

2 Good Reasons for Dependable VIKING PUMPS

These simple 2-moving parts with their **CORRECT** application and engineering have meant good reliable pumping for over a third of a century. They give you these outstanding features:

Self priming.
Constant, even discharge.
Low speed—long life.
Low power requirements.
Suitable for any clean liquid (heavy or light).
Discharge pressures up to 200 psi.
No timing-gears, springs or gaskets.
Complete capacity and model range available.

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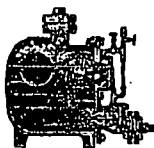


See Our Catalog in SWEETS **Viking PUMP COMPANY**
Cedar Falls, Iowa

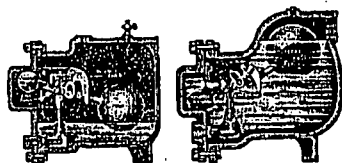
Nicholson Weight and Piston-Operated Traps Help

SOLVE CORROSION PROBLEMS

Right, Nicholson weight-operated traps for steam, air, gasoline; pressures to 200 and 650 lbs. Other models to 1500 lbs.



Above, Nicholson piston-operated steam trap, 2 to 650 lbs. pressure. Large capacity for steam purifiers, etc.



All working parts of Nicholson traps are made of stainless steels or bronze, carefully selected to give permanent resistance to corrosion. Other trouble-free features resulting in the adoption of Nicholson traps by an increasing number of large users: positive fluid seal keeps valve tight; not easily affected by dirt, pulsation, pressure variations; non wire drawing; rugged to take unavoidable abuse.

TRAPS FOR EVERY POWER APPLICATION. 5 thermostatic types for steam press. to 225 lbs.; 2 expansion types, press. to 250 lbs.

Catalog 448 or see Sweet's

W. H. NICHOLSON & CO.
125 OREGON ST., WILKES-BARRE, Pa.

no lead steam or exhaust cushioning is present. Efficiency is lowered by clearance losses and work done in pushing exhaust out of cylinder. Best cure is to advance the eccentric.

Steam-admission line for crank end slopes towards cutoff point, while the mep is higher than the head end. From this, it appears that edge of steam valve or port is broken, dashpot is acting slowly or closing spring is weak. Another possibility that applies to all valves is that of excessive play between the valves and their operating spindles.

There is no indication of any valve leaking. Steam valve at the head end has a sharp cutoff but shows absence of lead. *AJS* should check crank-end steam valve gear and if necessary remove valve from chest. He should then advance the eccentric to give free exhaust, compression and steam lead.—W Melville, Cheshire, England

Adjust Valves for Proper Compression

LACK OF COMPRESSION is chief cause of pounding in *AJS's* engine. Since diagram height represents steam pressure, and card length the piston stroke, the shorter length of head-end diagram has probably been caused by faulty indicator operation.

Indicator cards show late release or opening, and late closing, as well as no compression curve. *AJS* should adjust exhaust valves to give earlier release and earlier closing until proper compression stops engine pound.

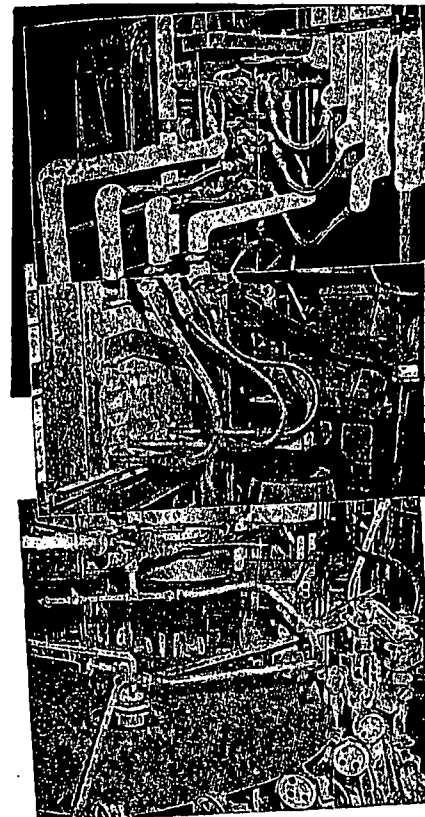
Admission is late at crank end and there appears to be a steam leak through the valve during expansion. Head-end admission appears slightly late, but it may be due to excessive clearance-volume.

Difference in mep on diagrams and slight difference in height indicates load on engine varied considerably in taking the cards from each end of cylinder. For better-proportioned diagrams he could use two indicators and take cards simultaneously. A number 40 or 50 spring should be strong enough for his slow speed engine.—Arthur Belton, Montreal, Canada

Because of space limitations, we could not publish remaining acceptable answers this month. We will publish them later if possible.

Ballinger Co. architects and engineers have moved their offices to 121 N Broad St. Philadelphia 7, Pa. They announce that they would like to receive the latest catalogs from manufacturers to bring their files up to date.

CMH REX-WELD corrugated flexible metal hose



WELD. Top, steam lines; Center, gas lines; Bottom, compressed air lines.

the answer to leak proof conveyance of high pressure, high temperature liquids and gases

REX-WELD sets the standard for corrugated flexible metal hose. Formed from strip by advanced methods, it offers greater uniformity than is otherwise possible.

Made in both bronze and steel with helical or annular corrugations, braided or unbraided. It is particularly suited for installations where vibration is a problem or where hose is subjected to prolonged flexing or bending.

The range of applications for REX-WELD is virtually unlimited. It is capable of handling pressures to 6000 psi. and temperatures to 1000°F. Leakproof for searching liquids and gases.

Ask for data sheets and specifications, today. For corrosive services ask about REX-FLEX Stainless Steel Flexible Hose and Tubing.

"REX-WELD" idea—New CMH products, which have served industry for more than 45 years.



"The science of FLEXONICS..." "the controlled bending of this metal for use under varying conditions of temperature, pressure, vibration and corrosion"... is accomplished in the basic products of Chicago Metal Hose Corporation.

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