

brought out through a Stupakoff[†] seal; the thermocouple and Hall voltage leads were brought right through the pins and sealed in with wax, avoiding extra junctions.

Below liquid nitrogen temperature, an equilibrium temperature was obtained by allowing the mechanical pump to pump continuously on solid nitrogen. No attempt was made to maintain a vapor pressure higher than that obtained by continuous pumping, i. e., to obtain intermediate temperatures. Temperatures above liquid nitrogen temperature were obtained by setting the current through the heater to a fixed value and waiting for thermal equilibrium.

Because the Hall constant of sodium, potassium, rubidium, and cesium did not vary significantly between room and nitrogen temperatures, no attempt was made to measure it at intermediate temperatures. Sodium and potassium were measured by immersing the formica sample holder rod directly into the dewar filled with liquid nitrogen. Cesium and rubidium were measured using the same sample holder and terminal plug as in the pressure experiments. A piece of formica tube, closed at one end, was filled with mineral oil and the sample holder enclosed in it. This served to protect these highly reactive metals from accidental exposure to air.

[†] Available from Stupakoff Ceramic and Mfg. Co., Latmore, Penn.

II. References

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