



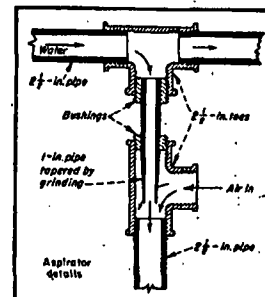
A photoelectric pyrometer is responsive to the radiant-heat energy from the material in a furnace or kiln. This heat can thus be made the means of regulating the temperature of the material or other related factors in the furnace.

For example, with one lumen of light flux on cathode of the photoelectric tube and 20 v. applied to anode, current flow is about 11 microamperes, point A. With a gas-filled tube results are prac-

Atoms that lose one or more electrons become positively charged ions. These ions neutralize most of the negative space charge effect that exists in a high-vacuum tube, and permit the electrons to reach the anode. This action combined with a large increase in free electrons produces a large increase in current flow through the tube.

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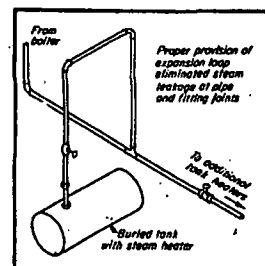
## PLANT-TESTED IDEAS TO SOLVE PROBLEMS OF DESIGN, OPERATION AND MAINTENANCE



Another method that was tested introduced compressed air into the water through a series of holes in a copper tube. Results were good, reducing  $\text{CO}_2$  by 70%, but this setup required running the air compressors 24 hr a day. The present method was then devised, the design being based on a successful type of ejector chlorinator. Three ejectors or aspirators were built up of fittings and hooked up as shown in the above sketches. The makeup was

DALTON WHITE      Atlanta, Ga.

Since expansion of the steam-supply line caused the trouble, redesign of the tank connection must take proper ac-



count of this movement. This was accomplished by the rearrangement shown at right, which called for only a few extra lengths of pipe and two

elbows. This loop has been operating for two years without trouble.

JOHN R BROWN      *Bauta, Cuba*  
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