

More PLANT PROBLEMS

commutator segments. This can cause excessive sparking. Check by setting each coil in a neutral position and see if leads are shorted by the brush. If leads aren't shorted, shift brush position or change coil lead connection.

Wrong interpole polarity also causes sparking. Test by shifting brush and noting direction of rotation. Correct position of brushes in an interpole motor is found by turning armature so one coil lies midway between main poles or directly under an interpole. Then trace leads from coil to commutator, if possible. Or if motor has factory markings for correct position, use them to set brushes correctly.

Chances are lead connections were incorrectly made at time of coil change. This is easy to do when you have a number of leads pulled out at the same time. Always use care when reconnecting.

A R ECKERT M. Vernon, III.

HERE ARE NINE CURES for V/N's trouble, together with their possible causes. Sparking causes commutator burns, so best method of attack is to find the sparking cause and cure it in a hurry.

Roll and grind rough commutator surfaces to obtain the desired finish. If commutator is out of round, turn and grind it true.

Look for one or more commutator bars that loosen at high rotative speeds. Tighten loose bars, grinding and turning entire commutator if necessary. Undercut high mica. See that brush pressure is sufficient to prevent "bounce." Adjust spring pressure according to manufacturer's recommendations.

Check to see that brushes are not stuck in their holders, and that shunts are tight. If original brushes have been replaced, the new ones may be the wrong type. Remove any dirty film that may have accumulated on commutator surface. It is always undesirable.

A J BRUGELMANS New York, N. Y.

Here Are the Answers on Removing Ammonia

NEW YORK CITY rules for ammonia disposal are interesting and may help TS. Here is a general outline; for specific wording, refer to Administrative Code.

Low-pressure side of ammonia systems having 1000 lb or more of refrigerant must have a hand-operated valve for discharging ammonia into water through a mixer to the sewer in emergency. Mixer should be steel to withstand a pressure of at least 50 psi.

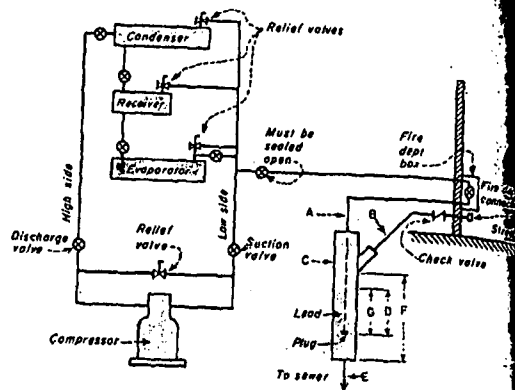
No valve is allowed in the ammonia

emergency-discharge line except the manually operated valve discharging into the water and ammonia mixer. But one stop valve may be inside the building for repair purposes. It should be sealed open and labeled, "Keep Open."

A manually operated pressure-relief valve should be located in a locked box, which can be opened by fire-department members. Door of box is on a public thoroughfare so it is easily accessible. Box is labeled for positive identification.

A single, standard, 3-in., fire-department connection is provided, through which water may be supplied the mixer. Check valve between connection and mixer prevents flow of ammonia gas to the street. Systems having more than 27,000 lb of ammonia must have one additional mixer for each 27,000 lb or fraction of it. Sketch above shows important details of required hookup.

JOHN J CRIST Brooklyn, N. Y.
(Continued on page 136)



Tonnage of plant	Inches						
	A	B	C	D	E	F	G
30-60	3/4	1 1/4	4	15	2	45	150
60-100	1	1 1/4	5	15	2	50	160
100-175	1 1/4	1 1/4	6	20	2	60	180
175-250	1 1/2	1 1/4	8	25	2	75	225
250-450	2	1 1/2	10	30	2 1/2	90	270
450-900	3	2	12	40	3	120	360

What's Best Way to Remove Ammonia in Emergency?

HERE ARE THE FACTS: We have 2000 lb of ammonia in our refrigerating system, which serves a large cold-storage plant. Because we have a large number of employees in the basements we need some quick way of disposing of this ammonia in an emergency.

We have adequate water supply from an outside source as well as a 50,000-gal basement storage tank. What method, if any, could we use to mix this ammonia with water in the storage tank, or mix it and then discharge it to waste? We'd like to be able to get rid of the ammonia in about 10 minutes.—TS, June Power

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