volumeter piston to the extreme low position, and the dosimeter piston to the extreme up position. We separate the dosimeter from the mixer by valve 1. We open valve 2 and evacuate the dosimeter with a vacuum pump, after which the liquid is admitted to it, and valve 2 is closed. To fill the equipment with gas, we open valves 3, 4, and 5, and close valve 6. We fill the equipment with gas to the test pressure, and then wait, to allow the system to take up the temperature of the thermostat. Thereafter we uncouple vessels A and B, by closing valves 4 and 5, and note the null position of the galvanometer needle. We open valve 1. The pressure in the mixer then falls off somewhat since the liquid has not been compressed. Then with the motor we begin to move the dosimeter piston until the galvanometer needle returns to the null position, and therefore the liquid has been compressed to the test pressure.

Pressures up to 1500 atm were measured firstly with the coarse manometer I, and then with the precision Bourdon manometer K, to an accuracy of $\pm$ 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.