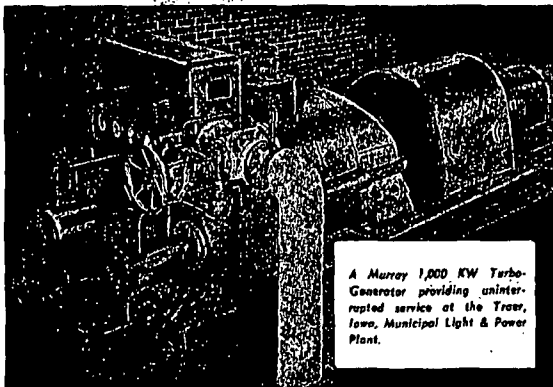


Murray Turbines



A Murray 1,000 KW Turbo-Generator providing uninterrupted service at the Traer, Iowa, Municipal Light & Power Plant.

● A typical, modern, small public utility is the Municipal Light and Power Plant at Traer, Iowa. This plant supplies water, steam heat and electric power to the community and surrounding countryside. The Murray turbo-generator pictured above carries the full electrical load of the plant and supplies the steam for heating by automatic extraction at 10# gauge pressure.

The simplified design and rugged construction of this and all MURRAY turbines particularly adapt them to this or any other drive where long life, reliability and low operating costs are a must.

MURRAY IRON WORKS COMPANY

BURLINGTON, IOWA

Builders of Steam Power Equipment for Three Quarters of a Century

More TECHNICAL BRIEFS

Begin on page 154

Since the primary purpose of a ground system is to limit the rise of potential on a circuit during a fault, it is necessary that the resistance to earth be kept low by suitable electrodes. The design and installation of the grounding systems at the U. S. Steel Corp's Fairless Works is described as a typical case of cathodic protection. When developing this system, soil samples were tested which gave resistance readings of 22,500 to 28,000 ohms per cm.

Because of the earth's high resistance steel rods 40 ft long 1½-in. in diameter were driven into the earth to a point where better conductivity was found. Each pair of these rods was protected by a 10-ft long, 4x4-in. square magnesium anode rod cast on the center of a 20-ft long, 1-in. diameter steel rod. It is believed the steel ground rods with this cathodic protection will last indefinitely and that the magnesium anodes should last about 20 years. *AISE paper. No number.*

More FREE BULLETINS

Begin on page 167

color, 4-page folder. Photos, sketches, engr. data, model and application spec. Bulletin 101A, Helmholtz Electric Co., 111 Plum St., Trenton 3, N. J.

14 Bitulene products application increased. Old listing expanded to include three new categories, 16 new products ranging from adhesives to molding compounds. Dow-Corning Corp., Midland, Mich.

15 Totally enclosed, fan-cooled, high-speed induction motor for punch press service. Two-color, 4-page folder. Photos, cutaways, dimensions, drawings, full specs. Bulletin GBA-1983, General Electric Co., Schenectady 5, N. Y.

16 Current limiting, cast-in-concrete reactors for single and 3-phase circuits of 4,600 v and below. Two-color, 8-page catalog. Application photos and data. Bulletin GBA-1980, General Electric Co., Schenectady 5, N. Y.

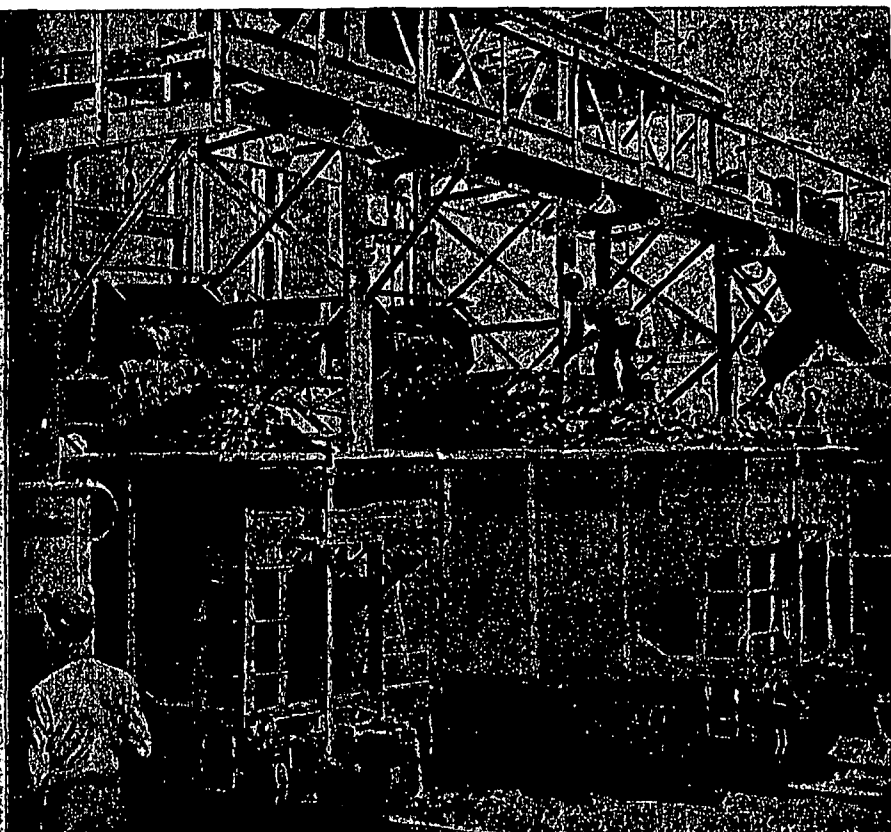
17 New manual, Operation and Maintenance of Dry-type Transformers, written as guide for management, electricians and maintenance personnel in proper installation and care of equipment. Ten pages, 11½x8½ energy data. Manual T-1, Flavi Duty Electric Co., Milwaukee 1, Wis.

18 Aluminum for power and lighting wire, its uses and properties including current-carrying capacity, comparison of weights, breaking strength, etc. Thirty-page handbook. United States Rubber Co., Electrical Wire & Cable Dept., Rockefeller Center, New York 10, N. Y.

HEAT EXCHANGERS

19 Fully automatic, heavy fuel oil burners. Two-color, 8-page folder. Photos, capacity ratings, construction features. Brochure A-404, Ray Oil Burner Co., 1801 San Jose Ave., San Francisco 18, California.

20 Standard method for testing hot water unit heaters so as to assure



BOOM LOADING "GENTLES" THE COAL INTO WAITING CARS ...
MAINTAINS INITIAL SIZING AND BANS DEGRADATION

BEACON COAL



EASTERN GAS AND FUEL ASSOCIATES

PITTSBURGH • BOSTON • CHICAGO • CLEVELAND • DETROIT • NEW YORK
NORFOLK • PHILADELPHIA • SYRACUSE

For New England: New England Coal & Coke Co., For Export: Carmon, Corran & Bellitt Inc.