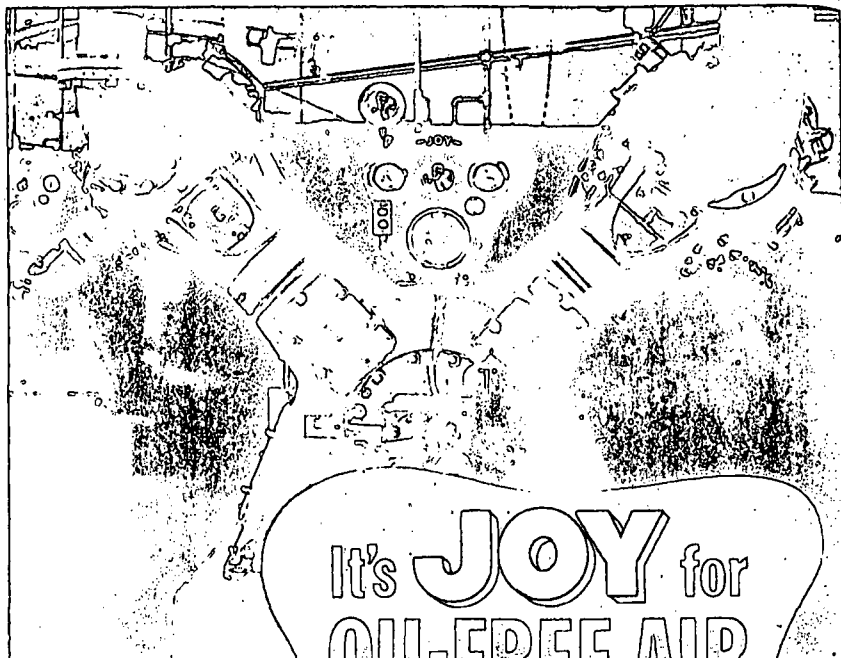




It's JOY for OIL-FREE AIR

Above: Joy WFO-112 Oil-Free Compressor

Below: Joy WGO-9 Oil-Free Vertical Compressor



Backed by manufacturing experience since 1915

★ Special lightweight pistons minimize wearing pressure on the rings.

★ Ease of disassembly facilitates inspection of pistons, rings, cylinder liners and valves.

★ On-the-job-replaceable chrome-plated cylinder liners for hard, smooth, friction-reducing surfaces. Also replaceable crosshead guides.

★ Carbon-graphite compression rings designed to compensate automatically for wear.

★ Large, direct air passages and liberal water-jacketing reduce heat of compression and increase ring life.

★ Patented Dual-Cushion valves, all parts of which are made from corrosion-resistant materials.

★ All wearing areas, except carbon rings, are either chrome-plated, surface hardened, or of stainless steel.

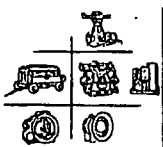
★ Complete line of types and sizes of compressors to meet any capacity and pressure requirements. Let us quote on your air supply needs of any nature. Joy Manufacturing Company, Oliver Building, Pittsburgh 22, Pa. In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario.

JOY

SPECIALISTS IN THE COMPRESSION AND MOVEMENT OF AIR AND GASES SINCE 1915

Consult a Joy Engineer

for Various Jobs . . . Compressors, Vacuum Pumps and Boosters . . . Oxygen Generators

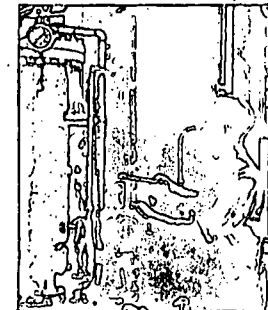
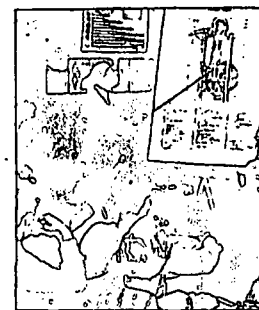


WFO 1-1000



NONRETURN valve on boiler is opened by maintenance man at Eastman Kodak Co's Hawkeye plant. Experience shows that it pays to instruct all personnel in the operation and maintenance of valves because their upkeep can run into big money

'KNOW COMMON VALVES'



CLASS of power-plant youngsters at Dow Chemical Co soak up valve info to help pass upgrading exams. Testing relief valve (right) assures operation when installed

says F J Ardolino, assistant supt of sewage plant. Here are valve instructions he gives to his men so they can pass test for job-promotion requirement

► METALS for valves are usually brass, bronze, iron or steel. When selecting valves for steam, cold water, oil or gas, almost any of these metals is good enough. But each has certain limits. Never use brass above 550 F. Bronze can stand 550-psi pressure and temperature up to 700 F. Bronze and brass

valves usually come in smaller sizes, up to and including 3 in. Above this size, use iron up to 250 psi and 500 F. Steel is for temperatures above 550 F, and is also used when valve must withstand high internal or external pressures or shock.

Markings. Look at the valve body. A