

Check-up view of test-type filter used with Sorbo-Cel by Pullman-Standard

How Pullman-Standard operates boilers on a

1% blow-down basis... with SORBO-CEL

At the Haskell & Barker plant of Pullman-Standard Car Mfg. Co., Sorbo-Cel solved the major filtration problem of removing oil from condensate returned to the two new 10,000 lb-per-hr 400 psi, 750-F boilers.

Pre-Coat Sorbo-Cel and regular Sorbo-Cel, specially processed high flow-rate diatomaceous silica powders, are used on leaf-type filters. After a film of Pre-Coat Sorbo-Cel has been built up on the filter screens, regular Sorbo-Cel is added continuously to the unfiltered water. This means a new filter surface is constantly presented to the oncoming water.

Results... Water filtered by Sorbo-Cel contained less than 0.1 ppm of oil... and boilers have since been operated on a one per cent blow-down basis.

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Observed transient in phase and cathode currents were not dangerously high, but proved more severe than when auxiliary power was maintained while load was dropped, leading to the conclusion that provision should be made in proposed higher-capacity installations to maintain auxiliary power. However, the tests showed there is no cause for concern in cases of power failure in which the auxiliary power supply would be lost.

3. Load interruptions by short-circuiting the firing circuit should not be considered in large rectifier installations because of excessive overcurrent and accompanying arc-back.

4. Load interruption by operation of cathode circuit breakers is not recommended because the last breaker has to clear as much as one half the normal pole current.

5. At Mead, it is satisfactory to pick up load by removing the short circuit on the firing circuits, followed by closing the ac circuit breaker. In general, it is recommended that loads be picked up by removing the short circuit on the igniter circuit after the ac circuit breaker is closed. Such procedure reduces the maximum transient current on the ac system since load current does not flow simultaneously with transformer inrush current.

6. The order of magnitude of inductance on aluminum potlines is less than one millihenry. This figure, originally arrived at by calculation, was confirmed by these tests.

7. It is improbable that failures of rectifier transformers on earlier installations were caused by voltage surges resulting from circuit-breaker operations. AIEE Paper No. 53-65.

Capacitors in Power Systems with Rectifier Loads. By A Schmidt, Jr., General Electric Co.

Static capacitors have come into wide use as an efficient and economical source of reactive power for ac systems. Harmonic voltages are sometimes a problem when applying capacitors to a system. In early days the principal sources of system harmonics were rotating machines and transformers. More recently, the widespread application of mercury-arc rectifiers has introduced other sources of system harmonics. These often require consideration when rectifiers and capacitors are connected to the same system.

Parallel-type resonance between capacitors and system reactance in the presence of harmonic sources, such as power rectifiers, may cause: (1) Over-

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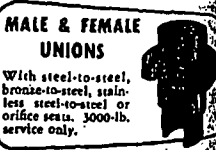
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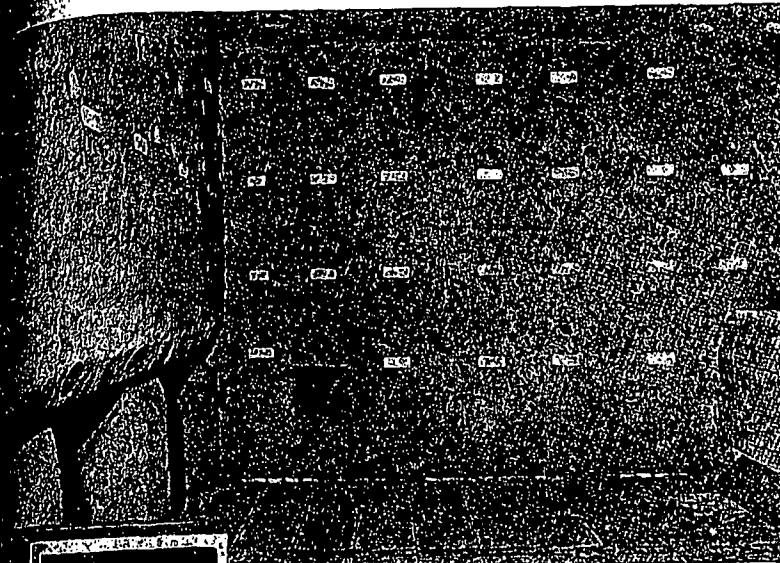


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