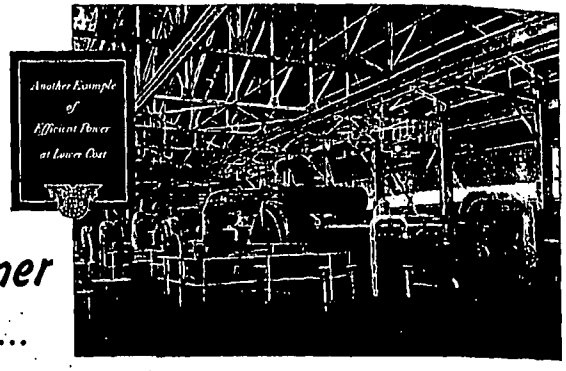


Cooper-Bessemer

MODERN DESIGN...

for compressors at Sindri . . . at Suez . . . everywhere!

● Shown opposite are Cooper-Bessemer *motor-driven compressors in two of the* world's newest and largest synthetic ammonia plants.

The top view shows part of the 22,000 Cooper-Bessemer M-Line compressor horsepower installed in the ammonia synthesis plant of the Sindri Fertilizer Factory, Bihar Province, India. Here, ammonium sulphate can be produced at a rate of 1,000 tons a day — 350,000 tons a year!

Similarly the other photo shows a line-up of Cooper-Bessemer compressors in the large Suez plant of the Societe Egyptienne D'Engrais et D'Industries (S.A.E.), Egypt. Here, calcium nitrate fertilizer is produced at a rate of 200,000 tons yearly.

In both plants, these modern Cooper-Bessemer units handle the entire compressing job and comprise the heart of production operations. For, with Cooper-Bessemers, you can be sure of year-in, year-out performance at the lowest operating cost.



Cooper-Bessemer M-Line motor-driven compressor in the synthesis section of the Sindri Fertilizer Factory, India. Here eight 2,750 hp 7-cylinder units compress gas through six stages to a pressure of 5,500 psi. The huge Sindri plant was engineered by the Chemical Construction Corp., New York, and built under the direction and supervision of the Power-Gas Corp., Ltd., England.

Here, in the Suez plant of the Societe Egyptienne D'Engrais et D'Industries (S.A.E.), these four 2,750 hp JM-3 motor-driven units compress 25,344 mcf of gas daily from atmospheric to 5,200 psi for initial calcium nitrate production of 200,000 tons yearly. This plant, engineered by the Chemical Construction Corp., utilizes waste gases from nearby oil refineries.

The
Cooper-Bessemer
Corporation

MOUNT VERNON, OHIO — GROVE CITY, PENNA.

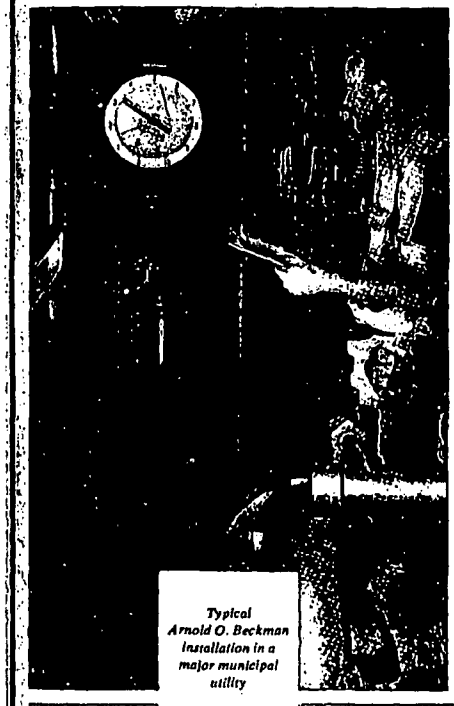
New York Washington, D. C. Bradford, Pa. San Francisco Houston, Dallas, Greggton, Pampa and Odessa, Texas Seattle Tulsa Shreveport St. Louis Los Angeles Chicago Cooper-Bessemer of Canada, Ltd., Halifax, Nova Scotia Gloucester, Mass. New Orleans, La.

Start these savings NOW...

with the

Arnold O. Beckman

MODEL F-3
OXYGEN ANALYZER



Typical Arnold O. Beckman installation in a major municipal utility

Save Fuel!

Buying fuel that goes up the stack unburned is buying lost efficiency and objectionable smoke. Insure *complete* combustion with a Model F-31

Save Heat!

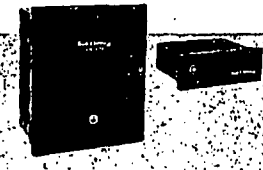
Excess air only wastes valuable heat. You *know* when to cut down on excess air with a Model F-31

Save Upkeep!

Costs for operating and maintaining the Arnold O. Beckman Analyzer are negligible. Only periodic checking is required, and no special skill is needed to operate the F-3.



Get the full story on the many ways the Model F-3 Analyzer and Sampling System can benefit your operations. Write for Data File 58-431



Features of the Beckman Model F-3

SELECTIVITY Highly sensitive to oxygen. Effects of gases other than oxygen are negligible.

MANY RANGES Combustion ranges include 0-3%, 0-10%, 0-15%, and are provided with a second range of 0-25%. Other ranges up to 0-100% O_2 are available. Calibration of the Model F-3 is strictly linear and scale is accurate over the entire range.

HIGH ACCURACY ±1% of full scale for spans of 5% and greater. Accuracies within .05% O_2 on 0-5% range are available.

AIR CHECK Simple positive check of proper operation by recording the air point on the second range.

SIMPLE SAMPLING Independent of flow rate. Nothing is added to the sample. The sample may be dry or saturated. Corrosive gases will not poison the instrument. Only a small sample (3-15 cu.in./min.) is required.

LOW MAINTENANCE Completely insulated against extreme shock and vibration. No chemicals, no catalysts to replenish. No wicks, filaments, orifices, valves, etc., to clean and replace.

STANDARD RECORDERS Any standard industrial potentiometer recorder or pneumatic receiver can be used.

Arnold O. Beckman INC.

Manufacturers of Industrial and Scientific Instruments

1020 MISSION STREET
SOUTH PASADENA, CALIFORNIA