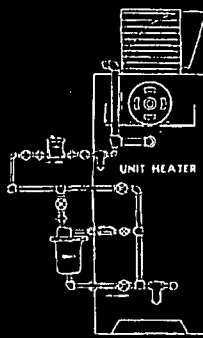


MORE HEAT-FASTER WITH LESS FUEL!



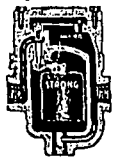
Floor type heater with Strong 70 Series trap draining inlet line, and Strong 80 Series trap with thermal air valve draining heater. Note: strainers ahead of traps. OVERHEAD HEATER (left) drained by Strong 170-T trap, with built-in thermal vent.



Accumulated condensate and trapped air can make unit heaters slow in starting. Uncertain drainage will seriously reduce heat output.

LEAKY TRAPS WASTE FUEL

While all Strong Inverted Bucket Traps will handle large amounts of air, the hookups shown here provide thermal air vents for practically instantaneous heating. Use of Strong traps, guaranteed for a year against leakage, insures positive drainage without waste of steam.



Strong 170-T trap with integrated thermal air vent and new M-CAP "Orifice". Available in sizes from 1/2" to 1 1/2". "Reg. Trade Mark"

Completeness of the Strong line enables us to recommend exactly the right type and size of trap you need—open or inverted bucket, closed float, float-and-thermostatic (blast), etc.—semisteel, cast, forged and welded construction. Send your drainage problems to us for the right solution.

STRONG, CARLISLE & HAMMOND COMPANY
1392 West 3rd Street
Cleveland 13, Ohio

Anchor Mark
Reg. Trade Mark



STRONG

Generator Exciters

(Continued from page 73)

voltage back to normal.

At very low voltages, current in capacitance and reactance circuits differs appreciably. This means that if conductors A and B of the turbine generator are short circuited the potential transformer voltage is extremely low. The regulating equipment still provides an additional voltage to cause the rototrol pilot to boost the excitation on the main exciter in an attempt to bring the ac terminal voltage back to normal.

Higher Voltages. Direct-connected turbo-excitors in capacities up to 300 kw at 250 v can be built readily. Above these ratings, a higher voltage is preferable to simplify current collection and to reduce the size of collector rings, thus simplifying operation and reducing maintenance. The largest 3600-rpm turbine generator contemplated now is 150,000 kw, which requires about 400-kw excitation.

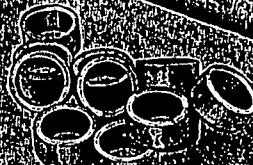
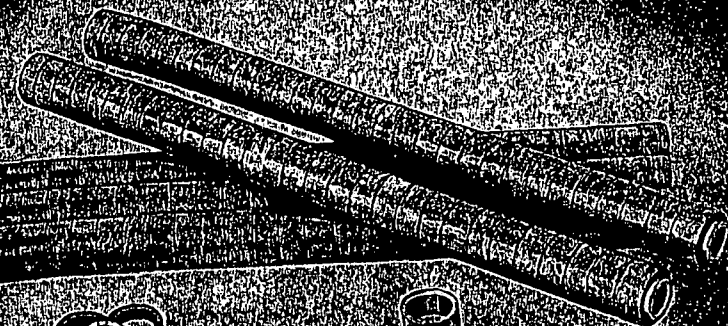
Adoption of 375 v as a new standard excitation voltage introduces no problems for either exciter or ac generator as it is in the same insulation class as the present lower voltages. The excitation voltage for machines, 12,500 kv and smaller, is 125 v; for larger machines 250 v is standard.

Technical Briefs

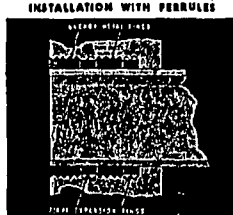
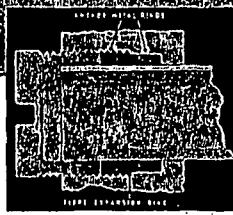
(Continued from page 130)

The 103,000-Hp Turbines at Shoshone Dam, by J F Roberts, Allis-Chalmers Mfg Co. Gives the engineering features of these units, which are rated 103,000 hp at 330-ft net head and 50,000 hp under 238-ft minimum head. Best efficiency, 93.2%, is between 380- and 400-ft net head. They operate under an extreme head variation from 238 minimum to 475 ft maximum; that is, from 72 to 144% rated head. At maximum head the turbines are estimated to be good for 187,000 hp each.

Spiral casings for these turbines are welded plate steel made in seven sections with riveted field joints held by double butt straps. Plates are 1 1/2 in. thick in the inlet section, which is 12 ft, 8 in. inside diameter. These are among the first and the largest welded plate-steel scroll cases built in this country. After assembling and riveting in the field, each casing was pressure



"ANKORITE" SURFACE CONDENSER TUBE PACKINGS



SAVE LABOR LONG WEARING NO LEAKS!

"ANKORITE" Metallic and Fiber Ring Combination holds condenser tubes free from leakage, with or without ferrules. Not affected by fresh or salt water or sewerage contamination.

Metal rings bond the tubes to tube sheet and aid in preventing electrolytic tube destruction.

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