of this work, we are ultimately led to consider the pseudo-potential approach to the description of the Fermi surface and to consider how it can predict pressure effects.

A. EXPERIMENTAL

The methods that have been used to determine the effect of pressure on the Fermi surface and related properties of Zn are summarized in Table I which refers to the techniques of producing the high pressures

TABLE I. Investigations of the effect of pressure on the Fermi surface of Zn

Authors	Method of investigating Fermi surface	Methods of producing pressure
Dmitrenko *et al.* (1959)	Torque de Haas–van Alphen	Ice-bomb technique
Verkin & Dmitrenko (1959)	Torque de Haas–van Alphen	Ice-bomb technique
Gaidukov & Itskevich (1963)	Magnetoresistance oscillations	Frozen oil–kerosene
Balain *et al.* (1960)	Ettinghausen–Nernst effect	Liquid helium
Schirber (1965)	Oscillations in transverse magnetoresistance	Helium gas
Higgins & Marcus (1966)	Torque de Haas–van Alphen	Alloying
O'Sullivan & Schirber (1966)	de Haas–van Alphen (modulation technique)	Helium gas Liquid helium
Melz (1966a)	de Haas–van Alphen (modulation technique)	Helium gas

already described. The methods of investigating the Fermi surface which are of importance here will now be summarized.

1. *The de Haas–van Alphen Effect (see, e.g., Shoenberg, 1957)*

This is probably the most important method of determining the shapes of Fermi surfaces. The effect discovered by de Haas and van Alphen refers to the oscillatory variation of the magnetic-susceptibility of a single crystal of a metal when the applied magnetic field, H, varies. The susceptibility is periodic in $1/H$ (more correctly $1/B$)