

**The Knowledge Bank at The Ohio State University**  
**Ohio State Engineer**

**Title:** Professor Foulk Says Steam is Still Being Utilized

**Issue Date:** Nov-1933

**Publisher:** Ohio State University, College of Engineering

**Citation:** Ohio State Engineer, vol. 17, no. 2 (November, 1933), 17.

**URI:** <http://hdl.handle.net/1811/35088>

**Appears in Collections:** [Ohio State Engineer: Volume 17, no. 2 \(November, 1933\)](#)

## Professor Foulk Says Steam is Still Being Utilized

"We are still in a world of steam," says Professor Charles W. Foulk of the department of chemistry. "Our modern electric engines secure their power through steam with the exception of some from water power. But for the most part steam is utilized."

Professor Foulk is doing research work in boiler water chemistry. The work consists of the "investigation of foaming and priming of boiling water," by foaming and priming is meant the passage of liquid water from the steam boiler to the engine through the connecting pipe. The conditions which influence the passage of the liquid water into the steam is the real problem.

The behavior of the boiler water is studied by two means. First, water is boiled in glass equipment and the behavior of the liquid is noted. Secondly, small steel experimental boilers are utilized in order to have pressures comparable to those in a commercial steam boiler.

Professor Foulk has received several thousand dollars from various engineering societies for the continuance of the research work. Notable among the contributors are the research Foundation of the American Society of Mechanical Engineers and the University Engineering Experiment Station.

Anything that can be done to prevent the passage of liquid water to the engine from the boiler is a saving of expense. Thus, Professor Foulk is working to determine the fundamental causes of foaming and priming.

Research work in boiler water chemistry is also going on at the University of Illinois as well as several other places. The work at Illinois has to do with "scale formation" on the inside of the boiler. The scale, formed by the water, is so hard at times "that it is necessary to use a chisel and hammer to remove it from the boiler."

"Extra activity in boiler water chemistry during the past ten years," says Professor Foulk, "can be attributed to two facts. First, boilers are being operated at higher pressure than before which brings new problems. Secondly, people have interested themselves in that sort of thing." There have been more pamphlets and books printed on boiler chemistry in the last ten years than in the preceding period of fifty years.

The laboratory equipment used to the greatest extent by Professor Foulk consists of three boilers. Two of these boilers are made of steel and the third of glass. In his experiments with one of the steel boilers all results were contrary to expectations and as a result a glass boiler was constructed so that the behavior of the water could be observed. The glass boiler is almost an exact replica of the steel model.

Professor Foulk is the author of nine publications concerning the foaming and priming of boiler water. One of these is published in a German chemical journal.

He is a graduate of Ohio State, class of 1894, spent a summer at the Massachusetts Institute of Technology, and then attended the University of Leipzig in Germany for two years. He has been a member of the faculty of Ohio State since that time.

## PLEZWELL HOME LAUNDRY

1363 Summit St.

*Particular Work Done for  
Particular People*

**Special Rate to Students**

**Twelve Cents a Pound for Finished  
Work**

**FLATWORK, SIX CENTS A POUND**

For Service Call UN. 3804

Quality Service

AD. 1555

## Otto Bess

MEAT DEALER

*We cater to Fraternities and Sororities*

Stall No. 8

CENTRAL MARKET

## STONEMAN PRESS

*Printers*

EXPERIENCE  
CAPACITY  
SERVICE



*Printers of the  
Ohio State Engineer*