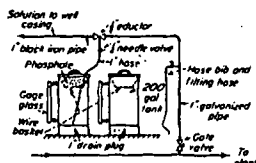


More PLANT PROBLEMS

Continued on page 134



WE FIND injection of phosphates helpful in reducing the effects of corrosion and high iron content in well water. Sketch shows how we hook up the treatment system.

Phosphate is injected directly into the well casing, after the solution is prepared in the tanks. One tank is for standby service. For treatment of our water we use 9.6 lb of phosphate per day. Water flow is 200 gpm. One batch of phosphate solution lasts about 50 days.

JOHN CONSTANCE

Cliffside Park, N. J.

PHOSPHATE COMPOUNDS effectively stabilize well water, eliminating scale deposits and corrosive attack. As these crystals dissolve, a thin glass-like pro-

TECTIVE film deposits to protect the metal.

Use an earthenware crock and stainless-steel basket to hold the phosphate while it is dissolving. Dosage, best fed with a pump, will vary with water demand but will average 2 to 3 ppm. Start treatment at 10 ppm, leaving system drains open until phosphate tests in all parts of the system.

Use a high-test hypochlorite because phosphate is food for bacterial growth. Use a water filter to eliminate rust, organic matter, discoloration and bad odors.

Phosphate reacts with compact hard scales to soften them so they crumble, loosening them from metal surfaces. Scale-removal rate increases with temperature and water velocity.

Periodic acid cleaning more than repays its cost. A typical heat exchanger cleaned with acid, by sandblasting and plugs and brushes, will have a far higher efficiency after acid cleaning than when any other method is used.

E. W. FITZPATRICK

Jefferson City, Mo.

INSTALL a continuous-treatment system, if possible. It will keep water in the right condition at all times during the

year at low cost and with little trouble. I've found this method excellent for similar job in my plant.

M. B. SHERIDAN New York, N. Y.

WE FIND that continuous treatment is better than intermittent acid cleaning because we can keep our heat exchangers in service at all times. This saves much production time and eliminates week-end labor crews we might have to use with intermittent cleaning.

The big factor to be considered in any cleaning job is how long the units will be out of service and what this means in dollars and cents. Of course, there are some units that are better cleaned with acid than by continuous feeding of chemicals. Much depends on the scale encountered.

I'd have a chemist analyze the water supply and go along with his recommendations for treatment. The results obtained should be apparent within a month or so because heat-exchanger efficiency can readily be checked on the job. Be sure you have thermometers on exchanger inlet and outlet so you see exactly how the unit is performing.

WILLIAM STERN New York, N. Y.

YOUR TWO NEW PROBLEMS FOR NOVEMBER

Question No. 1: What's Best Unit for Emergency Power?

Our large industrial plant produces typewriters. We buy our electricity, but a week ago there was a power failure that caused us plenty of trouble. Though this is the only one we've had so far, we'd like to be ready for the next, if it comes.

We figure that a 100-kw gasoline, diesel or steam-turbine unit would solve our problem.

Arens and units needing fuel are: lights (exit, aisle, etc.), sprinkler supply air, elevator, hospital, stokers, floodlights, fire alarm, auto-call system and cat-

steria refrigeration units, fans.

Which drive would be best? How should we connect emergency unit into the system? Are there any other uses for emergency sets? What is the best type of control to insure good emergency power always?—PT

Question No. 2: What Causes Stack Carbon in Our Plant?

We burn No. 6 oil under our two hot boilers serving a varnish and insulator factory. Boilers are in excellent condition and are regularly inspected.

However, we get many complaints from neighbors in the

area about carbon flakes from our stack settling on their buildings and equipment. Our local smoke inspector has been in several times, will take action.

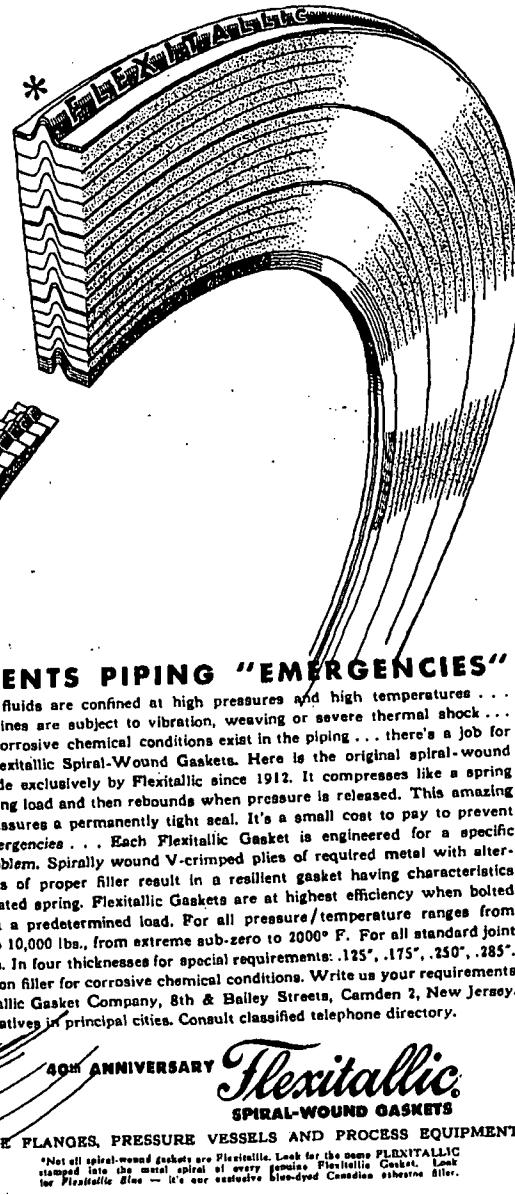
We've checked the boilers completely, including draft, CO₂

and stack temperature. All readings are OK, pointing to good combustion.

What causes this carbon to form? How can we reduce it? Is it possible to eliminate it entirely?—HW

Don't miss next month's two problems. Another chance to use your ingenuity

Will you help readers who sent us problems? Extra pay for photos or sketches.



PREVENTS PIPING "EMERGENCIES"

Wherever fluids are confined at high pressures and high temperatures . . . wherever lines are subject to vibration, weaving or severe thermal shock . . . wherever corrosive chemical conditions exist in the piping . . . there's a job for genuine Flexitallic Spiral-Wound Gaskets. Here is the original spiral-wound gasket made exclusively by Flexitallic since 1912. It compresses like a spring under bolting load and then rebounds when pressure is released. This amazing flexibility assures a permanently tight seal. It's a small cost to pay to prevent piping emergencies . . . Each Flexitallic Gasket is engineered for a specific sealing problem. Spirally wound V-crippled plies of required metal with alternating plies of proper filler result in a resilient gasket having characteristics of a calibrated spring. Flexitallic Gaskets are at highest efficiency when bolted up cold at a predetermined load. For all pressure/temperature ranges from vacuum to 10,000 lbs., from extreme sub-zero to 2000° F. For all standard joint assemblies. In four thicknesses for special requirements: .125", .175", .250", .285". With Teflon filler for corrosive chemical conditions. Write us your requirements . . . Flexitallic Gasket Company, 8th & Bailey Streets, Camden 2, New Jersey. Representatives in principal cities. Consult classified telephone directory.

40th ANNIVERSARY

Flexitallic
SPIRAL-WOUND GASKETS

PIPE FLANGES, PRESSURE VESSELS AND PROCESS EQUIPMENT

*Not all spiral-wound gaskets are Flexitallic. Look for the name FLEXITALLIC stamped into the metal spiral of every genuine Flexitallic Gasket. Look for Flexitallic Blue — it's our distinctive blue-dyed Canadian asbestos filler.