

### **Careful—Names May Cloud Polyethylene Picture**

The commercial growth of low pressure polyethylenes is pointing up the need for a more logical and precise nomenclature for all polyethylene resins. It is easy to classify polyethylene as being either high or low pressure today because the plastic is either flexible (high pressure) or rigid (low pressure). The two groups are separated by a range of materials still in the experimental stage. Once this gap is bridged with resins having properties midway between low and high pressure resins, confusion is apt to be the result. H. F. Robertson of The Bakelite Co. (page 51 A), thinks that the use of general designations could lead to such expressions as: "medium high tensile," "moderately linear," or "slightly branched." As one solution, Robertson suggests describing all polyethylene resins by one family name and using a common characteristic to identify individual resins. One such useful yardstick is density. Regardless of what they're called, however, everyone agrees that the future of the polyethylene family of resins is pretty bright.

### **The War Between the States**

Competition between states for new industry is becoming a big business in itself. The advertising budgets of several State Industrial Development Commissions already look like the advertising budgets of multimillion dollar corporations. One state even goes so far as to let prospective companies select the community they want, specify plant construction, and then offer 100% financing with 2% interest on up to one half the total plant cost. With the current trend of companies locating new plants "in the country," the competition between states will become even more torrid.

### **Every Round Goes Higher and Higher**

High energy fuels research is literally one of the hottest fields in chemical research. Leading contender in the high energy fuels race are the boron hydrides (42 A). Boron ores, although not plentiful, are concentrated, making recovery easy and inexpensive. Ultimately, all high energy fuels could be tailor-made. How? By synthesizing new chemical compounds and putting them together for most desirable handling properties and high heats of combustion. Emphasizing the importance of the develop-

ment of high energy fuels, the Air Force has just given Olin Mathieson Chemical Corp. a \$33 million contract for the production of high energy fuel. This fuel will be used for an advanced, chemically fueled supersonic bomber, details of which the Air Force has not yet announced.

### **Lacking: Automation and Process Control Courses**

For a long time, professors and men who have had considerable experience in industrial plants have been making this point: Chemical engineers coming out of college don't have enough know-how in process control. Now, a young chemical engineer out of college a few years makes the same observation. James L. Ragan, Celanese Corp. of America, writes in this month's Professional Side (page 101 A), that most engineers get into process control and automation regardless of their college training. However, with college courses behind them, they would be more effective in a shorter time. This shortcoming could be remedied in time by the trend toward 5-year engineering courses.

### **Polyurethane Foams to Replace Foam Rubber?**

Use polyethers instead of polyesters in making polyurethanes and what's the result? Manufacturing costs of polyurethane foam are lowered 25% below that of foam rubber. Why? Polyethers are based on propylene glycol selling for around 25 cents a pound, while polyesters are about 50 cents a pound. Predicts one urethane manufacturer: Foam rubber has had it.

### **Bulk Handling of Chemicals Trend Grows**

The chemical industry is waking up to the fact that packaging and materials handling are the highest contributors to high labor costs. One estimate indicates these two factors may be responsible for as high as 90% of direct labor costs (page 57 A). Relief is in sight with the development of a portable steel bin which can handle up to 5000 pounds of chemicals and which can be shipped freight-free when empty. One large company already is using the new bins to ship phosphates from New Jersey to a detergent manufacturer on the Eastern seaboard (page 107 A).