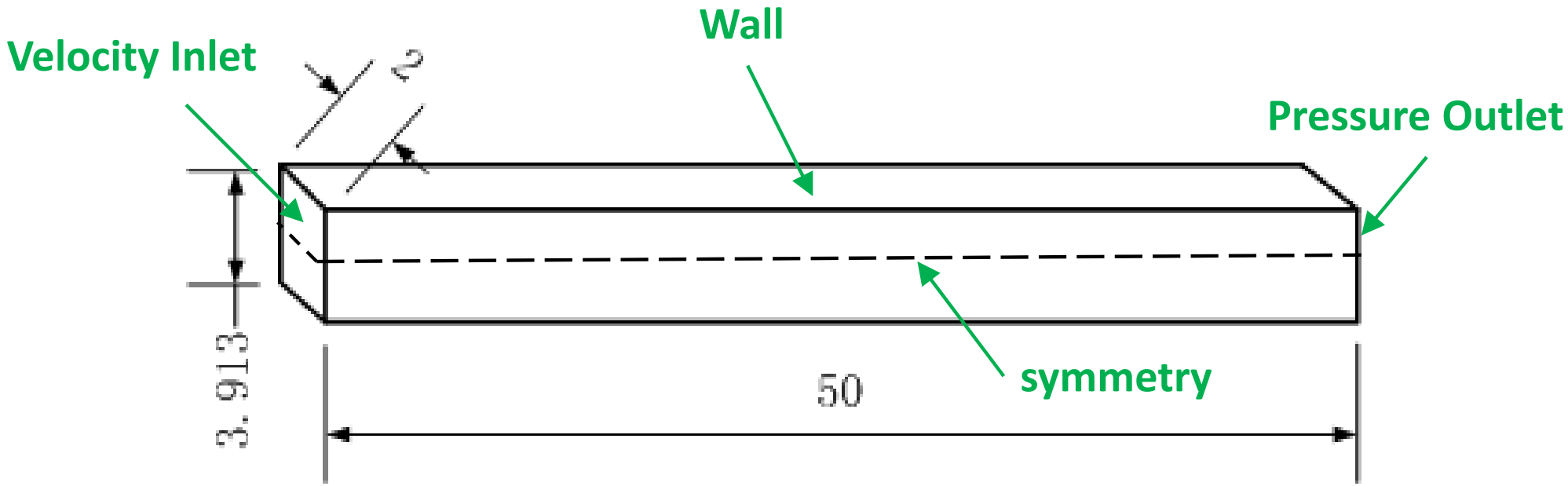
dimensional model
(unit: inch)

Thickness normal to page = 1.375”
Nozzle diameter = 1 cm

Non-dimensional model
(normalized by $D_{jet\ exit}$)

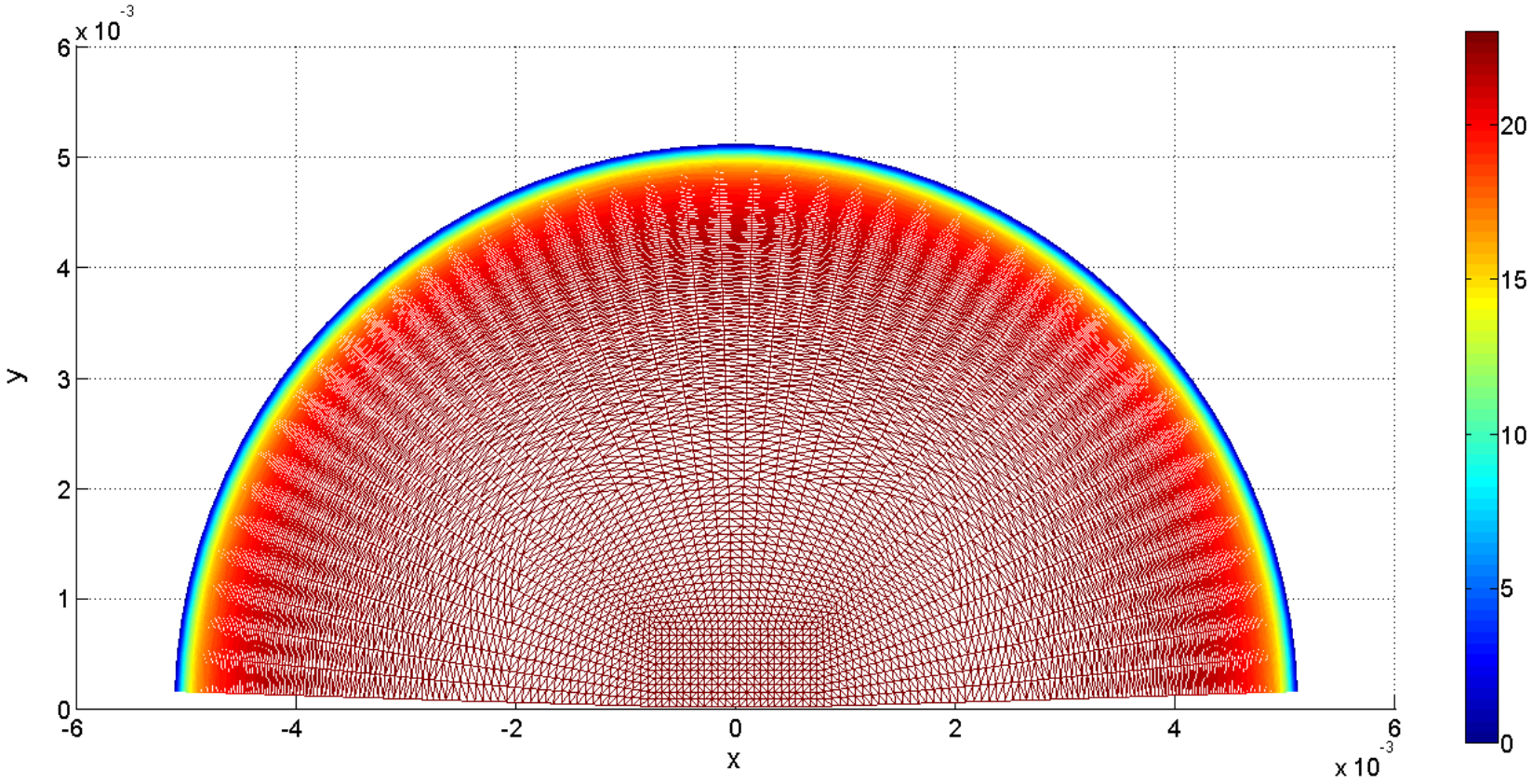
Simplified model

Boundary Conditions



X axis is in the short (2 unit) direction
Y axis is in the long (3.9 unit) direction
Z axis is in the very long (50 unit direction = direction of jet
No gravity in the model.

Axial Velocity Contour At The Jet Inlet (without weld bead)



u = **U** + sqrt(2**k**/3), where **k** = ½((u')^2+(v')^2+(w')^2)

pipe simulation

The x and y axes on this slide are rotated by 90 deg compared to those on slide 4.