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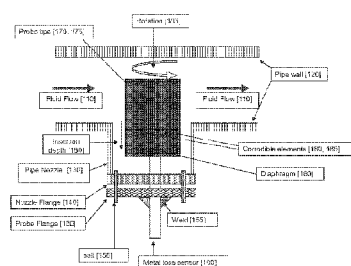
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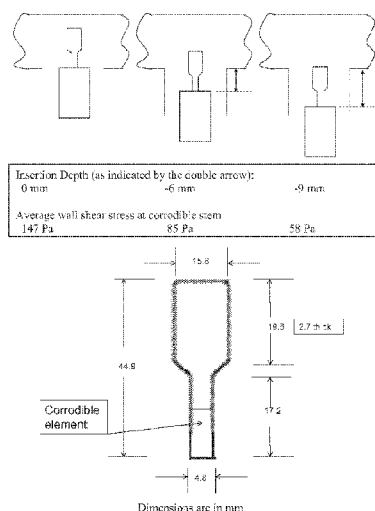
(54) **Title:** A SYSTEM AND METHOD FOR ENHANCING CORROSION RATE DETERMINATION IN PROCESS EQUIPMENT USING A TELESCOPING/ROTATING SENSOR

Figure 1a

Corrosion Sensor Inserted to a Specific Depth into the Process Fluid with Respect to a Pipe Wall using a Flange Mounting

**Figure 1b**

Corrosion Probe Position Correlates with Wall Shear Stress



(57) **Abstract:** A system and method for optimizing the response of a metal loss sensor which is configured in a way that its insertion depth and orientation in the process fluid are adjustable. These adjustments affect local turbulence and thereby enable achieving a desired corrosion rate at the metal loss sensor. Corrosion rate comparison between the metal loss sensor and pressure containment boundary can be measured directly or indirectly by computing wall shear stresses at the sensor and the pressure containment boundary.