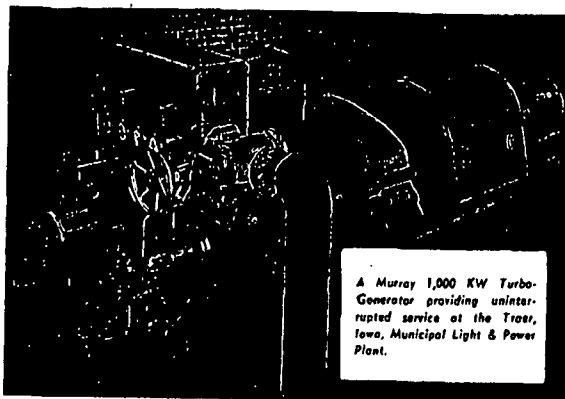


Murray Turbines



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

The dielectric properties of insulating materials undergo a change during thermal treatment. This is particularly evident in the case of electric loss and in the insulation resistance. The variations in these properties during aging tests can be correlated with the mechanical properties of the materials making it possible to estimate the time at which the plasticizer has been removed and embrittlement has occurred. This point of embrittlement corresponds with minimum point on the normal temperature curves for Formica insulation, a special type tested by the author. The usefulness of these changes in dielectric properties during aging in determining the true life of life remaining in insulation can be determined only through further study of other insulations with dipolar groups as those with non-polar groups. A investigation of the effects of environment and conditions of contamination is in order. It is important that studies be made of the change in properties of insulated structures which are composed of two or more dielectrics, as is found in machinery construction. It is expected, too, that further work will reveal the effects of temperature changes on these dielectric properties; the desirable information at the higher temperatures. AIEE Paper No. 53-125

ELECTRIC CONTROLS

Operatorless Elevators. By Sidney Clark, Otis Elevator Co.

For many years, light-duty elevators have been operated without attendants, therefore being automatic might be classed as operatorless. But, let us think of the latter as the units of a group of three or more heavy duty continuous running non-attended high-speed elevators, controlled by an automatic supervisory system that automatically handles six different traffic programs. These programs are: up-peak, balanced up-down, heavier-down, heavier-up-down-peak, intermittent night and day traffic.

On operatorless elevators the patching system is used directly to initiate starting the cars instead of working through starters or other attendants. A load-weighting device is also used: (1) dispatch cars from the ground floor when 80% loaded if this occurs before the scheduled time interval has elapsed; (2) bypass all halt calls if the cars are loaded to 80% of capacity. To prevent passengers being hit by closing doors, way and car doors, closing speed of these doors has been reduced and a protective device is used that returns the doors to open position if a passenger is in their way. A two-way load



Tips on Better Pumping

5 WAYS to Get the Most From Your PUMPING INVESTMENT

1. MATCH THE PUMP TO THE CONDITIONS

First, determine all possible conditions of the liquid to be pumped—chemical analysis, suction lift (if any), head or pressure, specific gravity and temperature of liquid—then pick the exact pump made for those conditions. (In the "Buffalo" line, you'll find that "ideal" pump, because the line is so complete.)

2. SAVE ON FIRST COST BY USING HIGHEST RECOMMENDED DRIVER SPEED

The higher the speed, the more the pump will deliver—within reason—and the smaller the pump you can use for a given job. But be sure to operate at no higher than recommended speeds. Overspeeding wears out any pump.

3. RIGHT INSTALLATION AIDS PERFORMANCE

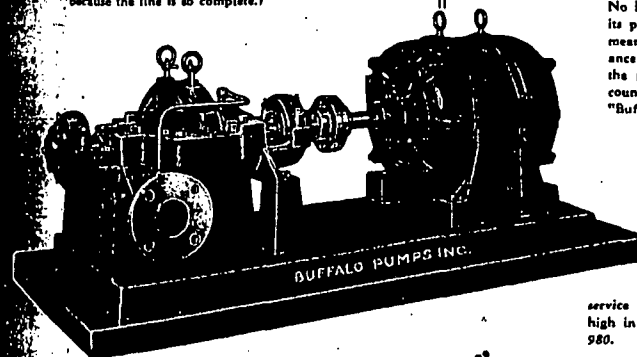
Give your pump the best chance—install close as possible to liquid supply source—keep pipe friction losses to a minimum—be sure suction line has no humps or hollows which could cause air locks. (You'll find "Buffalo" Pumps compactly built and easy to install.)

4. REGULAR MAINTENANCE SCHEDULE LENGTHENS PUMP LIFE

Regular inspections and servicing of bearing lubrication, shaft alignment, packing, impeller not only keep your pumps running smoothly, but head off minor conditions which could develop into problems later on. (You have a long-life "bonus" to start with if your pumps are "Buffalo"!)

5. A QUALITY PUMP IS ALWAYS AN ECONOMY—SPECIFY "BUFFALO"

No installation can be better than its pump. For known quality that means long life, efficient performance and simple maintenance, pick the pumps used in many of the country's largest installations—"Buffalo" Pumps.



"BUFFALO" TYPE RR PUMP FOR HIGH PRESSURES—

—multistage design for clear water

service such as boiler feed. Rugged, high in efficiency. Write for Bulletin 580.

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