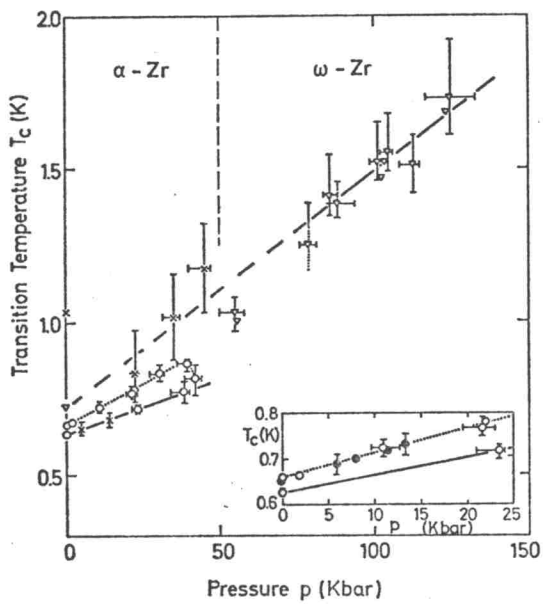

Fig. 3. Pressure dependence of T_c in zirconium. α phase: dotted line—first compression run, full line—further compression cycles (after pressure had exceeded ~40 kbar), crosses-cold work run at 4.2 K. ω phase: triangles. Inset: Comparison of data obtained with liquid cell (full circles) and steatite cell (open circles). The error bars indicate the transition widths of the Zr-samples (10 to 90% of residual resistance) and the uncertainty of pressure determined by the transition width of the lead manometer

Since it could be suspected that this behaviour is a consequence of our solid medium pressure technique, measurements were also performed with a liquid cell up to about 13 kbar. The results are included in Fig. 3 (Inset, full circles). Since in the liquid cell pressures near 40 kbar could not be attained, the samples showed the same $T_c(p)$ dependence as the samples in the solid cell on their first compression run. The only differences observed between the two techniques were: 1. the scatter in the experimental points was less with the liquid cell, 2. the transition widths of the samples were practically constant with the liquid cell, whereas with the solid cell they increased slightly with increasing pressure. From the transition widths of the lead samples, we deduced a pressure uncertainty in the liquid cell of ± 0.3 kbar at any pressure.

From this we infer that the described behaviour of the samples is an intrinsic property of the material. It is supposed that the samples