

We are pleased
to announce
the affiliation of

BAKER & SPENCER, INC.

with

FREDERIC R. HARRIS, INC.

Consulting Engineers

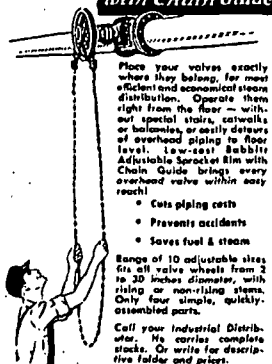
27 WILLIAM STREET

NEW YORK CITY

TEL: HANOVER 2-9115

Operate Overhead Valves
From the Floor with...

Babbitt
Adjustable
SPROCKET RIM
with Chain Guide



Place your valves exactly where they belong, for most efficient and economical steam distribution. Operate them right from the floor — without special stairs, catwalks or ladders, or costly detours of overhead piping to floor level. Low-cost Babbitt Adjustable Sprocket Rim with Chain Guide brings every overhead valve within easy reach!

- Cuts piping costs
- Prevents accidents
- Saves fuel & steam

Range of 10 adjustable sizes fits all valve wheels from 2 to 30 inches diameter, with rising or non-rising stems. Only four simple, quickly-assembled parts.

Call your Industrial Distributor. We carry complete stocks. Or write for descriptive folder and prices.

Babbitt STEAM SPECIALTY CO.
3 BABBITT SQUARE, NEW BEDFORD, MASS.

More POWER NEWS

Begins on page 154

First 100 kw Wind Generator

LONDON — (McGraw-Hill World News) — The first wind-driven generating station is soon to be added to the British Electricity Authority's system. Preliminary trials under light inland breezes are to take place this summer at a site near St. Albans, Hertfordshire, north of London. This is a step further in BEA's effort to overcome the acute shortage of electricity and at the same time to save precious coal.

The new generator works on the depression principle, an arrangement whereby the generator is directly coupled to an air-turbine, both being at or near ground level and neither being mechanically connected to the propeller. The propeller, by extracting air from the system, sets up a pressure difference across the turbine sufficient to cause rotation.

The pitch is adjusted automatically by a hydraulic system so that the rotational speed is maintained constant when the wind speed is in excess of 30 mph and not more than 65 mph. Diameter of the swept circle is 80 ft. The propeller operates down wind of the tower.

The electrical equipment comprises one 100 kw, 415 volt, 3-phase, synchronous induction generator with exciter, which is started from rest as an induction motor. When synchronous speed is approached, direct current is fed into the field causing the generator to operate as a synchronous motor running under no load conditions. Air is then admitted to the turbine which in turn drives the motor in synchronism with the connected system. Fully automatic control gear is connected to the generator by flexible armored cables.

Mining progress is pictured in a new Gardner-Denver movie entitled *Pay Dirt*. It dramatizes the improved techniques which mining men and mining equipment manufacturers have developed for producing greater and greater tonnages of iron, copper, uranium, zinc, nickel, lead, and all the other minerals which are used so abundantly today. It shows, for example, the strenuous hand drilling methods practiced years ago, followed by scenes of miners using early compressed air powered rock drill models, and then the newest high speed automatic drilling equipment.

Pay Dirt is a 16-mm. sound, color film that runs for about 30 minutes. It is one of a number of films on construction and mining subjects which are available from the Gardner-Denver film library, at no cost. Copies of these films may be obtained from Gardner-Denver Co., Quincy, Illinois.

Performance is
PROOF

A large filtration
Superintendent has
this to say,

"For coagulation of high turbidity
with a high PH we have found
Sulphate to be superior in effect
and we would not hesitate to recom-
mend it."



Ferric Salts have proven their ability
coagulate waters of widely varying turbidity.
Spring rains bring about turbidity for those
who must treat surface supplies. The use of
Ferri-Floc will simplify the treatment of
high turbidity. Ferri-Floc is partially hydrolyzed
Ferric Sulphate that has the ability to coagulate
these high turbidities without radical pH changes.



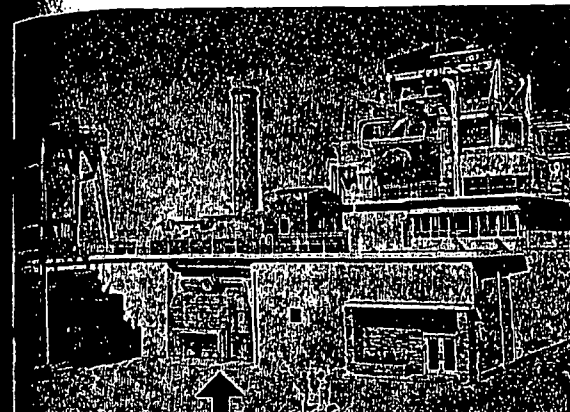
FREE LITERATURE—Let us send you
our cost, our new booklet: an economical
and efficient coagulation. Just send a card
or letter to Tennessee Corporation, Great
Building, Atlanta, Georgia.



TENNESSEE CORPORATION
617-29 Great Building, Atlanta, Georgia

POWER • MAY 1953

Salt River Power District Installs I-R Rectangular Condensers in unique, outdoor-type steam plant



**NEW KYRENE
POWER PLANT,**
designed to take
advantage of
Arizona climate
conditions, saves
valuable under-
turbine space with
Ingersoll-Rand
Rectangular
Condensers

This 27,500 sq. ft. I-R Rectangular Condenser serves Unit No. 1, a 30/33,000 kw turbine-generator, at the new Kyrene Steam Plant of the Salt River Power District.

The new Kyrene Steam Plant, near Phoenix, Arizona, is the latest addition to the Salt River Power District's combined steam, hydro and diesel power generating system.

Designed and built by the Bechtel Corporation, the Kyrene Station differs from the conventional outdoor installation in that the maintenance shops and auxiliary equipment are under cover for the comfort and convenience of operating personnel. All other elements of the station are of the outdoor type resulting in maximum economy of construction for the Arizona climate.

Unit No. 1—a 30/33,000 kw turbine-generator with throttle conditions of 850 psig, 900F—is supplied by a 350,000 lb. per hr. steam generator, designed to burn natural gas automatically, fuel oil manually, or coal or lignite on conversion. The turbine is served by an Ingersoll-Rand Rectangular Condenser containing 27,500 sq. ft. of cooling surface. Condenser cooling water is handled by two I-R

vertical pumps handling 25,800 gpm. Condensate is handled by I-R vertical pumps.

Unit No. 2, now under construction, will have a rating of 60/66,000 kw. It will be served by a 47,500 sq. ft. I-R Rectangular Condenser, also of two-pass and vertically divided design. The condensate and circulating pumps will again be supplied by Ingersoll-Rand.

These Ingersoll-Rand Condensers save valuable space because their rectangular design makes the most efficient use of the rectangular space available below the turbine. And installation cost is minimized because they are completely assembled in the shop, then shipped in large sections, completely flanged for easy erection without any field fitting or strength welding.

Ingersoll-Rand
868-4 11 BROADWAY, NEW YORK 4, N. Y.

COMPRESSORS • AIR TOOLS • ROCK DRILLS • TURBO BLOWERS • CONDENSERS • CENTRIFUGAL PUMPS • DIESEL AND GAS ENGINES

MAY 1953

265