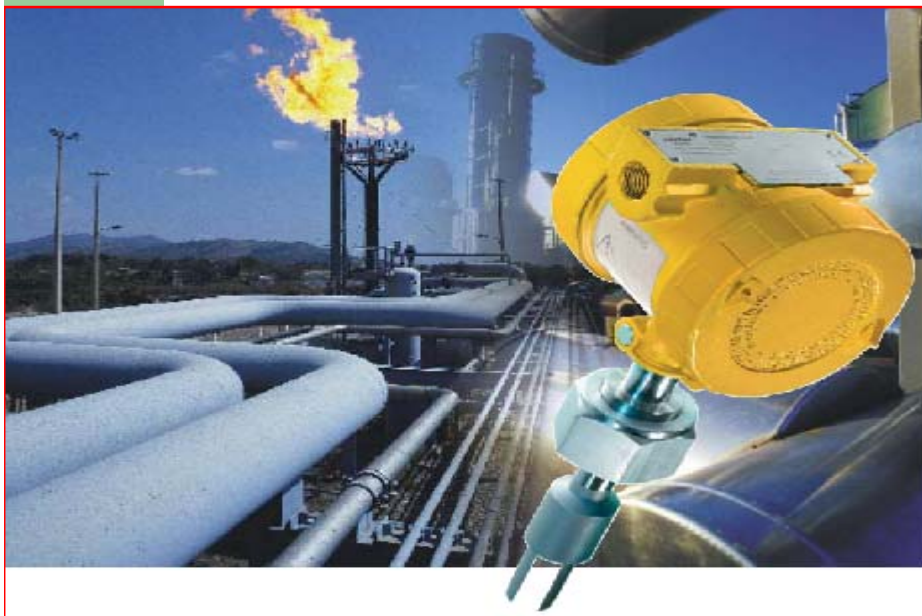


Flow & Practical Viscosity Measurements

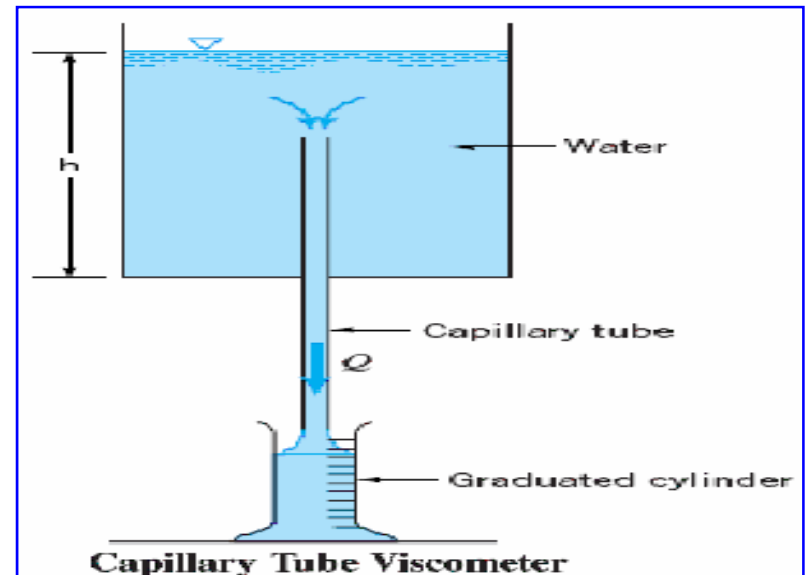
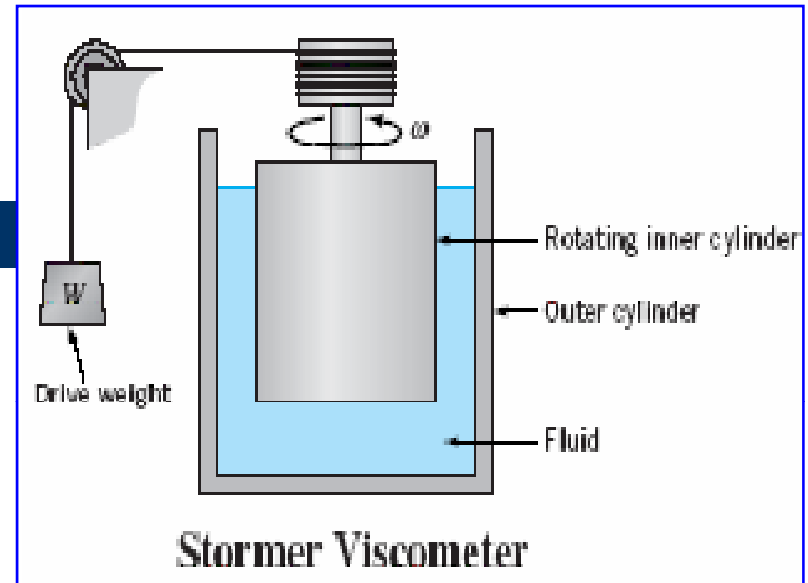


Flow & Practical Viscosity Measurements

Course Program and Contents (parts I & II):

Part I- Basic and Theoretical Concepts:

- State of substance
- Fluid definition
- Fluid properties
- Non compressible & compressible flow (liquid & gas)
- Viscosity
- Newtonian & Non Newtonian flows
- Flow basic equations
- Flow in pipeline
- Friction loss in pipeline
- How viscosity is measured? What are the units?
- Typical Examples, Problems and Exercises.



Flow & Practical Viscosity Measurements

Course Program and Contents (parts I & II):

Part II - Practical /Experimental Concepts:

- How to take the perfect viscometer reading:
 - Sample container considerations
 - The effects of temperature on the viscosity reading
 - To stir or not to stir: Sample handling prior to taking a reading
 - Spindle insertion and immersion
 - "My viscosity keeps changing!": -When to record the reading
 - Torque values and the viscometer range
- Testing "difficult" samples: slurries and gels etc
- Instrument handling: How NOT to break the viscometer
- Test method development:
 - Spindle and speed selection
 - Choice of instrument and attachments
 - Benchmarking and competitor comparison methods for viscometer users.
 - "Is this thing working okay?" How to check your viscometer is in calibration and performing correctly

