

Power

the magazine of

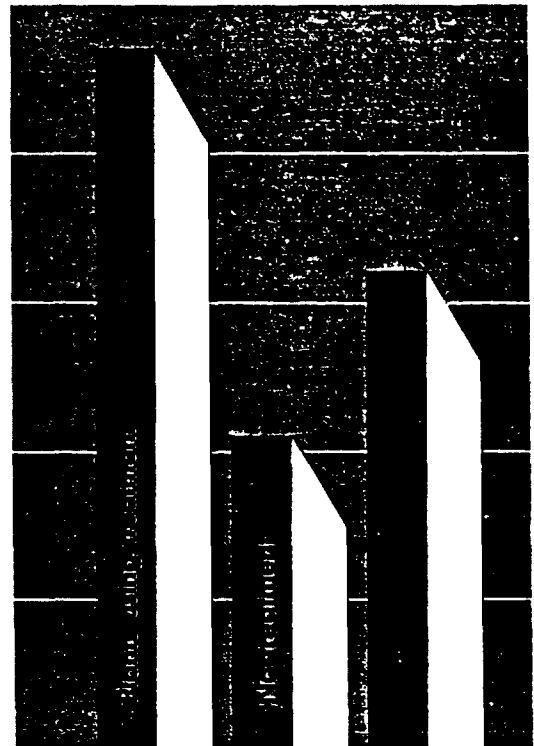
energy systems engineering

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State University



INDUSTRIAL WASTE TREATMENT: The growth years ahead ▶ 185

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City-fed district heating and cooling is on the upswing. 51

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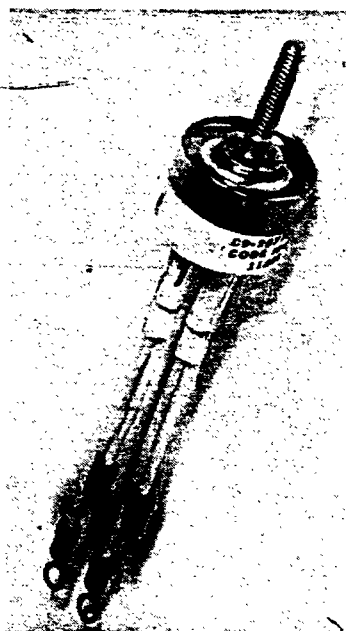
Some fresh thinking on use of expansion joints for flue ducts 66

How you can benefit from modular design of industrial boilers 68



Longer-lasting drive belts used for light machinery

10 • This V-belt offers improvement in its cover and internal construction. The cover, of neoprene-impregnated fabric insures prolonged resistance to higher operating temperatures, ozone, oils and chemicals. It also is formulated to conduct static electricity, providing safety in hazardous atmospheres.—Gates Rubber Co



Spark gap device used as primary protector

11 • Designed as a primary protector in communications and con-

trol equipment, this spark gap device protects against transient overloads of the type generated during an electrical storm. It features three metal alloy electrodes hermetically sealed in a ceramic and metal package and will switch 55 coulombs per line, or a total of 110 coulombs. The 60 cycle breakdown voltage may vary from 300 to 1100 v and is established by proper spacing of the line-to-ground electrodes and the type of inert gas used for backfilling. — Sylvania Electric Products Inc

Test loop for heat-transfer problems

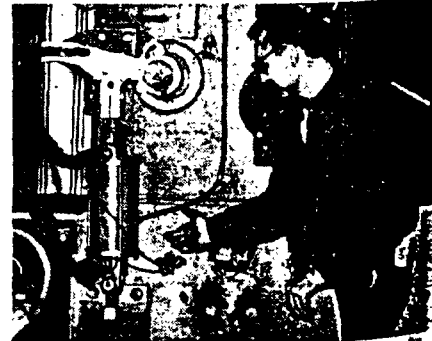
12 • Recently placed in operation, this thermal transient test loop is designed to study stress analysis problems in power plant piping, valves and other components. Typical capabilities are: stress determination in asymmetrical shapes; testing of bi-metallic welds; determination of radial

R/M distributors and Big 7 Packings



R/M 363 saves Nopco Chemical Co. \$1,613 yearly in maintenance costs

The seal around the agitator shafts of 750-gallon pressurized mixing kettles was a constant headache at Nopco Chemical Co., Carlstadt, N. J. An authorized R/M packing distributor cured it with the use of R/M 363. This premium-grade, braided asbestos packing with a special lubricant not only provided direct savings of over \$1,600 per year, but also gave Nopco almost 300 man-hours to devote to maintenance of other equipment.



R/M 1550 piston cups seal even at high-speed cutting temperatures

Pneumatic cylinder leakage at Owens Corning Fiberglas, Barrington, N. J., was solved by R/M 1550 piston cups. Recommended by an authorized distributor,† they resist the temperatures generated by the cutter operating at speed of 90 cycles/minute, have shown little wear when changed after 6 weeks. Former packing failed even though water cooled, jammed valves and slowed production. Distributor inventory is a plus value—cuts customer's stock requirements, permits deliveries in hours.

temperature distribution in parts or specimens; determination of discontinuity stresses in pipe joint welds and proof testing of analytical methods for thermal transient stress analysis. Specifications for the loop include: 3000 psi pressure rating; 670 F temperature; 108 kw immersion heating; 10 million Btu per hr cooling; 70 to 650 F hot loop; 60 to 150 F cold loop; 300 gpm at 170 ft head pump capacity; thermal transient capacity up or down, 525 F in two seconds; transient frequency, as desired within heating/cooling capacity; 1½ in. standard specimen size, 2500 psig flange size 1 in. thick and 12 channel recording oscillograph. — Copes-Vulcan Div, Blaw-Knox Co

Insoluble impurities can be detected in liquids

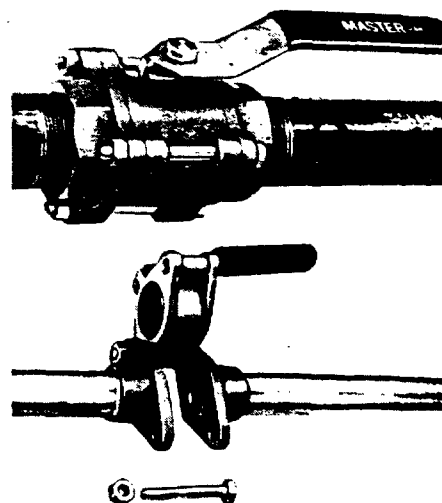
13 • An automatic instrument that detects, measures and records the minutest insoluble impurities in liquids

is sensitive enough that it can note the presence of two solid particles in a billion parts of water. In addition to monitoring impurities, the device registers color variation. Basically the instrument uses a membrane filter test—insoluble solids are removed from a liquid or gaseous sample by an ultra-fine filter membrane and retained on the filter surface where they are easily identified, sized, and counted.—Graver Water Conditioning Co

Just circle numbers on the Reader Service card, page 193, to get complete product story

Air cooled water chiller is weatherproof

14 • A packaged air cooled water chiller specifically designed for outdoor installation is housed in a heavy-gage, textured aluminum casing to eliminate the need for engine room space. The units are available in seven standard models from 16 through 44 nominal tons.—McQuay, Inc

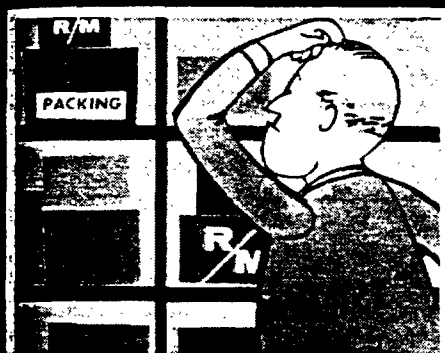


Ball valve swings away, doubles as union

15 • By loosening two bolts and removing one, center section of this valve swings out for aligning and soldering. When center section is bolted into place, valve is operable.

continued

-best problem-solving combination!



There are few, if any, maintenance packing problems that can't be solved by the combination of R/M packing distributors and R/M Big 7 Packings. And most of the time the right packing for your application can be taken out of a distributor's stock. An R/M Big 7 Selection Chart and full details of the case histories are available. Ask for them. PACKING DIVISION, Raybestos-Manhattan, Inc., Passaic, N.J.

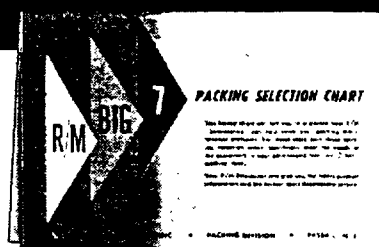
SEND FOR YOUR SELECTION GUIDE TODAY.



New from R/M: "How to Be a Success through Failure"

This sound slide film gives valuable tips on how to reduce packing costs and simplify maintenance by extending gasket and packing life through proper selection and installation. Showings can be scheduled at your convenience—and at no charge—by calling your authorized R/M packing distributor or writing us on your business letterhead.

*New Jersey Engineering & Supply Co., Passaic, N.J.
†Industrial Pump & Supply Co., Woodbury, N.J.



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