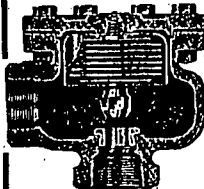


We Invite You TO TEST NICHOLSON STEAM TRAPS FOR
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LARGEST CAPACITY



BULLETIN 1047
or see Sweet's

See why an increasing number of America's leading plants are standardizing on Nicholson traps. Test trap gladly sent.

Comparative tests by large trap users show: record low for steam waste; 2 to 6 times overage drainage capacity; operate on lowest temperature differential; no freeze-ups; greater simplicity (fewer spare parts to stock). 5 types for every purpose; size 1/4" to 2"; pressure to 225 lbs.

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For steam, water, air, gas, oil; and for all types of operation—lever, foot, solenoid, motor. Choice of 6 metal combinations to meet specific needs. Pressures to 5000 lbs. CATALOG 546.



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You can cut clean gaskets in a jiffy... with the

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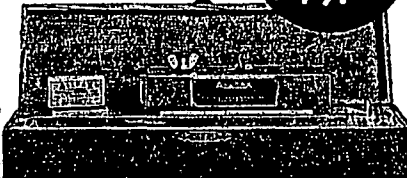
Here's the tool to save money and time... inexpensive... fast... foolproof. Anyone can cut clean gaskets with it in a fraction of the time required by old-fashioned hand methods.

Cut gaskets from 1" to 36" diam. in asbestos sheet, rubber, duck, canvas, cork, felt, cardboard or any other gasket material. Pays for itself.

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Complete
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\$19.50

THE
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(Continued from page 182)

grams should fall near the counter pressure line by end of stroke.

Excess release pressure as on card will oppose rather than assist compression. To remedy, eccentric should be advanced to speed opening of steam and exhaust valves, making release and compression earlier. If this results in too much lead, steam-valve rods can be adjusted so these valves have more lap over their ports.

In diagram marked crank end, actual expansion line rises considerably above the theoretical curve. This indicates a leaky valve, which allows steam to enter after cutoff. Although an expansion line that closely follows the theoretical curve is not positive indication that valves and piston are tight, steam may leak in and out of cylinders at the same time, producing a card that appears satisfactory. I advise checking all valves for tightness, also steam cylinder piston and rings.

Clearance should be checked and kept low, since smaller clearance results in greater pressure due to the small final volume obtained.

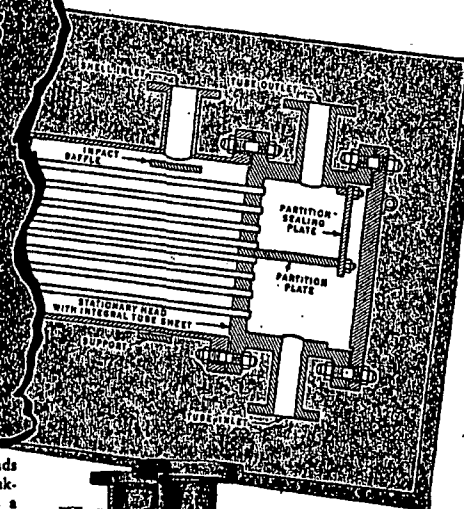
It is good practice to give more lead to an engine at bottom center in compensation for the angularity of connecting rod, weight of moving parts and reduced area of piston because of the piston rod.—Paul Dovenar, Brooklyn, N. Y.

Use Dial Indicator To Check Bearings

At present, I am in charge of the same type compressor engine. And by coincidence it has the same defect, having a heavy thud at bottom center. Plans are now under way to correct the trouble.

Records of this unit installed in 1937 show main bearing trouble during its life and replacement of one broken crankshaft. Easiest and most accurate way to check radial play of main bearings is with a dial indicator. Attach indicator to lower half of bearing with a stiff bracket that holds indicator over top center of shaft. Try the indicator for maximum number of revolutions needle will turn. Set indicator so hand moves up .010 to .015. When point rests on the shaft, so any movement of shaft will damage the instrument by over-travel set zero on the dial indicator. Start up and gradually increase speed noting movement of needle to the point where maximum pound is produced. Movement of indicator hand shows rise and fall of shaft during each revolution. This method works well on slow-speed engines.—S. C. Page, Buffalo, N. Y.

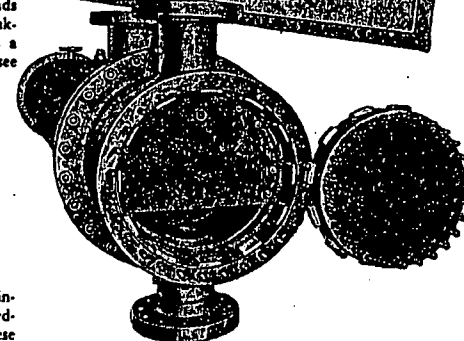
Leakage Between Passes Prevented in **G-R** FEEDWATER HEATER



The partitions between passes in the water heads of feedwater heaters are a fruitful source of leakage that can't be detected. The head cover is a literal "iron curtain" behind which you can't see short-circuiting of water between passes.

Griscom-Russell offers designs of feedwater heater stationary and floating heads in which this inter-pass leakage CAN'T occur. How? By making the differential in water pressure between the passes help to keep the partition joints tight instead of tending to force them apart.

The sketches tell the story. It's one of many instances of G-R pioneering in the design of feedwater heaters. Write for bulletin describing these heaters and their many distinctive features that give you benefits you can't obtain in other feedwater heater designs.



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