

This NEW METHOD DRIES AIR PRECISELY as you want it

- ▶ to control your product's quality
- ▶ to prevent condensation on your product or material
- ▶ to prevent changes due to moist air in contact with your product
- ▶ to protect your material from dampness
- ▶ to protect your processing of moisture-sensitive material
- ▶ to DRY your material or product
- ▶ to pack or store your product safe from moisture damage
- ▶ to get exact moisture control for the precise atmosphere condition you need
- ▶ to provide precise atmospheric conditions for testing
- ▶ to increase your air conditioning capacity
- ▶ to DRY large quantities of fresh air from outdoors

The Niagara's Controlled Humidity Method using HYGROL moisture-absorbent liquid is

Best and most effective because . . . it removes moisture as a separate function from cooling or heating and so gives a precise result constantly and always. Niagara machines using liquid contact means of drying air have given over 20 years of service.

Most reliable because . . . the absorbent is continuously re-concentrated automatically. No moisture-sensitive instruments are required to control your conditions.

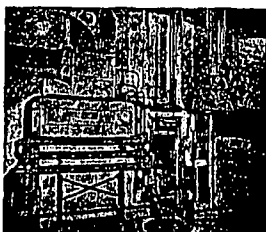
Most flexible because . . . you can obtain any condition at will and hold it as long as you wish in either continuous production, testing or storage.

Easiest to take care of because . . . the apparatus is simple, parts are accessible, controls are trustworthy.

Most compact, taking less space for installation.

Inexpensive to operate because . . . no re-heat is needed to obtain the relative humidity you wish in normal temperature ranges and, frequently no refrigeration is used to remove moisture.

The cleanest because . . . no solids, salts or solutions of solids are used and there are no corrosive or reactive substances.



Niagara Controlled Humidity
Air Conditioning

This method removes moisture from air by contact with a liquid in a small spray chamber. The liquid spray contact temperature and the absorbent concentration, factors that are easily and positively controlled, determine exactly the amount of moisture remaining in the leaving air. Heating or cooling is done as a separate function.

For complete information write

NIAGARA BLOWER COMPANY

Dept. F, 405 Lexington Ave., New York 17, N. Y.

District Engineers in Principal Cities of United States and Canada

More TECHNICAL BRIEFS

Fuels and Firing

Quick Starting of Large High-Pressure Boilers. By Jefferson C. Fellers, Consolidated Edison Co.

In the near future the Consolidated Edison generating stations will be faced with routine week-end hour shutdowns of large, high-pressure, high-temperature boilers and boilers. As a result of end load drop and the opening of new Astoria Station—with its approximately 20% better than existing plants—the annual cold starts on high-pressure boilers will greatly increase. It is with this prospective situation in mind, together with a conviction that quick starting of large high-pressure boilers, properly handled, is less risky than the expanding boiler string, that a present five to six hour starting investigation was carried out.

This paper shows by test results safe operating procedures developed to bring 1,000,000 Btu per hour high-pressure high-temperature boilers equipped with superheaters from cold conditions to on-the-line in one hour. It discusses some of the technical techniques and fundamental concepts relative to such acceleration. It also presents data on the handling of both the topping and condensing boilers in connection with cold starts.

Design and operation considerations of unit-system high-pressure high-temperature boilers, prior to the material reported in this paper, have been concentrated on the range from maximum to full output. Practical performance data has been reported to the author's knowledge in the range from zero to 30% maximum output. This is particularly true in the output range which begins with the generator and ends with the synchronizing generator.

During the early part of the reported herein, it was concluded following a week-end shutdown with its companion turbine, that started in a total elapsed time of minutes from light-off to on-the-line proposed typical start or zone performance is shown graphically. However, as such an operation is a role of saturated steam temperature increase of 400 F to 500 F per four to five times as large as generally accepted practice in 1950—the reduction of starting

Directions for ordering papers on

12,000 H.P. Hours per Gallon with Sinclair RUBILENE™

... says Leo D. Bradley, Manager
Western Michigan Electric Co-operative, Scottville, Michigan

"Our two Cooper Bessemer super-charged 1600 H.P. Model LS8T diesels deliver over 12,000 H.P. Hours per gallon of Sinclair RUBILENE H.D. Oil consumed," says Leo D. Bradley.

"We give much of the credit to the quality of this oil," continues Mr. Bradley. "RUBILENE® keeps our diesels exceptionally clean. Wear is kept at a minimum — the result is high efficiency . . . low operating costs . . . and low maintenance cost."

Sinclair Products have been used since the generating station first went into operation — 12 years ago. The recommendations made by a Sinclair Lubrication Engineer at that time plus continuous counseling service and superior Sinclair Products have meant substantial savings for this co-operative.

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