

- 9) Hardness,  $\text{kg/mm}^2$
- 10) Section with pure alcohol
- 11) Section with distilled water
- 12) Section with 50% diluted alcohol
- 13) Section with gasoline

††

\* The microhardness was defined as the arithmetic mean of the values obtained for four impressions in the case of 5, .....200-g loads and five impressions in the case of a 2-g load.

In this series of measurements we used sections of metals obtained by mechanically grinding and polishing, i.e., cold hardening in the surface layer was not eliminated, so that the hardness of the samples tested was rather high at the surface. However, as the measurements bore a comparative character, i.e., we were comparing the results of measurements made on dry samples and on the same samples moistened with various liquids, this circumstance should not seriously distort the results.

Here once more the measurements show that there are no appreciable systematic differences in the microhardnesses of these metal samples. Thus the measurements prove that in the case of both macro- and microhardnesses the hardness numbers obtained in the tests are identical for dry surfaces and surfaces wetted with surface-active substances.

Measurements of Tensile Strength..... Carried Out on Dry Samples and Samples Wetted with Surface-Active Substances

In order to discover the effect of surface-active liquids on

Table footnote →