

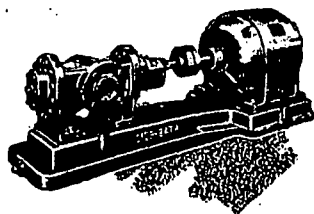
Can a pump be TOO GOOD?

WE believe that no pump used in industrial processes can be too good. The cost of only one shut-down for pump replacement or repair often exceeds the difference in price between the best pump it is possible to obtain—and the second-best.

That is why we put everything that engineering ingenuity can devise into Sier-Bath Screw Pumps and Gearex Pumps. As a result, Sier-Bath Pumps are noted for their dependability and durability and for requiring the absolute minimum

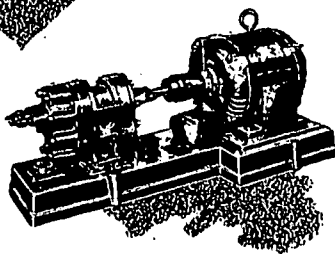
in down-time for maintenance.

Sier-Bath Screw Pumps and Gearex Pumps are made in a modern plant under the best working conditions, by a company that has long been noted for the manufacture of precision gears. In the making of our pumps we adhere to the rigid standards of high quality that have made Sier-Bath Precision Gears famous among manufacturers of quality products. Send for booklet on Sier-Bath Screw Pumps or Sier-Bath Gearex Pumps.



SIER-BATH Screw Pump Advantages: Positive flow, anti-friction bearings, vibrationless operation, low maintenance costs, rugged construction. Pumps handle, asphalt, brines, bunker C fuel oil, cellulosics, greases, molasses, syrups, lube oil, etc.

SIER-BATH Gearex Pump Advantages: balanced axial thrust, vibrationless operation, roller bushings for precision running under load. Pumps oils, varnishes, solvents, molasses, chemical solutions. Capacities 1-550 g.p.m. Discharge 250 p.s.i. for medium or high viscosities, 50 p.s.i. for water.



ALSO MAKERS OF SIER-BATH PRECISION GEARS

FOUNDED 1905

MEMBER A. G. M. A.



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BOOKLETS

RESUME OF BUREAU OF MINES RESEARCH AND DEVELOPMENT WORK ON WESTERN COALS, 1942-47. By V. P. Perry, Bureau supervising engineer, Golden, Colo. This Report of Investigations 4171 available on request to Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa. Order by report number and title. Western coal research report describes discovery of two extensive reserves of coking coal, the successful operation of coal and lignite gasification plants, development of safe methods of storing sub-bituminous coal in open pits, and a beginning on studies of briquetting certain coals.

ANNUAL REPORT OF RESEARCH AND TECHNOLOGICAL WORK ON COAL FISCAL YEAR 1947. A. C. Fieldner, chief of Fuels and Explosives Div., and Paul M. Ambrose, former assistant chief, Fuels and Explosives Div., Bureau of Mines. Single copies of Information Circular 7446 are available from Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa. Outstanding achievements of the Bureau are recorded in the report, which is the 12th annual review of research and technologic work on coal. The Bureau's broad field of research included coal mining and exploration, coal sampling and analysis, gas-and-dust explosion research, coal preparation and storage, and coking and gasification studies.

MAP OF PRINCIPAL NATURAL GAS PIPELINES IN U. S. 4x56 in., with one inch representing about 60 miles, printed in 12 colors on heavy map paper for tracing. For ordering, refer to map as FPC-M-1. Federal Power Commission, Washington 25, D. C. Map shows the principal natural gas pipelines in U. S. as of 1947. It includes information that makes it possible to trace flow of natural gas from its source to point of consumption. Pipelines authorized, but not yet constructed, are also shown.

THE INVESTIGATION OF INDUCTION HEATING IN RELATION TO INDUSTRIAL GAS HEATING. By S. L. Case, L. R. Jackson and R. J. Land. Battelle Memorial Institute, Columbus, Ohio. Sponsored by American Gas Association, Committee on Industrial and Commercial Research. Ralph L. Manier, chairman. 6 pp., 11x8 in., paper, \$1. American Gas Assn., 420 Lexington Ave., New York 17, N. Y. This report is divided into four sections. First, second and third sections outline salient technological features of each type of heating and describe a few commercial examples of each kind that have proved outstandingly successful. Purpose of these sections is to present examples of well-engineered installations of various types of heating. A fourth section attempts to present an appraisal of social, logistical and economic factors that will be important in deciding which method is most suitable for future installations.

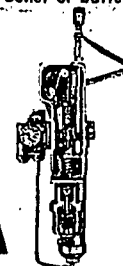
AMERICAN STANDARD SAFETY CODE FOR CONVEYORS, CABLEWAYS, AND RELATED EQUIPMENT. Send 90¢ for copy of B20-1-1947 to American Standards Assn., 70 E 45th St., New York 17, N. Y. The first nationally acceptable safety provisions have been made available for construction and operation of mechanical conveyors and counting equipment. Safety provisions for all kinds of conveyors are included in the standard. Special provisions for safety are given for each type. The safety

Correct FUEL-AIR RATIO FUEL FEED OVER-FIRE DRAFT

GET ALL Three AND HAVE THESE RESULTS

- 1 More steam from your present boiler.
- 2 Less fuel — coal — oil — gas required.
- 3 Savings in maintenance whether you have a single boiler or battery of boilers.

WHETHER YOU HAVE ONE OR A BATTERY OF BOILERS . . . INSTALL
CASH STANDARD
AUTOMATIC COMBUSTION CONTROL SYSTEMS

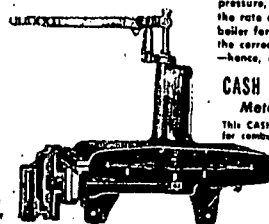


CASH STANDARD FUEL FEED CONTROLLER . . .
Automatically Regulates Fuel Feed

This CASH STANDARD Master Controller automatically regulates fuel feed. Located in conveniently working from boiler pressure, it will adjust the rate of combustion by regulating the rate at which fuel (any kind of fuel) is supplied to the boiler furnace. And it will adjust the Air Flow Controller so the correct amount of air is supplied for proper combustion — hence, money saving.

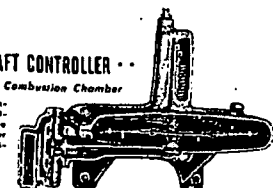
CASH STANDARD AIR FLOW CONTROLLER . . .
Meters the Air Needed for Combustion

This CASH STANDARD Air Flow Controller meters the air needed for combustion. Install it near its damper. It is not affected by changes in fuel load resistance or any other valve, because it meters air supply according to the differential pressure through the gas passages of the boiler, doing its part to insure perfect combustion.



CASH STANDARD FURNACE DRAFT CONTROLLER . . .
Maintains a Constant Draft in the Combustion Chamber

This CASH STANDARD Furnace Draft Controller (which comes complete with Operating Power Cylinder) works from overboard draft, regulating the boiler uptake damper to maintain a constant draft in the combustion chamber.



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