

SOME STATISTICS ON THE OHIO WORKS ORE BRIDGES

Free digging capacity of each bridge	1640 tons/hour
Grab bucket capacity	22½ tons
Bridge hopper capacity	100 tons
Total weight of each bridge (empty)	1300 tons
Span of bridge between tracks	279 ft
Length of single-rail shear trucks (16 33-in. wheels)	132 ft 9 in.
Length of double-rail pier trucks (16 33-in. wheels)	115 ft 6 in.
Bridge travel speed	.75 fpm
Trolley travel speed	.900 fpm
Bucket hoisting speed	.240 fpm

ELECTRICAL DATA

Power Supply	2300 volts, 25 cycles, 3 phase
Motor-Generator Set	
Motor	700 hp, 1500 rpm, 2300 v, 25 cycles
Bucket-hold generator	250 kw, 375 v d-c
Bucket-close generator	250 kw, 375 v d-c
Trolley generator	400 kw, 395 v d-c
Auxiliary generator	50 kw, 250 v d-c
Main Drive Motors	
Bridge truck motors (4)	100 hp, 230 v d-c
Trolley motors (2)	250 hp, 230 v d-c
Bucket-hold and -close motors (2)	250 hp, 230 v d-c
Rail clamp motors (2)	6½ hp, 230 v d-c

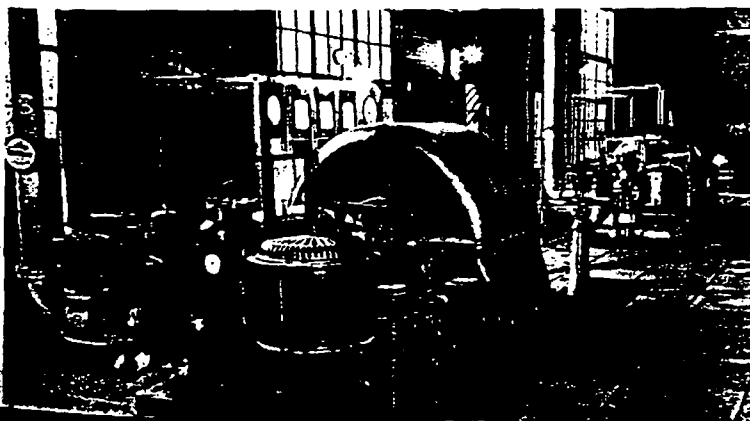
36-year-old turbines still on the job

HERE are four centrifugal compressors driven by Elliott steam turbines. The turbines look a little old-fashioned. They have a right to, for they have been on the job 24 hours a day for 36 years and are still operating. Installed in 1919 in the plant of the predecessors of Alan Wood Steel Company, Conshohocken, Penna., they have operated continuously since that time. The units are used in making and boosting coke-oven gas. Much of the gas is used in the plant; the balance has been sold to the local utility. Even though natural gas has come to the territory, there is use for the by-product variety.

The turbines were built by the Kerr Turbine Company, which was taken over by Elliott Company in 1925. The records show that two turbines are rated 260 hp, 6 stage, 3875 rpm; the other two—325 hp, 10 stage, 3200 rpm. They were designed to operate on 195 psig steam, exhausting to 28 in. Hg. The turbines have single-row impulse stages throughout.



These two compressors driven by Elliott 325-hp turbines operate as gas boosters.



Two Elliott 260-hp turbines drive coke-oven gas exhausters. An Isbell-Porter auxiliary governor regulates each turbine in accordance with inlet gas pressure in the coke ovens.