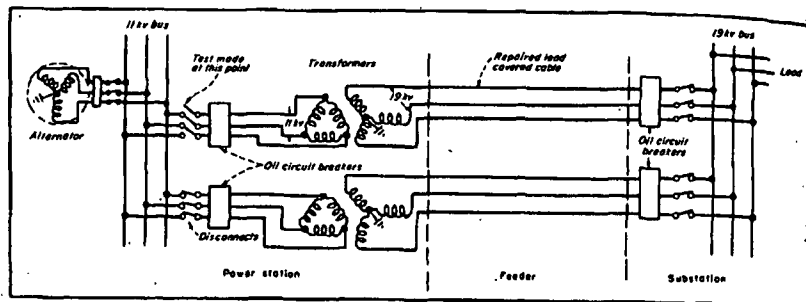


PROBLEMS FROM THE PLANT

Exercise your engineering skills by submitting answers to this question, fresh from the plant. Suitable material will be paid for answers accompanied by sketches or photographs commensurate with the problem.



What Methods Are Best to Check for Phase Reversal?

OUR PLANT has several 19-kv 3-ph 4/0 lead covered cables feeding an outlying substation. The voltage of our main bus is 11 kv. As the accompanying sketch will show, bus voltage is raised to 19 kv by transformers connected delta-wye. There

is a common bus at the substation. The system frequency is 25 cycles.

Before restoring the feeder to service after a repair has been made on any cable, it is necessary to make certain that no phase has been reversed. We have been using a glow stick to phase out across the open disconnects at the power-station bus. During this test the repaired cable is energized by closing the three discon-

nects and the circuit breaker at the substation end. We have some doubt about this method being foolproof because the transformers are between the cable and power-station disconnects.

Have any Power readers faced this problem and found a practical solution? We will appreciate hearing about methods of checking for phase reversal that we can apply to our system.—JR

Readers' Answers

What Is Best Way to Remove Ash Siftings?

(This question is from March issue with best answers from readers.)

WE HAVE TWO WATERTUBE BOILERS, each fired with an underfeed stoker. The compartment under the front of the stoker is a siftings chamber, which collects the fine ash that drops down. This compartment fills with ash siftings that must be removed on an average once a month. The chamber is not readily accessible, so any siftings that collect have to be shoveled through the air-tight door in the front. We find this job both disagreeable and tedious.

We have tried one or two schemes for removing the ash by machine, but to date have found no practical remedy. Have any of POWER's readers encountered a similar condition, and worked out a good solution?—HWP

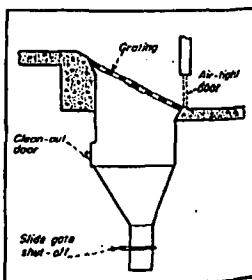
Remove Siftings by Vacuum

I suggest that HWP use either a steam or air-vacuum ejector system to remove the siftings. It will be necessary to install 4-in. cast-iron pipe along the boiler front underneath the stoker operator. Pipe fittings at suitable intervals will provide for the necessary extensions into sifting chamber. Maintenance crew can install all parts, made on the job. The siftings may be discharged into the rear ashpit and removed as usual or into a special tank, whichever is most convenient or cheapest.—A T Appleton, Winnipeg, Canada

Hopper Installation Tips

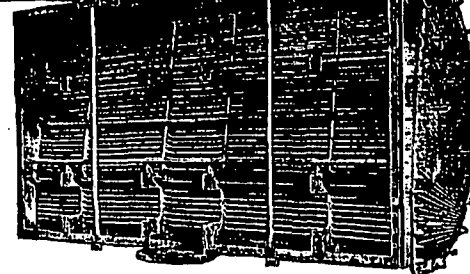
HWP DOES NOT say whether room is available under the sifting chamber. If there is sufficient space, remove the present floor of the chamber and install

a hopper fitted with a cleanout door and a discharge duct, as shown in sketch below. By this means the siftings can be removed without shoveling or working in restricted passages.—John D Thuman, Buffalo, N. Y.



MORE POWER TO WARREN, PA.

Anaconda Arsenical Admiralty Tubes and Anaconda Muntz Metal Tube Sheets go into 30,000 sq. ft. Elliott Condenser for new utility plant



THIS DIVIDED WATER-BOX CONDENSER, manufactured by the Elliott Company, Jeannette, Pa., will serve a 30,000 KW turbo-generator in the new Pennsylvania Electric Company plant at Warren, Pa.

Anaconda Arsenical Admiralty was specified for the 5950 tubes, which are set in 1½" thick tube sheets of Anaconda Muntz Meml. Tubes are

¾" O.D. x .058" x 22' 3" long.

Arsenical Admiralty Alloy provides all of the advantages of the original Admiralty Alloy... high heat transfer and good corrosion resistance... plus special resistance to dezincification.

Arsenical Admiralty is but one of eleven standard and several special Anaconda tube alloys for condenser and other heat exchange applications. To help you select the alloys best suited for your needs, our Technical Department will be glad to cooperate with your own engineers or your equipment manufacturer. Also, write for your copy of Publication B-2, which provides detailed information.

Anaconda
CONDENSER TUBES

THE AMERICAN BRASS COMPANY
General Offices: Waterbury 88, Connecticut
Subsidiary of Anaconda Copper Mining Company
In Canada: ANACONDA AMERICAN BRASS LTD.
New Toronto, Ont.