Figs. 114 and 115. Figure 114 is a drawing of a ring specimen of unhardened tool steel (.40 carbon), $\frac{7}{8}$ inch thick. Holes parallel to the cylindrical surface have been drilled, 0.07 inch in diameter, at increasing depths below the surface. The depths vary from 0.07 to 0.84 inch in 0.07 inch increments, from hole #1 to hole #12.

Figure 115 is the plot of the threshold values of current necessary to give a readable indication of holes in this ring, by the dry continuous method with central conductor, using 60 cycle A.C. and three forms of D.C. The three types of D.C. are straight D.C. from batteries, three phase rectified A.C. with surge, and half wave rectified single phase 60 cycle A.C. Currents as read on the usual meters are varied from the minimum necessary to indicate hole #1

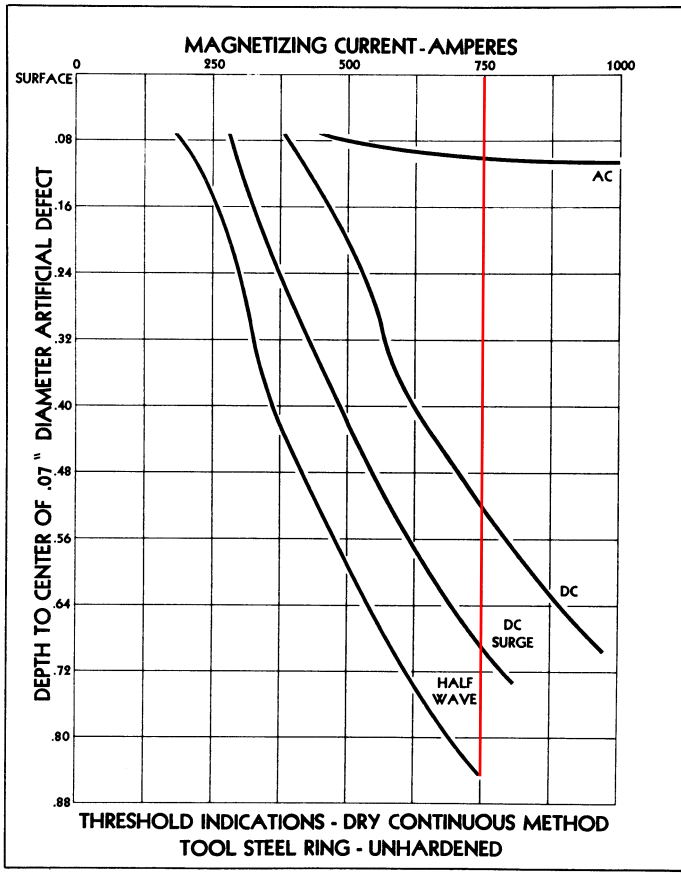

Fig. 115—Comparison of the Sensitivity of A.C., D.C., D.C. with Surge, and Half Wave, for Locating Defects Wholly Below the Surface.