Quiz #1

MEMS 0051 - Introduction to Thermodynamics

Assigned: May 21th, 2020
Due: May 22nd, 2020, 11:59 pm

Problem #1

A large, cylindrical container has a diameter of 20 [cm] and contains three layers of different liquids at 25 °C of varying heights. The three liquids are, from top to bottom, engine oil, water, and mercury. The surface of the engine oil is exposed to an atmospheric pressure of 101.3 [kPa]. If the height of the engine oil is 30 [cm], the height of the water is 20 [cm], and the height of mercury is 5 [cm], determine the following:

a) the overall (average) specific volume, ν_{avg}, in the container;

Academic Integrity Statement:

I hereby attest that I have received no assistance (from a friend, from another student, from an on-line resource, such as Chegg, etc.), and that I have provided no assistance to another student, during this examination. All the work presented within is solely my own work.

Signature: _____

Date: _____

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