is rapidly deactivated during the dehydrogenation at 300° of cyclohexane containing 10% of 1-ethylcyclopentene-1. The authors consider that the reason for the poisoning of the catalysts in this process is the intermediate formation of easily-polymerizing cyclopentadiene. As a second type of poison we took thiophene. The cyclohexane had a bp of 80.7° (751 mm) and refractive index ..... . The gasoline contained considerable quantities of hydroaromatic hydrocarbons ; it boiled between 96 and 107° and had a refractive index and density of.....; it contained no sulfur or unsaturated compounds. It was natural to expect that the stability of the nickel-alumina catalyst in the course of the dehydrogenation of this gasoline (not containing impurities in the form of five-membered cyclenes) should not depend on any change in the porosity of the catalysts after pressing.

A catalyst containing 30 wt.% nickel and 70 wt.% alumina was prepared by the method described in /5/.

After forming, the catalyst was treated with hydrogen at 350° for 25 h. The hydrogen was passed over 50 ml of catalyst dried at 125° at a rate of 5 to 6 liters/h. Part of the reduced catalyst was subjected to pressing at 10,000 and 20,000 atm in a special booster. The catalyst was pressed in aluminum ampoules 50 mm long, with outer diameter 10 mm and inner diameter 9.6 mm, in accordance with the method given in /1/.

In all our experiments we used samples of the same catalyst, 250 ml of which were prepared in one process. The specific vol-