

+2 atm; pressures above 1500 atm were measured on a manganin manometer L on the equalizer A.

During the test the tube leading from the equipment to the manometer was shut off by valves 3, 4, and 5; thus all the gas in the system was thermostated.

When the galvanometer needle was steady in the null position, we began to admit liquid into the mixer.

To accelerate solution of the liquid in the gas, we switched on the electromagnetic stirrer. On the galvanometer we noted a fall in pressure between the mixer and the equalizer.

When the fall became steady, by raising the volumeter piston, we added the additional volume to the system that completely cancelled out the pressure drop. The differential manometer galvanometer needle came back to its original position at the start of the experiment.

On the height gauges of the dosimeter E and volumeter G we read the volume of the liquid admitted to the system, and the change in volume of the system upon solution of this liquid into the compressed gas.

By plotting the movement of the dosimeter piston (volume of liquid admitted) against movement of the volumeter piston (change of volume of the system upon solution of the liquid), we obtain a graph. The slope of the curve relative to the x axis gives the value of the partial molar volume of the liquid in the compressed gas, in the homogeneous region.

Upon further supply of liquid there is a discontinuity in the curve. The point of discontinuity indicates saturation of the gas by the liquid.

Fig. 6.