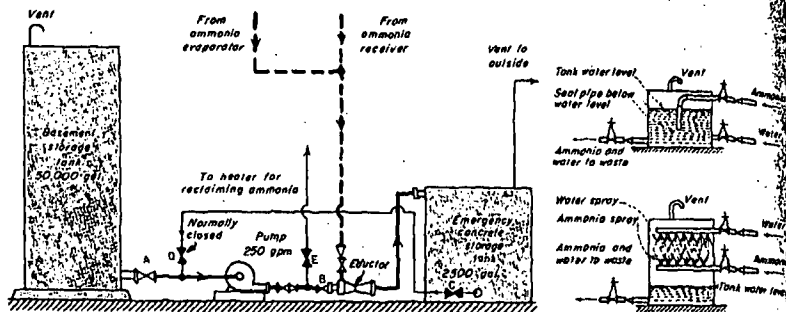


More PLANT PROBLEMS.



BOTH GAS AND LIQUID must be handled by disposal unit if best results are obtained. Sketch shows one method.

Gas from evaporator and liquid from receiver are piped to a common line connected to an eductor. Centrifugal pump transfers water from basement storage tank and discharges through eductor into a 2500-gal emergency tank vented to the outdoors. Mix one gallon of water with one pound of ammonia in the eductor. Keep tank vent away from building windows, other openings.

By using an emergency tank, *TS* can reclaim the ammonia when the emergency ends. To do this, close valves *A*

and B; open C, D and E. Pump mixture to a waste-heat exchanger for ammonia removal from the water. Pipe ammonia from exchanger to compressor.

New equipment TS needs includes the pump, valves, eductor and concrete tank. Pump, valves and eductor should be cast iron.

Of course, TS could dump the ammonia-water mixture into an underground sewer or river instead of a tank. The ammonia, however, could not be reclaimed and local water authorities might object. Best location for ammonia-storage tank would be outdoors.

A. I. BREUGELMANS *New York, N. Y.*

SKETCHES show two ways of disposing of the ammonia. In the first it is piped to the water-storage tank through an inlet pipe that terminates below the water surface, providing a water seal to prevent escape of ammonia gas.

Fit a gate valve to ammonia feed line to permit isolating gas from tank. Check valve in same line prevents backflow of gas if line pressure goes below the vapor pressure of the ammonia-water mixture, or if tank water level rises too high. Fit tank discharge line with a gate valve to isolate tank from waste disposal system. Use a check valve to

(Continued on page 206)

-YOUR NEW PROBLEMS FOR SEPTEMBER.

1 How Do I Stop Pump Casing Erosion?

Our four sea-water circulating pumps are driven by 100-hp 575-rpm induction motors. Lift is about 6 ft, discharge resistance about 7 psi.

Photos show one rotor after six months' use. It is badly corroded and had to be replaced with a neoprene-coated unit. After new rotor was in use one month we removed it for a look. It was in good condition but casing showed signs of severe erosion; it appears that attack on casing is worse than on the rotors in these pumps.

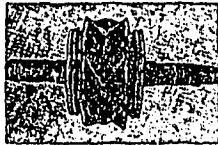
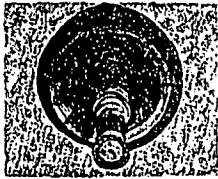
What's best way of protecting these casings? Our plant is a long distance from repair shops, and we'd like to do the work if it's possible.—MC

2 What's Best Hookup For This Plant?

We have two 5-ton refrigerating machines in parallel for creamery service. Suction pressure is 25 psi, discharge 170 psi. There's only one expansion valve to serve both machines.

When either machine runs alone we are able to maintain the right suction and discharge pressures. But when both are in use, suction pressure drops to 15 psi.

Is change in suction pressure a result of using only one expansion valve? We have an equalizing line on the high-pressure side of each condenser, and electric hookup is OK. What can we do to maintain a 25-psi suction pressure with both machines running?—EK



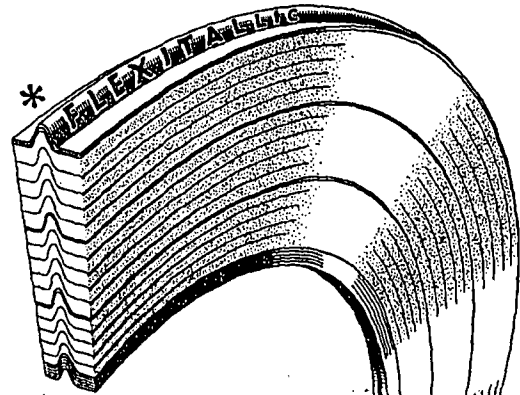
Will you help readers who sent us problems? Extra pay for photos or sketches.

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PLANT OPERATION AND MAINTENANCE SECTION

POWER

POWER; SEPTEMBER 1953



SAVED: 24 HOURS OF "DOWN-TIME"

SAVED: 24 HOURS OF DOWNTIME

The operating department of a large Texas company saved one complete day in putting their plant back on the line after a maintenance shut-down. They saved an estimated \$45,000 and gave all the credit to Flexitallic Spiral-Wound Gaskets. It's the amazing spring-action of Flexitallic Gaskets that simplifies the making and breaking of flanged joints. Only 1/16-inch breakaway is required—and that's important at valves or where there is close manifolding of the piping . . . Each Flexitallic Gasket is engineered to meet specific conditions of thermal and physical shock, corrosion, vibration, weaving and unpredictable joint stresses. Spirally wound V-crippled piles of required metal with alternating piles of proper filler results 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., mixed load. For all pressure/temperature ranges from vacuum to 10,000 lbs., mixed load. For all pressure/temperature ranges from vacuum to 10,000 lbs., mixed load. For all pressure/temperature ranges from vacuum to 10,000 lbs., mixed load.

Gasket Company, 8th & Bailey Streets, Camden 2, New Jersey. Representatives in principal cities. Consult classified telephone directory.

40th ANNIVERSARY *Flexitallic*
SPIRAL-WOUND GASKETS

FOR 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 exclusive blue-dyed Canadian asbestos filler.