(curve I) after 27 h has fallen from 70 to 20%. With the sample pressed at 20,000 atm, the degree of dehydrogenation after 48 h has fallen from 70 to 48% (curve II). The degree of cyclohexane dehydrogenation with the sample pressed at 10,000 atm has fallen from 70 to 30% in 29 h (curve III). Thus the stability of the sample pressed at 10,000 atm was greater than that of the unpressed sample and less than that of the sample pressed at 20,000 atm.

Stability of Catalyst Samples in the Dehydrogenation of the 96-to-107° Fraction of Maikop Gasoline. Figure 3 shows the time variation in the activity of catalyst samples during the dehydrogenation of gasoline by reference to the degree of dehydrogenation of the cyclohexane after every 10 h of passing gasoline.

Fig. 3. Stability of a nickel-alumina catalyst in the aromatization of the 96-to-107° fraction of Maikop gasoline.

Key

1) Degree of cyclohexane dehydrogenation

2) h

We see from Fig. 3 that in an experiment lasting more than 220 h the unpressed sample (curve I) had about the same stability as that pressed at 20,000 atm (curve II).

The results of all these experiments show that the stability of a nickel-alumina catalyst in the dehydrograntion of hydroaromatic hydrocarbons in the presence of a five-membered cyclene poison may