# Torrance Steel Plant Looks to Future

## Long Term Planning for Metal Homes Underway Here

Successful translation of Rheem Manufacturing Company's steel structural system to the home building field could be "a significant step forward in the long search for an economical, esthetically appealing all-steel house," Bennett S. Chapple, Jr., administrative vice president - commercial for U. S. Steel, said today.

Geneva-U. S. Steel plant in Torrance provides basic material for the construction program.

"The four homes now placed before the home building industry and prospective home buyers dramatize the benefits of steel in home construction. They show what can be done by designing to take advantage of steel's inherent strength, fabricability and economy on a competitive and cost basis," he said.

Working with Rheem on this project is typical of U. S. Steel's continuing efforts with many manufacturers over the years to help develop sound applications for steel in the home building field, Chapple pointed out.

"We are working constantly," he said, "to search out means for determining the efficiency and economy of steel components and steel products in all facets of the home building industry."

Two major benefits of the all-steel house are expected to be dramatized, according to Chapple.

**ECONOMICAL**

"First," he said, "the new steel houses are expected to offer the home owner a wide series of functional benefits not usually available in other construction except at added cost.

"Second, a home designed and built in accordance with a system such as Rheem's should be cost-competitive with other types of construction. The entire research and development plan is centered on time-cost reduction from preliminary design and drawings to the erection and completion of the final houses in the test series.

"Some of the benefits expected are:

1. Better structure through the use of steel, which is a stronger, more dimensionally stable material than the usual home construction products.
2. Inherently better fire protection.
3. Decreased sound transmission problems from room to room and from outside to inside.
4. Uniformly better control of heat losses and cooling requirements realized through use of efficiently insulated construction.
5. Flexibility of architectural design.
6. Quick occupancy by the owner because of the speed of construction made possible with a completely engineered design. The cutting and trying usually practiced in conventional home building has been eliminated.
7. Low maintenance costs."

**IMPROVEMENTS**

As an example of U.S. Steel's efforts to search out improved products and methods for using steel in residential construction, Chappel cited the development of the SteelFast, and entirely new method for applying interiors.

"We worked closely with the National Association of Home Builders Research and Technology Division and the builder who originated the idea for SteelFast," Chapple said. "Our combined efforts were successful in producing a cost-saving system that is now being marketed nationally."

Other instances of the steel company's activity in this field are development of an all-steel exterior door, a stainless-clad steel threshold and promotion of an all-steel swimming pool. It is presently developing a new system for applying conventional interior paneling.

**PREFABS**

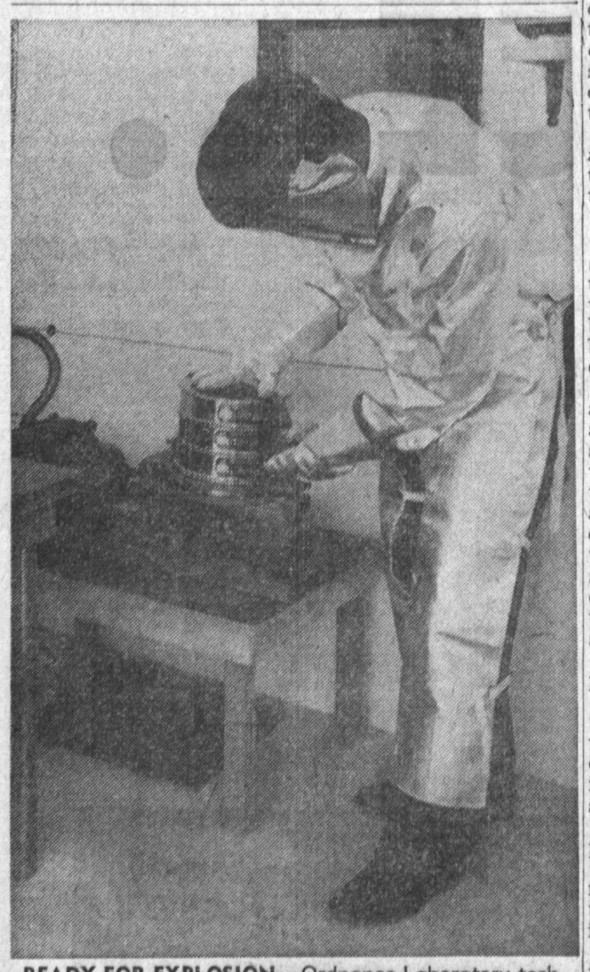
"Within our own corporation," Chapple said, "our U. S. Steel Homes Division is producing and selling prefabricated homes utilizing a steel structural framing system. We are marketing them in selected communities in the Mid-West.

"The Homes Division engineers recently developed an interior drywall partition which is made up of light guage steel vertical framing members with the gypsum board bonded to it by adhesives. The new partition is competitive in cost with conventional walls, dimensionally stable, allows rapid erection, and provides a much smoother wall finish."

In projecting the potentials of the Rheemetal Building Division steel structural system, Chapple pointed out that features of West Coast "sun belt" living have, in recent years, spread throughout the country. Out of the West has come the home with the pitched roof, making the house literally "hug the ground." Wide roof overhangs for shade and rain protection, designs for indoor-outdoor living, the patio, sliding glass doors, have spread East from California.

"It is certainly possible," Chapple said, "That a new theme of living will emerge through inexpensive, well-built, well-designed steel homes developed in the West to follow their successful predecessors eastward in home owner acceptance."

**DISTINCTIVE**—Three distinctive roof treatments have been designed for first models of the new Rheemetal home. A flat roof, as shown in this model, blends with its desert setting at Palm Springs. The structural system used in Rheem Manufacturing Company's new steel home is a direct translation of a system used successfully by its Rheemetal Building Division in constructing over 650 classrooms, shopping centers, restaurants, large stores and complete high schools in Southern California. Rheem is introducing the new concept in residential construction to builders and home buyers with four display homes—three in Palm Springs, and one in Palm Beach Gardens, Florida.



**READY FOR EXPLOSION**—Ordnance Laboratory technician at Hi-Shear Corporation prepared a powder grain in a Sieve Shaker for use in Hi-Shear developed Power Cartridges.

## Hi-Shear Marks 19 Years Of Growth in Torrance

Hi-Shear Corporation as seen today at Torrance Municipal Airport is a far cry from its first home in nearby Hermosa Beach, 19 years ago.

Founded as The Hi-Shear Rivet Tool Company by George S. Wing and his partner, Allan J. Kirk, the company first produced Hi-Shear rivets and tools. These fastener products, invented by Wing, won immediate acceptance by the airframe industry for their space, weight and time saving advantages on war-time military aricraft. Initially used on the P51C Mustang fighter, Hi-Shear rivets saved 75,000 manhours per month at North American Aviation plants at the peak of production during World War II.

Today, Hi-Shear's broadened line of precision fastener hardware and ordnance products are in the National Aeronautics and Space Administration programs as exampled by the recent Mercury manned space capsule shots at Cape Canaveral, the Saturn program at Huntsville, Alabama and the Air Force's Dyna-Soar manned mach 10 boost-glide research vehicle.

Hi-Shear rivets, now made in high strength and temperature resistant materials still command importance in industry use. For instance, the 400 mph NASA X-15 research vehicle, developed by North American Aviation, uses thousands of Hi-Shears in its primary structure.

Other high strength systems in current production and invented or principally developed by Hi-Shear engineers include: Hi-Torque Bolts, Hi-Lok Fasteners, Blind Bolts and Blind Nuts, Beta Bolts, Blind Press Nuts, Panel Fasteners, Inserts and Tape Terminals.

Starting three years ago, a rapidly expanding line of electro - combustion hardware has been developed. Typical uses include the release of external stores from aircraft, operation of undersea devices, as time delay mechanisms, for missile tiedown and stage separation and a variety of applications in space vehicles or probe equipment. These Hi-Shear developed electro - combustion devices serve as high strength fasteners, connectors or as a means ofcontainment. On command, they are electrically initiated, releasing controlled combustion energies produced by combustion to mechanically push, pull, separate, sever, jettison structure or components or activate other functional systems. Transland Aircraft, a division of Hi-Shear, manufactures a broad line of dispensing equipment for use on aircraft which apply chemicals and seed materials to agricultural crops for plant growth and insect control. Transland has also designed the Ag-2 airplane, specifically designed for the safe application of materials to crop and forest lands.

With Hi-Shear precision hardware, ordnance products and power equipment in use on all principal military aircraft, missiles and space vehicles, additional sales efforts are being directed toward other industries including electronics, sheet metal fabrication, marine transportation, chemical and agricultural. These markets are located in the U.S., Canada, Latin America and the NATO countries around the world.

Hi - Shear's management and technical staff directs the activities of approximately 400 skilled employees. With George S. Wing still active as president and Allan J. Kirk, executive vice president, other staff members include W. J. Carrigan, vice president and treasurer; A. E. Anderson, vice president-Manufacturing; Guy Nash, vice president-sales, William Haypern, secretary and general counsel; Vene Darby, chief engineer; Ray Fitting, chief-Quality Control; Sterling Souder, purchasing agent; Fred Pearce, personelm anager and John T. Hales, advertising manager.