Table 7 Comparison of specific volume V (cc/mol) of liquid ammonia

P (atm)	25°C			50°C		
	Present work	Keyes	Deviation (%)	Present work	Keyes	Deviation (%)
9.98	28.34_2	28.25_0*	−0.32			
20.05				30.30_8	30.25_6*	0.17
50	28.16_3			30.08_2		
61.65						
75	28.05_7			29.90_7		
100	27.96_0	27.91	−0.17	29.74_2	29.46	−0.94
250	27.76_0			29.44_4		
200	27.57_5	27.65	0.29	29.17_1	29.01	−0.55
250	27.40_0			28.92_2		
300	27.22_8	27.15	−0.29	28.68_8	28.60	−0.31
400	26.90_2	26.93	−0.11	28.24_2	28.12	−0.42
500	26.60_0	26.67	−0.23	27.82_5	27.82	−0.00

* These are the values in International Critical Tables.
Deviation $=(V_{\text{Keyes}}-V_{\text{Present work}})/V_{\text{Present work}}$

Table 7 (continued)

P (atm)	75°C			100°C		
	Present work	Keyes	Deviation (%)	Present work	Keyes	Deviation (%)
36.58	32.98_6	32.98_8*	0.01			
50	32.79_3					
61.65				37.29_0	37.27_4*	−0.04
75	32.46_2			36.77_5		
100	32.16_2	31.83	−1.02	36.02_2	35.46	−1.55
150	31.63_5			34.92_0		
200	31.19_2	31.04	−0.48	34.02_5	34.01	−0.02
250	30.80_0			33.36_7		
300	30.45_0	30.37	−0.26	32.79_4	32.69	−0.30
400	29.84_5	29.77	−0.28	31.85_5	31.73	−0.37
500	29.33_0	29.25	−0.27	31.12_4	30.99	−0.41

ture. They have been represented in Table 7 together with the values given by International Critical Tables[12]. There have been little differences of 0.32 and 0.17% between both their values at 25 and 50°C respectively, but they have agreed well within the experimental error of this work at 75, 100 and 125°C.

The specific volumes of ammonia of this work have been represented graphically in Fig. 6 plotting them *vs.* temperature at even pressures. It is shown that they increase together with the increase of temperature and this tendency is more conspicuous with decreasing pressure.

Table 7 (continued)

P (atm)	125°C		
	Present work	Keyes	Deviation (%)
98.15	47.62_0	47.65_4	0.07
100	46.88_0		
150	40.65_0		
200	38.40_0	38.23	−0.44
250	37.00_5		
300	35.94_0	35.78	−0.44
400	34.37_5	34.24	−0.40
500	33.24_5	33.14	−0.30

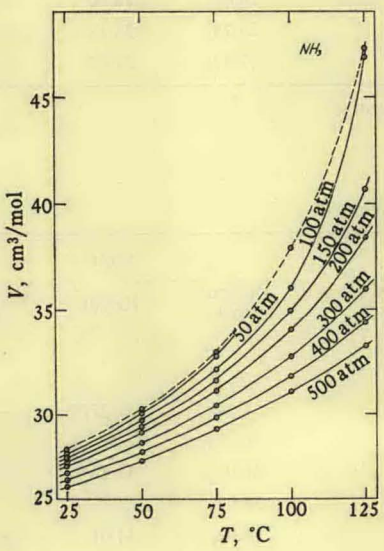

Fig. 6 Specific volume *vs.* temperature curves of liquid ammonia
—⊙—: Isobars above saturated vapor pressures
--⊙--: Saturated line

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