

is supplied by a special pump, returning afterwards to the thermostat. The thermostat is located in a steel enclosure.

Fig. 3. (1) reduction gear; (2) piston; (3) gasket; (4) mixer.

Control of the equipment is concentrated on a panel mounted on the outside wall of the enclosure. There is remote control of all the values, the heater, the stirrer motors, the pump, differential manometer, etc.

As we have pointed out, the basic equipment is two vessels: the equalizer and the mixer, joined together below by a capillary filled with mercury. The capillary with the mercury terminates in the equalizer at a glass tube, on which is mounted a coil of fine wire. Inside the glass tube, at the location of the coil, there is a moving light float of Armco iron. In the mixer the capillary with the mercury terminated in a wide cup. When the pressure changes in the mixer following supply of the liquid into it, the mercury level in the capillary of the equalizer is displaced, displacing the float to a new position in the coil. The coil carries a well stabilized current. The change in position of the float in the coil changes its inductive reactance. The balance of the bridge scheme in which the coil is included is disturbed, and the pressure drop between the vessels may be assessed from the deflection of the needle of a galvanometer. The electrical arrangement of the contact-less differential manometer is shown in Fig. 5.

Fig. 4. (1) volumeter; (2) shut-off valve; (3) dosimeter; (4) mixer.

Fig. 5.

When a pressure drop is established in the system upon solution of the liquid in the gas, the drop is eliminated by moving the piston of the volumeter.