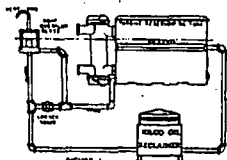
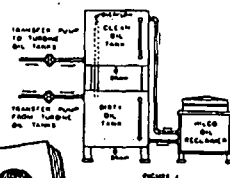


- **THE HILCO OIL RECLAIMER**
- **REMOVES WATER, SLUDGE, ACIDS**
- **IT IS CONTINUOUS AND AUTOMATIC**



- The HILCO system results in removing contamination as fast as it is formed, thus maintaining the oil in first class condition.

The HILCO OIL RECLAIMER is self-contained, including built-in pumps, electric heaters, starters and controls. It is compact, easy, and quick to service.



FOR MORE
INFORMATION
ON THE HILCO
SYSTEM

More TECHNICAL BRIEFS

The experiences discussed have been taken from actual operating records on several different units, both natural and controlled-circulation types. Inasmuch as more than thirty units of different sizes have heating surface arrangements, furnace arrangement and method of firing all of the same general design, they have shown the same operating behavior, it may be assumed that this will continue to hold true for the entire range from 40 mw to 250 mw or larger.

Plant personnel have found them no more temperamental or difficult to handle than once-through units. Figure 152. Addition of reheating has not complicated operation or reduced the liability of the steam-generating unit. In fact, no serious difficulties of any sort have been encountered.

Use of controlled-circulation principle does not alter any actual steam-generating characteristics except to provide for assured and uniform distribution of water to saturated steam surfaces of the unit. It also assists in the matter of maintaining uniform water level, even with widely fluctuating load, and thereby contributes to maintaining high steam purity at all times.

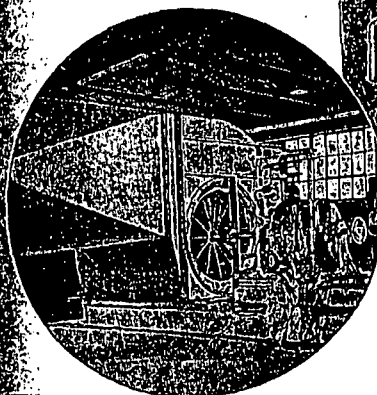
Controlled-circulation is usually indicated when operating pressure reaches a level where the thickness of furnace wall tubes normally employed for natural-circulation designs has its hot-spot temperature stress approach too close to safe allowable limits. The remedy is to employ smaller diameter tubes to reduce thickness resulting in lower stress and larger margin of safety. Smaller diameter tubes, however, increase resistance to flow, and at high pressure the difference in density of water and steam is reduced to a point where very little natural-circulation effect is available. The addition of a means for stimulating circulation and also regulating flow through all circuits is provided by the principle of controlled-circulation. It is also the forerunner of what is coming within the foreseeable future. That is, breaking through the critical pressure barrier with the next step around 4500 psi. APC Paper, no number.

Directions for ordering papers on p. 154

Black Liquor—A Paper Mill Fuel. By John E. Hoefs, National Container Corp. of Wisconsin.

As a fuel, kraft black liquor, in comparison with other fuels is very poor. Its heating value as fired is about 4,000 Btu per pound, while Midwestern bituminous coal will run 12,000 Btu per pound. Bunker C fuel oil would run 18,600, and lignite will run around 7,000.

MAINTENANCE DIVIDENDS from Proper Fan Selection



If you keep records of maintenance costs, you'll already know that first cost can be of minor importance on some equipment.

On fans, for example, over a period of years, maintenance costs can be considerable. We believe, after seventy-six years' experience in air handling, that some of this excessive maintenance cost comes from improper selections of equipment.

"Buffalo" manufactures 20 lines of fans and blow-

ers, for every service from residential kitchen ventilation to sub-zero airplane instrument testing—from 20 CFM to 600,000 CFM. We have, in our engineering files, almost every problem which AIR has been asked to solve.

We have the Engineering organization which produced, in 1914, the first edition of "Fan Engineering," ever since, the Bible of the air industry.

We do not hesitate to say, occasionally, "It cannot be done with present equipment."

Why not capitalize on this accumulated experience? Why not get the benefit of the "Q" Factor* that "Buffalo" builds into the fans, air cleaning and conditioning equipment, which our engineering sales representatives, in principal cities are ready to discuss with you? Their advice is impartial. No obligation—and no regrets.

*The "Q" Factor—The built-in Quality which provides trouble-free satisfaction and long life.

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