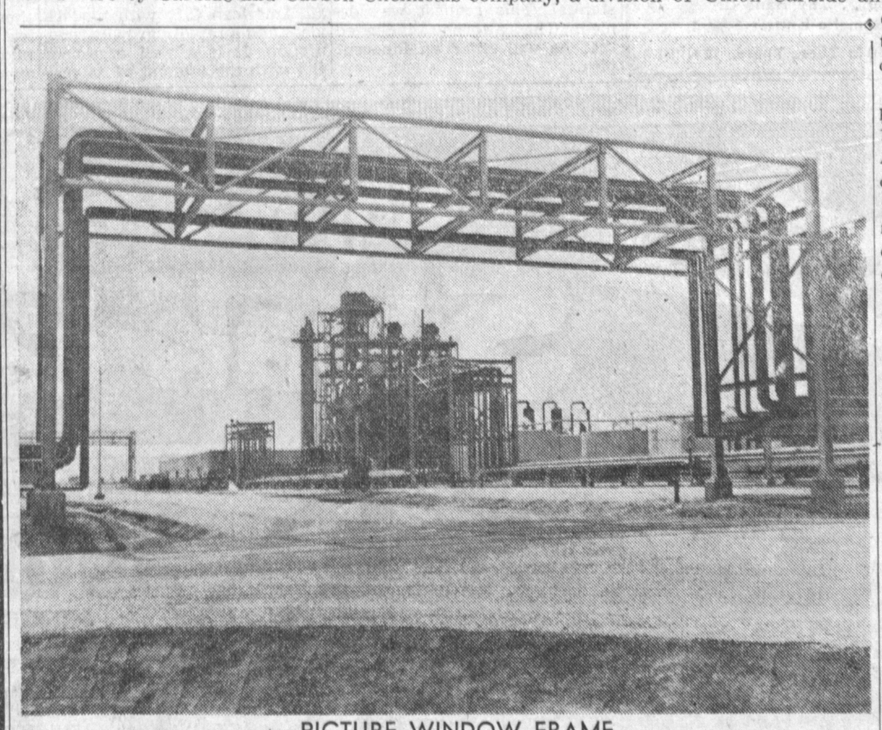
NEW TORRANCE INDUSTRY MAKES WEST COAST HISTORY

For the first time in the history of Pacific Coast industry three major chemicals from ethylene will be produced here by Carbide and Carbon Chemicals company, a division of Union Carbide and Carbon corporation. The chemical products are: polyethylene plastic resins, ethylene oxide and ethylene glycol.



PICTURE WINDOW FRAME
Elevated pipe provides a picturesque frame for an important unit of Carbide and Carbon Chemicals Company's new petrochemicals plant at Torrance, Calif. The equipment rising above storage tanks is used to produce ethylene glycol, from which all-winter anti-freeze is made.

Ethylene oxide is a most important chemical. From it over 100 derivatives can be made. Although ethylene oxide as a commercial product has been in existence for 30 years, this remarkable synthetic organic chemical is virtually unknown outside the chemical industry.

This year close to a billion pounds of ethylene oxide will be produced in the nation. Its derivatives will be used to make all-winter anti-freeze, plastics, synthetic fibers, cosmetics, antihistamine drugs, low freezing dynamite, shampoos, detergents, and textile specialties among other products. It will work unseen for the bus driver, the housewife the physician, the miner, the farmer, and the dressmaker.

Ethylene oxide is a flammable, colorless gas, difficult to produce, kept in sealed tanks generally used as an intermediate in industry. It is not found in nature and was first produced in a chemical laboratory in 1859. More than 50 years passed before a successful commercial process was developed by Carbide and Carbon Chemicals company for its production.

Anti-Freeze

Even then markets for ethylene oxide had to be developed. Its first use was to produce ethylene gleycol, the base product of all-winter anti-freeze. Almost half the ethylene oxide produced goes into ethylene glycol.

The commercial beginnings of ethylene oxide are closely bound up with Carbide and Carbon Chemicals company. Development of the synthetic organic chemicals industry, in which ethylene derivatives played the leading role, is due largely to the early work of Carbide's Dr. George O. Curme, Jr., at the Mellon Institute in Pittsburgh. His research project was to see if he could find a new source for acetylene gas, of which Union Carbide was the prime producer.

In the course of his experiments Dr. Curme became fascinated with the potentials of Ethylene, a gas that can be cracked from natural gas or petroleum. Carbide and Carbon Chemicals company was formed in 1920 to develop commercial production of chemicals from ethylene. The first pilot plant was started under Dr. Curme's leadership in 1920 at Clendenin, West Virginia.

This was the start of what is now known as the "petrochemicals" industry, but which should be more correctly described as the "synthetic organic chemicals industry." Today petrochemicals represent over half the value of all chemicals produced in the United States. So ethylene oxide, one of the first of the commercially available petrochemicals, occupies a high position in this country and vital industry.

Readiness To Combine

The striking characteristic of the molecules of ethylene oxide is their readiness to combine with the molecules of other substances to form substances never seen before by man. Ethylene glycol, for example, is made by chemically combining ethylene oxide with water. The resulting liquid makes a perfect base for all winter anti-freeze. An ethylene glycol derivative in dynamite prevents accidents which used to occur frequently when dynamite froze.

Ethylene glycol is a plasticizer for cellophane that gives this useful film added flexibility and toughness.

Combined with ammonia, ethylene oxide forms ethanolamines. These are colorless liquids useful in the manufacture of detergents, shampoos, and lubricating oil among other products.

Synthetic fiber manufacturers make use of ethylene oxide's readiness to combine with hydrogen cyanide. This is one step in the process for making acrylonitrile, from which several synthetic fibers are produced, including Carbide's own Dynel.

The fact that Carbide and Carbon Chemicals Company is now operating this new plant for making petrochemicals in Torrance is an indication that the market for this chemical is growing. Increased demand for synthetic fibers, detergents, and plastics are just part of the reason why the future of this 30 years old product appears to be as unlimited as its ability to combine with other molecules in the skilled hands of chemists and engineers.

C. N. Rucker Heads Local Carbide Plant

Biographical Sketch— C. N. Rucker, Superintendent, Torrance

C. Nelson Rucker joined Carbide and Carbon Chemicals company when he graduated from the Virginia Military Institute in 1933 with a degree in chemical engineering.

Since the start of his career at the South Charleston plant he has been engaged in chemical production and management work centered around the gas separation process, heart of petrochemical production.

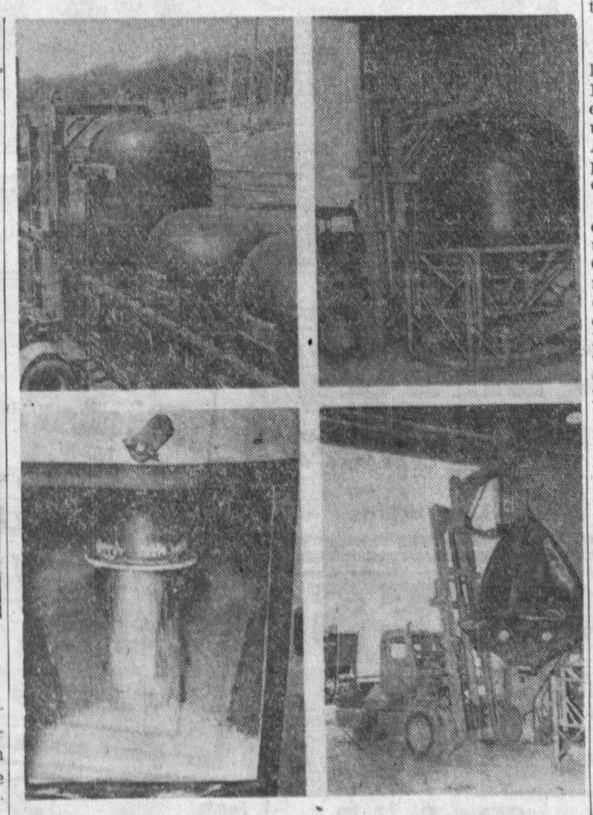
From the position of area supervisor over the two gas separation units at South Charleston plant he worked on the pilot plant leading to the first butadiene synthetic rubber material plant built by Carbide for the wartime rubber program. He was one of the first executive persons transferred to start up Oak Ridge uranium production units where he became Process Superintendent of the $500,000,000 gaseous diffusion plant for separating uranium. Later he was superintendent of the magnetic separation plant at Oak Ridge and returned to South Charleston plant after two years as Executive Director of Oak Ridge National Observatory.

HALLDALE P-TA MEETS TODAY

"Making Holidays Meaningful", is the theme of the Halldale P-TA meeting today at 1:30 p.m. in the school auditorium, Mrs. E. N. Reese, president, announced Mrs. C. L. Wilson, Honorary Life Membership chairman of Lomita-San Pedro council will give a gift wrapping demonstration

With a "Bigger Yes for Community Chest" as their goal approximately 50 Halldale P-TA board members will participate in the 1956-57 residental campaign starting today. The money-raising campaign supports 168 health, welfare, youth and recreation agencies.

Mrs. Amanda B. Wilhelm Halldale principal, and Mrs. Reese announced that at the Hallowe'en parade and bake sale judges awarded over 85 ribbons for costumes. The bake sale netted $121.00 Half the proceeds went to the Student body fund.



Better Method Found For Shipping Polyethylene

Giant, new synthetic rubber containers manufactured by United States Rubber Co. and filled with Bakelite polyethylene resins (in lots of 9400 pounds net per container) take about one half hour to unload (top left photo).

It takes 16 man-hours on the average to unload an equal volume packed in paper bags, which the big containers are designed to replace. A completely enclosed and mechanical handling system built around these giant, collapsible containers eliminates customer product contamination from fly ash, dust, dirt, cut bag fibers and other materials during shipment.

At the receiving end of field trial shipments by Bakelite Company of polyethylene resins from Charleston, W. Va., to Ottawa, Ill., lift trucks carry the huge new containers to a specially designed emptying fixture (top right photo).

A sleeve valve, similar to the one used for loading, connects to the container's closure. Bakelite polyethylene resins pour out of the container through the air-tight system and are ready for processing (bottom left photo).

The uncontaminated resin helps to maintain the customer's product quality and reduces rejects. When the container is empty, it is removed from the unloading fixture (bottom right photo), collapsed, folded and returned to a storage area awaiting periodic shipment back to the resin producer for refilling.

Air-tight, moisture-proof and collapsed to a fraction of their original size, the new containers can be stored outdoors with little or no surface preparation to protect them from the weather. With warehouse space currently valued at 60 to 80 cents per square foot per year, the collapsible, outdoor containers offer further savings to the customer.

Possible overall savings to the customer in bulk handling costs of Bakelite polyethylene resins have been estimated at one-third of a cent per pound on the basis of field trial shipments.

This flexible handling system is also being tested for the shipment of such materials as carbon black, used by the tire industry, calcium carbide, and other hygroscopic materials that must be protected from air and moisture.

Toys Needed By Bureau

Usable toys for little children of poor and low-income families are being sought by the St. Vincent de Paul Salvage bureau to replenish stocks needed for Christmas, it was announced by Albert Tassi, bureau manager.

Everything from dolls to ray guns is needed. They will be made available in four St. Vincent de Paul stores.

Toys, furniture, clothing, household appliances and other articles can be donated by calling TErminal 4-4533, Harbor area.

Proceeds during November will go to the suport of Miserere house, recreation and rehabilitation center for homeless, transient men in the downtown skidrow area.