



LARGEST IN CITY — National Supply, first major industry in the city of Torrance, now is the largest. Huge plant, which manufactures oil drilling equipment,

covers an area of 700,000 square feet and is located on a 39 acre plot of ground in the downtown Torrance area.

Largest Industrial Plant in Torrance Was First In Community; National Supply Moved Here in 1912

A plant that includes 33 principal buildings, with more than 700,000 square feet of covered floor space, on a tract of 39 acres.

A plant that was the first industry in a brand new city and that has grown with that city.

A plant that probably did more than any other to extend drilling depths to new records.

That is our Torrance plant, the largest plant now operated by the National Supply Division, and the largest completely integrated machinery manufacturing plant in the west.

The plant makes its own steel ingots and castings, and performs such other varied operations as forging,

machining, heat treating, plating, welding, and assembling, in order to convert them into a multitude of useful products. Although its principal activity is the design and manufacture of drilling rigs and equipment, the plant also is geared to the manufacture of heavy machinery and of maintenance and operating equipment for many basic industries, such as steel, aluminum, mining and cement.

HISTORY OF PLANT
Construction of the plant began when the present City of Torrance was little more than a promoter's dream. Back in 1911, a man named Jared Sidney Torrance bought a tract of 2800 acres and another of 730 acres and

had plans drawn for what he hoped would be a model city, including industrial, commercial, and residential areas. His first major sale was to the Union Tool Company, a manufacturer of oil field equipment, which had outgrown its quarters in Los Angeles. Work on the Union Tool Company plant began before the layout of the townsite had been completed.

INCREASED DRILLING DEPTHS

Union Tool had played an important part in developing rotary drilling rigs, which were beginning to compete with the cable tools then widely used. Under National Supply, this

development was continued, and today most drilling is with rotary rigs.

Whereas the 5000-foot mark was not reached until around 1909, the 10,000-foot mark was passed in 1930 and the 15,000-foot mark in 1938. From 1945 to the present, every world's drilling depth record has been achieved with a Torrance-made National rig. The depths were 16,655 feet in 1945, 16,668 feet in 1946, 17,823 feet in 1947, 18,734 feet in 1949, 20,521 feet in 1949, 21,482 feet in 1953, 22,570 feet in 1956, and 25,340 feet in 1958.

THREE MELTING FURNACES

Torrance has three electric melting furnaces, with capacities up to 50,000 pounds per heat, for the production of steel, and also has a 50-pound induction vacuum melting furnace for special work. The foundry has its own pattern shop, sand reclamation unit, coring ovens, heat treating furnaces, sand slingers, shot blast equipment, and cleaning facilities for producing castings up to 30,000 pounds.

The forge shop has three forging presses, the largest of which can exert pressures to 1500 tons, as well as a 12,000-pound drop forging hammer and four steam forging hammers. An 11-ton bridge manipulator and a 2000-pound manipulator machine facilitate the handling of forgings.

The heat treat department has 43 heat treating furnaces, together with four flame hardening machines and all standard harness testing equipment.

WELDING EQUIPMENT
The weld shop has 73 arc welding machines, with capacities up to 600 amperes, a 1200-ampere automatic welding machine, and three 600-ampere semi-automatic welding machines.

Automation Industries Is One of Nation's Largest Suppliers of Ultrasonic Gear

One of the largest suppliers of ultrasonic instruments and service, Automation Industries, Inc. maintain extensive facilities in Torrance at 3501 Lomita Blvd.

By definition, ultrasonics defines sound frequencies of

more than 20,000 vibrations per second. At first glance it is difficult to see how this phenomenon can be important to industry.

Ultrasonic as applied to "nondestructive testing" has, in many cases, revolutionized testing procedures. Nor-

mally it is not practical or economical to "test to destruction" in proving the integrity of structural components. Ultrasonics permits the detection of flaws or voids, or the lack thereof, without destroying the part.

The technical advantages and efficiencies of the ultrasonic testing technique extend to application both in the military realm and in private business or industry.

Automation Industries pioneered the development of practical and economically feasible means for inspecting drill pipe for the oil industry. This is just one example where ultrasonics helps industry.

Ultrasonics has aided in detecting defect in supersonic and hypersonic aircraft and missiles.

This method of ultrasonics allows critical inspection of the material before the costly process of machining begins.



CORWIN D. DENNEY, President
Automation Industries

Stauffer Chemical Offers New Color Film on Refining Metals

Electron beam melting and refining of refractory metals and alloys is the subject of a new 10-minute, 16 mm color and sound film produced by the Metals Division of Stauffer Chemical Co.

The film details the operation of electron beam furnaces, in which electrons are used to bombard and melt high-temperature refractory metals, such as columbium, tantalum, molybdenum and tungsten to form specialized alloys for use in critical applications where

ultra high strengths must be maintained at temperatures over 2000 degrees F. These include nuclear equipment, rocket motors, space re-entry vehicles, electronics components, high temperature furnaces and corrosion resistant equipment. The film also illustrates the precision quality control techniques required in the production of refractory metals and alloys.

The new Stauffer Metals film is available for showing on request.



Automation Industries—on the Move

AUTOMATION INDUSTRIES, INC. has moved its corporate offices to new, larger quarters in Torrance, California, to accommodate its expanded activities. The move follows a pattern of planned corporate development which has resulted in diversification into the following fields:

- Ultrasonics
- Non-destructive testing systems
- Magnetics
- Microwave equipment
- Electronics

- Instrumentation
- Chemical Milling
- Aircraft and Missile structures
- Test Equipment
- Radioisotope flow measurement

Sperry Products Division of Danbury, Connecticut is the most recent addition to Automation Industries.

RESEARCH

DEVELOPMENT

MANUFACTURING

automation industries, inc.

Divisional Plants In:

- Tulsa, Oklahoma
- Manhattan Beach, California
- Boulder, Colorado
- Columbus, Ohio
- Danbury, Connecticut
- Abilene, Texas
- Oakland, California
- Torrance, California

CORPORATE OFFICES
3501 LOMITA BOULEVARD
TORRANCE, CALIFORNIA

Continued Growth Noted at Dow Chemical; Expansion Program Scheduled for Completion by End of June

The Dow Chemical Company's plant at Torrance is continuing to grow.

The latest indication of this came early in 1962, when it was announced that an expansion of facilities for the production of high impact polystyrene was under way.

Leland A. Doan, general manager of Dow's Western Division, said the expansion is expected to be completed in June, 1962. Dow first started production of high impact polystyrene at Torrance in June, 1958.

Growth at Dow's Western Division facilities at Tor-

rance has been steady since 1953, when production of plastics was started here by Dow.

During the past two years, for instance, two new products have been added to the plant's list: polypropylene, a versatile, comparatively new plastic expected to find a wide range of use; and Roofmate, which in essence consists of asphalt laminated Kraft paper wrapped around a 2-foot by 4-foot board of Styrofoam.

For several years, Dow has also produced two other products at Torrance—Styron, the trademark name for the Dow family of thermo-

plastic molding compounds made from styrene; and Styrofoam, a lightweight plastic foam material with a long record of successful use in building insulation and other applications.

Dow also maintains a Plastics Technical Service Laboratory at Torrance. Staff members of the laboratory work with engineers and customers throughout the West, the object being to make the most of the properties and characteristics of Dow plastics.

In addition, the laboratory works on potential new uses for plastics. This last function can also

mean expansion of Torrance laboratory facilities. During the past year, for example, the laboratory has done extensive development work in the polypropylene field using an array of equipment installed for that purpose.

Why does the Torrance plant continue to grow? D. W. Ryan, manager of the Torrance production facilities, believes the answer to that question has several parts.

"We're proud of what's happened here during the past decade, and we're optimistic about the future."

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