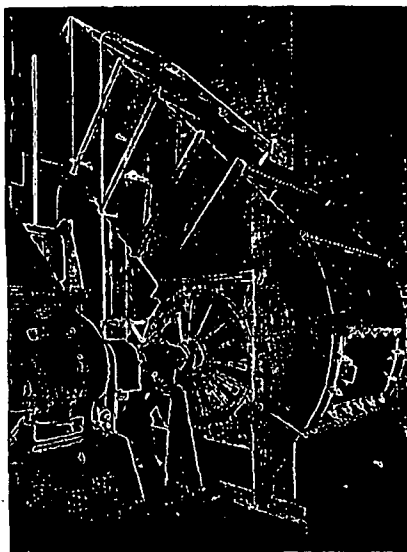
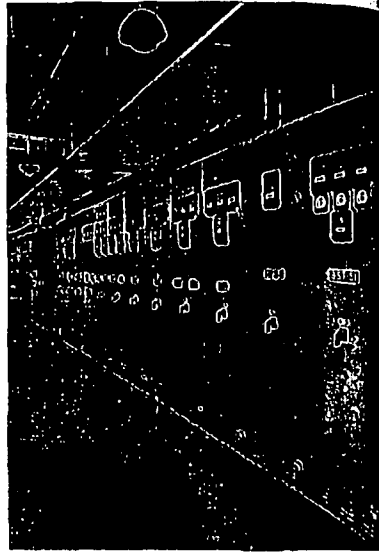




ONE MOTOR-DRIVEN FORCED-DRAFT FAN, located on upper level, serves each steam generator. Vanes control air flow



2300-VOLT SWITCHGEAR for electrically driven boiler-room auxiliaries, has protecting canopy against overhead leads

PRINCIPAL POWER-PLANT EQUIPMENT

Units No. 3 and 4, Crawford Station, Middletown, Pa., Metropolitan Edison Co

STEAM GENERATORS NO. 1 AND 2:

Boilers, 2 Foster Wheeler Corp
230,000 lb per hr each, 875 psig, 910 °F, pulverized-coal-fired, 3-drum, dry bottom, waterwalls
Superheaters, 2 Foster Wheeler Corp
7170 sq ft each, superheat control by condensers in saturated steam header, two section, non-drainable
Economizers, 2, 2540 sq ft each Foster Wheeler Corp
Air heaters, 2 The Air Preheater Corp
43,000 sq ft each, regenerative
Pulverizers, 4 Foster Wheeler Corp
Hardinge type, each feeds 3 burners, 6 burners per boiler arranged for opposed firing
Forced-draft fans, 2 Sturtevant Div, Westinghouse
Water driven, vane controlled
Induced-draft fans, 2 Sturtevant Div, Westinghouse
Two-motor drive, 250 hp at 720 rpm, and 500 hp at 900 rpm, vane controlled
Tempering air fan, 2 Sturtevant Div, Westinghouse
Flyash precipitators, 2 electrostatic Research Corp
Ducts and breeching Consery Construction Co
Chimney, 1 concrete Rust Engineering Co
Coal-handling equipment Link-Belt Co
Ash-handling equipment The Allan-Sherman-Hoff Co
Combustion-control equipment Leeds & Northrup Co

TURBINE-GENERATOR UNITS NO. 1 AND 2:

Turbine-generator, 1 General Electric Co
35,000 kw nominal, 42,150 kw maximum, 850 psig, 900 °F, 3600 rpm
4 bleed ports, hydrogen-cooled generator
Turbine generator, 1 General Electric Co
3000 kw nominal, 3710 kw maximum, 810-psig 900-°F throttle steam, 330-psig backpressure at 705 °F, 3600 rpm

Main condenser, 1 The Lummus Co
Surface type, 34,000 sq ft, 2-pass, Admiralty tubes
Circulating pumps, 2, motor driven Ingersoll-Rand Co

CONDENSATE AND FEEDWATER SYSTEM:

Condensate pumps, 2, motor driven Ingersoll-Rand Co
Closed feedwater heaters, 4 The Lummus Co
Desuperheating heater, 1 The Lummus Co
Evaporators, 2 The Grissom-Russell Co
Boiler feed pumps, 3 Pennsylvania Pump & Compressor Co
Two, motor driven, one dual driven with clutch-type coupling
Turbine drive, solid coupling to motor
Boiler feed pump turbine, 1 The Terry Steam Turbine Co
Major steel valves Reading, Pratt & Cady Div
Feedwater regulators The Northern Equipment Co

MISCELLANEOUS EQUIPMENT:

Desuperheating station Republic Flow Meter Co
Desuperheating pump The Aldrich Pump Co
Pipe fabrication Benjamin F. Shaw
Insulation Johns-Manville
Automatic trash rake The Link-Belt Co
Traveling screens Wallace & Tiernan
Chlorination equipment Permutit Co
Water softeners Permutit Co
Gravity filters Permutit Co
Water precipitators Tipsett & Wainwright
Tanks Tipsett & Wainwright
Central-air compressors Pennsylvania Pump & Compressor Co
Flow meters, pressure recorders Penn Industrial Instrument Co
Draft gages Republic Flow Meter Co
General contractor L. H. Focht & Son
Engineers Gilbert Associates

"Give us the tools..."

TO SURVIVE

America Must Have Better Tools

IN THE past twenty years the United States has failed to provide its workers with enough new tools and equipment.

To most Americans this statement will come as a shock—or will be doubted. We are quite complacent about our industrial equipment, for easily understood reasons.

Throughout the '30s we heard continuously the propaganda line that the United States had become a "mature economy." The job of equipping America with industrial plants and tools was said to be largely done.

Now, knowing that industry is spending billions to expand and rebuild its plants, many people assume that the result must be a first-class industrial system.

A further powerful inducement to complacency is the vastly worse industrial condition of most of the rest of the world. When Americans look abroad in almost any direction they see shattered plants and equipment. A natural reaction is that we are sitting pretty.

That is a dangerous reaction. Between depression and war, we have failed to build the tools and equipment we need. This condition is dangerous for three reasons:

1. From bitter experience we know that national security depends first and foremost on the capacity and readiness of our industrial equipment.

All of our plans for stabilizing prosperity assume a world at peace. The greatest menace to peace would be an unarmed America, unable or unwilling to keep herself strong and ready for defense—strong in spirit, in resources and in the all-important industrial plant and equipment.

2. Whether Americans live well—or badly—depends directly on the kind and quality of tools used by American workmen.

This is true for all workers, and for every worker—from a garage mechanic and his wrenches to a steel mill gang and its rolling equipment. In a monumental study of "America's Needs and Resources" the Twentieth Century Fund found this fact: The improvement in the real income of the American people has more consistently followed the amount of power used in industry than anything else. What the workman worked with determined, more than any other factor, the size of his pay envelope, and what it would buy.

3. Our success in stabilizing prosperity will depend largely on what we do about building new tools and equipment.

About 30% of our industrial workers are employed in producing tools and equipment. Steady employment for them is essential to our over-all prosperity.

How far have we fallen behind in providing new plants and equipment?

Estimates vary. Here is one rough estimate: If we had built new industrial facilities during 1930-48 at the rate we did in the prosperous '20s, we would have spent at least \$100 billion more than actually we did.

To get a better and more complete measure of this deficit, McGraw-Hill is undertaking a survey of American Business' Needs for New Plant and Equipment.

Businessmen all over the nation are being asked to answer questions like this: How much