The slope of the curve after the discontinuity, upon further addition of liquid, gives the value of the partial molar volume of liquid in the heterogeneous region.

The general form of the curve obtained, for example for the nitrogen-benzene system (at 50 atm and 50°C), is shown in Fig. 6.

Conclusions

1. An equipment has been built for measurement of the partial molar volumes of liquid dissolved in compressed gases.

2. The equipment permits data on partial molar volumes to be obtained in both the homogeneous and heterogeneous regions.

3. In addition to study of the volume relationships, the equipment allows data on phase equilibria to be obtained.

4. The equipment has been designed to operate at pressures from 1 to 5000 atm.

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