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SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE

Piping Marshland Sulfur

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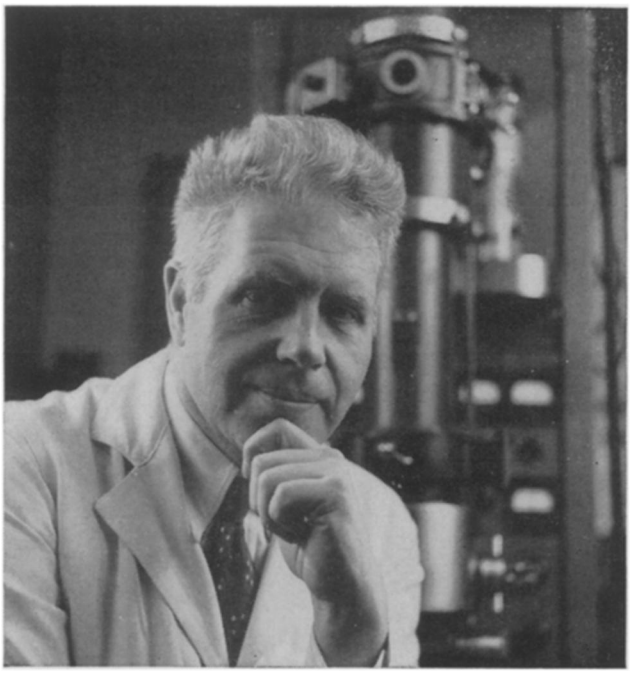

Adventurers in Research

Dr. Earl A. Gulbransen

SCIENTIST

A graduate of State College of Washington, Pullman, Washington, he received his Ph.D. from the University of Pittsburgh in 1934. He was a National Research Council Fellow in physical chemistry, and later a Research Associate at the University of California. For four years he was Instructor at Tufts College. In 1940 he came to the Westinghouse Research Laboratories as Research Engineer, and in 1947 was advanced to Advisory Engineer, his present post.

WHEN HE CAME to the Westinghouse Research Laboratories in 1940, Dr. Earl Gulbransen was given a challenging assignment. He was asked to initiate a program of fundamental research on the corrosion and oxidation of metals. A new approach was needed. Previous research had failed to solve the problems. Dr. Gulbransen, a physical chemist, was chosen to supply that new approach.

With complete freedom to proceed in any direction he saw fit, Dr. Gulbransen developed a host of new techniques and methods that have resulted in a better understanding of corrosion. He has a unique ability to apply physical tools to the study of chemical reactions. He developed a vacuum microbalance so sensitive that it can weigh a single layer of oxygen atoms . . . a special electron diffraction camera for the study of crystal structure of corrosion films at high temperatures . . . new applications for the electron microscope in the study of chemical reactions on solid materials.

The achievements of Dr. Gulbransen may also be measured by the many honors he has received and his 50 scientific papers published since the start of his research program. His latest honor was from the American Society of Corrosion Engineers, which, at its Spring meeting of 1952, granted Dr. Gulbransen the Willis Rodney Whitney Award for his contributions to the knowledge of corrosion.

Dr. Gulbransen is a soft-spoken, friendly man with intense interests in both technical and cultural directions. He points out that the research in which he is engaged has tremendous social significance. "It is well known that our metal resources are diminishing," he says. "The pressure for these resources in the past has led to power politics and disastrous wars. Success in corrosion research and subsequent practice of protection of our metal resources can offer a real alternative to the pressing problems of mankind."

Dr. Gulbransen will tell you he considers fundamental research the most useful research. He explains that by gaining an understanding of the basic reactions involved between the simple gases and pure metal, an important step is taken toward ultimate solving of the problem of corrosion.

His contributions to science have been many. His practical solutions to problems have added greatly to our knowledge of metal processing, and have resulted in many improvements in Westinghouse products.

Westinghouse Electric Corporation, Pittsburgh, Pa.

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