

STUDIES ON THE P-V-T RELATIONS OF FLUIDS AT HIGH PRESSURE I

The Compressibility of Ammonia

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Experimental

Method for gaseous ammonia

The measurements were made by the use of the constant volume type apparatus. The schematic diagram of the apparatus is shown in Fig. 1 and the cross-section of the high pressure gas pipet (A in Fig. 1) in Fig. 2.

The apparatus can be divided into two main parts. One is the high pressure system (steel-tubing side in Fig. 1) in which the P - V - T measurements for certain amounts of gaseous ammonia are made at

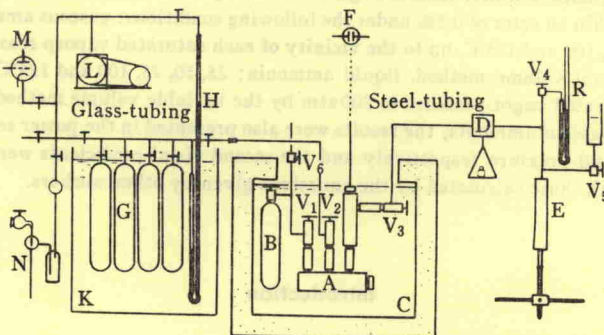


Fig. 1 Schematic diagram of apparatus for gaseous ammonia

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|----------------------------|----------------------|
| A: High pressure gas pipet | B: Sample cylinder |
| C: Thermostat | D: Pressure balance |
| E: Oil injector | F: Pilot lamp |
| G: Glass cylinder | H: Mercury manometer |
| K: Thermostat | L: Vacuum pump |
| M: Vacuum gage | N: Aspirator |
| R: Mercury manometer | |

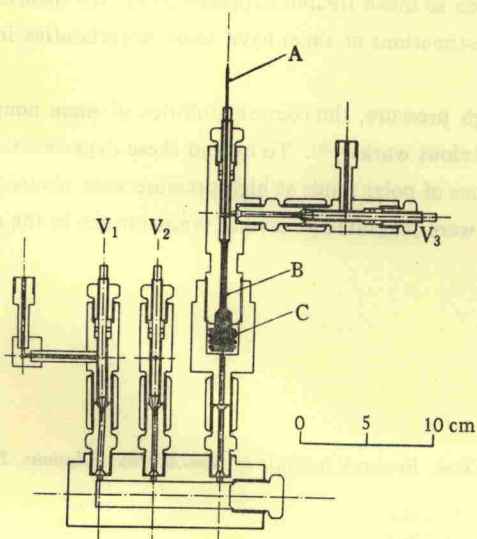


Fig. 2 High pressure gas pipet

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|------------------------|
| A: Insulated electrode |
| B: Mercury |
| C: Bellows |
| V: Valves |