# HALL INDUSTRIAL WATER REPORT

Hall Laboratories, Inc.—A Subsidiary of Hagan Corporation, Pittsburgh, Pa.

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### *Boiler Scale Formation And Control Subject Of Paper by Rivers*

In a recent paper, "Concentrating Films: Their Role in Boiler Scale and Corrosion Problems," H. M. Rivers, Director of Engineering Service for Hall Laboratories, discusses the theory of how and why highly concentrated films form on steaming surfaces, the mechanism of steam generation and scale formation, characteristic effects of concentrating films, and problems associated with degree of film concentration.

Mr. Rivers points out that water consultants are responsible for treating boiler water so that concentrating salts do not crystallize out of solution, or precipitate in forms which will accumulate continuously as solid deposits. Further responsibility: natural constituents or added chemicals in boiler water must not give trouble because of decomposition or volatilization under "film" conditions; and corrosive concentrations of free caustic must be safely avoided.

On the other hand, boiler makers must design for heat input rates which limit tendency toward excessive concentrations, and provide adequate circulation and turbulence to assure rinsing of all steaming surfaces.

Write for your free copy of this informative paper.

### *Radar Plots Course Of Illinois' Water*

The greatest water resource of the State of Illinois lies in the air moving across it, Dr. A. M. Buswell, chief of Illinois State Water Survey, reported at the recent American Power Conference.

Radar tracks the release of this water to land surface as rain from thunderstorms. Not only are storm paths logged, but the amount of rainfall can be estimated.

Accumulation of such data provides a basis for future efforts to trap more rain.

## CONSULT WATER SPECIALISTS BEFORE BUILDING!

***Future Water Problems are solved in planning stage***

Calling in the specialists of Hall Laboratories before a plant is built can save many dollars and much time. Hall engineers study plant requirements and needs, and come up with important recommendations which can then be incorporated in the plant as it is built.

Consider a recent instance. Hall was called in by the consulting engineers of a large, New York State manufacturing company that had decided to construct a plant in California. The problem involved was the proper treatment of the local city water supply, for use in boilers at the new plant. Changes in the available water would occur frequently due to the mixture in the system of water from four different sources, all varying widely in composition. These changes could markedly alter the composition of the plant's water supply within less than an hour's time.

To properly prepare this water, a flexible pre-treating system was recommended by Alex Henricks and approved by his associates on the Hall headquarters staff. Designed to insure good quality water under any conditions, the equipment suggested was simple to operate and sized so that capacity would be adequate regardless of incoming water composition; yet frequent attention would not be required to keep the system in proper operation.

### *Industrial Water Problems Require Special Handling*

There are no "stock answers" to industrial water problems. For information write, wire or call Hall Laboratories, Inc., P.O. Box 1346, Pittsburgh 30, Pa.

*Water is your industry's most important raw material. Don't waste it.*

### *Water Important Topic Of ASME Meeting in L. A.*

Major interest appears to focus on three papers dealing with corrosion produced by condensed steam, but other water problems are not neglected at the two sessions sponsored by the Joint Research Committee on Boiler Feedwater Studies and the Power Division at the mid-year meeting of the American Society of Mechanical Engineers at Los Angeles, June 29 to July 3.

### *Woolen Yarn Dyer Improves Cleaning, Dyeing Operations With Hall Technique*

Unsatisfactory yarn scouring plus the intermittent need for 35% more acid in dyeing operations than tests indicated should be needed, plagued this yarn dyeing concern, a new client of Hall Laboratories.

Noting that dye kettles were heated with direct-contact steam from a low-pressure boiler, the Hall engineer checked steam for carryover of alkaline boiler water. At peak load, samples were heavily contaminated; even at normal load, carryover was appreciable.

The Hall engineer recommended using Hagan Anti-Foam to reduce steam contamination. Now, even for heaviest loads, steam contains less than 3 ppm dissolved solids, higher boiler water solids are carried with resulting savings in water, heat, chemicals.




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