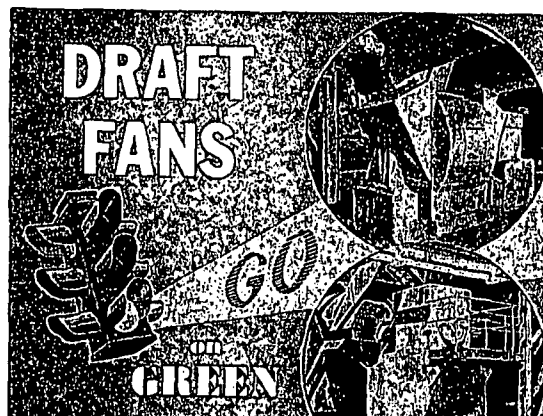




as at the ALBRIGHT STATION*

Monongahela Power Company
Fairmont, West Virginia

Units #1 and #2 are in operation. The fans for Unit #3 have been designed and are being constructed. They will be larger than the fans for the first two units. Boiler #3 will operate on the same type of fuel (pulverized coal) and is expected to generate one million pounds of steam per hour.

Each boiler now in service is served by two Forced Draft and two Induced Draft Fans with the following specifications:

- F. D. Fans Double inlet with radial inlet vanes; outlet dampers; rain hoods and recirculating duct connections. Capacity for each fan: 110,500 cfm; 100 F; 14.7" SP; 1180 rpm; 348 hp.
- I. D. Fans Double inlet, special control type inlet dampers and outlet dampers. Capacity of each: 187,000 cfm at 350 F; 13.5" SP; 880 rpm; 366 hp.

Green Fans can show an excellent record of efficiency and durability. They can be found in many of the leading and recently completed utility and industrial power plants. They have back of them a fund of knowledge about fan requirements and fan design. They serve their users well.

*Benderson & Porter, Engineers

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Fans. Write for a copy.

WATER TREATMENT

Continued from page 218

while quick to develop, is quite slow to deteriorate. Under boiler operating conditions scale is only sparingly, if at all, redissolved. The result, should you succeed in catching up, is an abundance of small bits of scale, not easily removed by blowdown. Instead, you'll find they tend to accumulate in points of slow circulation, where they may later build up to harmful proportions.

Normally, for operating pressures up to 100 psi with fairly stable conditions, you can establish a standard blowdown practice and regulate feed of chemical treatment daily by making a simple phosphate colorimetric test of boiler water. With pressures from 100 to 250 psi you have to go further and control blowdown by running daily tests for the boiler water's alkalinity and chloride concentrations. For pressures between 250 and 400 psi, various additional tests become necessary depending on the external-treatment method you use as well as other specific problems that demand greater attention and control.

Boiler Openings. When employing a new type of treatment, you'll find it wise to take your boiler down for at least two checkups during the first six months. Then with satisfactory internal conditions established, open it semi-annually. The midyear opening serves merely for washing out the unit to maintain peak efficiency through the next six months and facilitate the thorough cleaning to follow. Where scale is causing deterioration, you'll need frequent clean-outs. Refrain from turbing the tubes of your boiler, unless you have no other choice. Turbing scores tube bends and greatly shortens tube life. Instead, pass a wire-brush rotary attachment through the tubes once yearly.

BEARING FAILURES

Continued from page 121

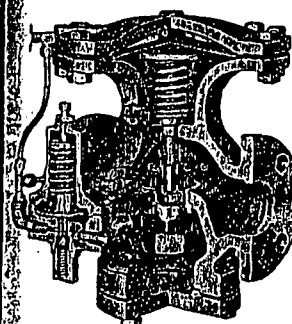
friction of the lube. And there's some sliding friction too—especially between balls and retainers in deep-groove bearings and where the rollers have become skewed.

Studies show that rolling friction hinges on size of balls or rollers. The smaller these elements are, the higher the friction. Oddly enough, friction, traced to churning up or pushing aside the lubricant, and pure hydrodynamic pressure may be much greater than normal rolling friction of the bearing elements. Then why lubricate? For one thing, lubrication helps cut sliding friction. It also prevents seizure, carries

Men Who Know Plant Engineering

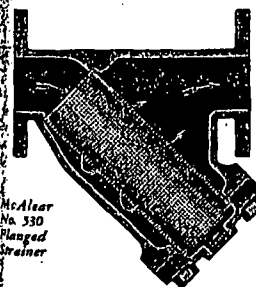
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The No. 228 Pilot-Operated Pressure Reducing Valve (left) is accurately sensitive and dependable where positive and automatic control of reduced pressure is required in steam service.



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