ARMCO RESEARCH CENTER

1937 to 1987

50th Anniversary

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New lab was termed a 'wonder

It was called the "wonder" laboratory by those in the business of steel research and many felt, as it was dedicated in 1937, it would be a major force in keeping Armco at the forefront of the industry in new products and processes.

More than 200 scientists from all parts of the U.S. were guests that cool November day when Armco dedicated its new research laboratory on Curtis Street.

It culminated about a two-year effort resulting from the accidental explosion in December 1935 and destruction of the firm's older and smaller research facility.

George M. Verity, Armco's founder, told the gathering that day in 1937 when the new Armco Research Center was dedicated that it was just such facilities that would keep American industry ahead of the world and the standard of living high for all Americans.

"From the courage and brains of men who have refused to accept today's products as representative of perfection has come the impetus that has given us the highest standard of living known in the world and which has provided profitable investment for savings of the nation, and work and more abundant opportunities for millions of men."

Another entrepreneur with a scientific bent at the event put it in a more unusual fashion.

Said visitor Charles Kettering, then vice president in charge of research for General Motors, "Research is what keeps industry healthily dissatisfied with itself."

The dedication he was attending, was "like a public confession," said Kettering.

"It is a confession that all these men who are running Armco do not know all there is to know about making steel."

"It's an expression of determination that they are going to find out more about the important things about it and, in finding that out, they are going to do that which is so essential to our industrial and social vitality."

THE REASON Kettering, Verity and Charles Hook, then the president of Armco, and the industry in general were using the word "wonder" in describing the lab was that the new facility was deemed to be the most modern in the steel business at that time in the world.

The building itself was tradition-breaking in design as well as in the combined application of new and old materials — mostly materials associated with Armco and steel.

The approximate one-acre building costing $280,000 was (and still is, though somewhat modified and expanded later) a statement in curvilinear design, accenting a look that was then called by trade publications and newspapers "modern and streamlined."

On the exterior was an architectural blend of porcelain, enameled iron, stainless steel and glass block.

Though the glass blocks were later covered with enameled steel panels, the building typified, as one publication noted, "modern industrial design and the role of sheet iron and steel in application to construction."

Steel walls on buildings were not common at the time in other than service stations, but the new research building incorporated them in its design, and there was a sawtooth roof, with all-welded steel frame.

Structural steel was anchored to concrete piers, and the structural steel framework and bent beams for the roof were pre-welded in the shop to keep field welding to a minimum. It was noted that only 6-inch H-beams were necessary to support the exterior walls. Interior walls were also steel panels. Altogether, six products of Armco served as the principal construction materials used in the building.

The roof was supported by columns on 30-foot centers, eliminating trusses and other shadow-producing crossbars, so there were virtually no obstacles to the even distribution of light.

More important, the new research laboratory was equipped with what was a greater collection of metallurgical research and testing equipment than had been possible in the old lab, and the space available for more equipment was a further statement of the commitment to a growing research activity, according to one young mechanical engineer who retired many years later. "We had more room than anyone really thought we'd need in the new lab." The older lab, now gone forever, "had been cramped," but the new one, "was a wonderful place." The equipment installed in the new center was largely used equipment, but within a few years, as Armco prospered, the technical sophistication of research's hardware would be enhanced.

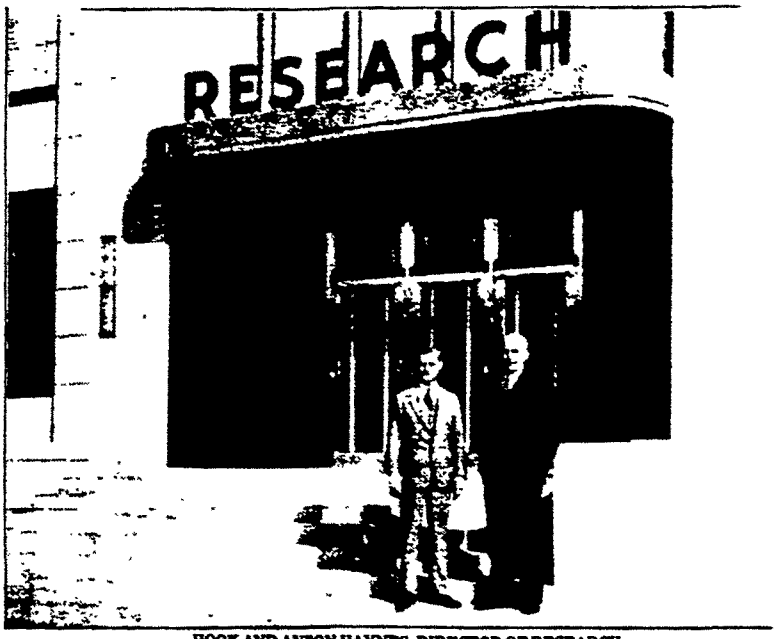
IN THE years just prior to the 1935 explosion that destroyed the earlier lab, Armco had already accomplished much meaningful work in stainless steels, introduced a new high-tensile sheet steel and developed several types of steel pipe, including spiral welded. Researchers had developed such products as Paintgrip (galvanized sheet that can be painted immediately), Zincgrip (a heavily coated galvanized sheet that can withstand severe drawing and forming) and other products.

The new lab would form the focal point for developments of Aluminum Killed Steel for the automotive business and deep-drawing applications, Aluminized steels, the first continuously aluminum-coated steel strip, Ultrasmooth (galvanized for auto exteriors) and other products that helped boost Armco's fortunes in the next five decades.

The new research center cost only $250,000 with its equipment valued at about the same figure, and the structure covered about one acre.

Today, the building, having undergone major expansions in 1961 and in 1976, is over 180,000 square feet, and behind its usually closed doors is a variety of laboratories and other experimental areas — like a pilot electrogalvanizing line, a room where laser experiments are undertaken and another where robot welders are put to use to determine if they might play a part in keeping Ar ahead of the industry as the century approaches.

For those who may have seen inside of the lab when it opene 1937, the planned open house Sa day afternoon will exhibit quit different technical world than t saw 50 years ago. But it's technical world that's likely to j ve every bit as challenging for s researchers in the next 50 years.



HOOK AND ANSON HAYNES, DIRECTOR OF RESEARCH
In front of then new Research and Technology Center in 1937

Verity applauded early researchers

Armco's first serious try at applied research came in electrical and rust-resistant steels.

George M. Verity, founder, said on the day the then-new Research Center was dedicated in 1937 that the early search by Armco researchers for sheets with high magnetic properties (unknown at the time) and of what was termed "ingot iron," a very pure iron to be used for rust—resistent steel, "were two of the most outstanding examples of what pure research and intensive crusading development work have done in the field of sheet metal."

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