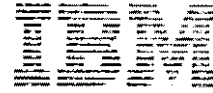


For Release
Thursday,
May 25, 1967



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9,000 Miles of Glass

FORD'S NEW COMPUTER-CONTROLLED PLANT TO OPERATE NON-STOP FOR THREE YEARS

DEARBORN, Mich., May 25 . . . A non-stop, three-year production run that will produce a ribbon of windshield glass long enough to reach from Michigan to the South Pole is underway here at Ford Motor Company's new computer-controlled glass plant.

Ford is working around the clock to produce 9,000 miles of glass in a continuous strip more than eight feet wide. As it reaches the end of the production line, the glass is cut, laminated and formed into windshields.

The new plant includes an IBM 1800 data acquisition and control system -- a computer especially designed to control continuous operations ranging from paper-making to food processing. This is the first 1800 system to be installed in the flat-glass industry.

"Ford is the country's third largest producer of glass, and every production improvement yields big returns," said Kenneth E. Coburn, manager of the Dearborn glass plant. "With the computer, we should be able to increase productivity five per cent and maintain consistently high quality standards."

In the "float" process used at the Dearborn plant, molten glass is floated on a 175-foot bath of molten tin. As the glass moves over the tin, heat is reduced gradually until the glass hardens and takes on the perfect flatness of the molten tin. The glass ribbon then flows through a 350-foot annealing furnace, emerges as finished glass and is cut automatically into windshield sizes.

The traditional flat-glass process requires the glass to be ground and polished after it is formed. The "float" process, licensed to Ford by the developer, Pilkington Bros., Ltd., of England, eliminates the need for grinding and polishing.

To regulate the glass-making process, the 1800 system currently receives 30 signals a second from approximately 700 sensing devices. These devices, which are located in the furnace and at other key points in the process, report such variable conditions as temperature, liquid and gas flow, and the level of molten glass.

The computer compares the information with established high-low limits. When a variable falls outside these limits, the computer adjusts the process at one of 80 control points.

These control cycles -- called closed loops -- enable the 1800 system to regulate most of the process automatically. In addition, the system will alert an operator if any adjustment cannot be made through one of the 80 closed-loop control points.

Back-up controls will continue the production flow during normal maintenance of the IBM 1800 and other parts of the processing system.

The 1800 system collects statistical data and prepares management reports that can lead to further improvements in the process. Coupled with other data processing equipment, the 1800 also can extend management reporting capabilities to include such functions as production planning, cost accounting and inventory control.

Mr. Edward R. Sczesny, manager of research and engineering, Ford Glass Division, said, "Ford saved more than \$100,000 in equipment costs by installing the IBM 1800 instead of conventional measurement and control instruments used in the past. The company expects to reduce operating, maintenance and material costs as well.

"With computer control of the process, less strain is placed on the furnaces and other equipment," he said. "For example, critical temperatures in the 2,000-degree Fahrenheit range can be controlled to within one degree, and pressures in the furnace can be held to within two thousandths of an inch. These tolerances are up to five times tighter than in the past."

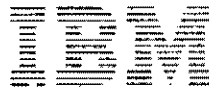
Data collected from production operations, including test runs, is recorded continuously in an IBM 2310 disk storage unit, where it is available to glass technologists searching for improvements in the process.

The 1800 system was installed and operating within three weeks after the plant opened on March 1.

Ford is planning another 1800 system installation this month at its Nashville, Tenn., glass plant.

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DPD 13

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DPD 12

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DPD 12

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DEARBORN, Mich., May 25 . . . This sheet of windshield glass was cut from a continuous glass ribbon rolling off the production line at Ford Motor Company's new computer-controlled glass plant here.

An IBM 1800 data acquisition and control system (left rear) will keep the line running non-stop until it produces 9,000 miles of glass -- enough to reach from Michigan to the South Pole. The computer currently reads 30 signals a second from 700 sensing devices located at key points throughout the glass-making process. It instantly-analyzes these signals and automatically adjusts the system to maintain peak efficiency.

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