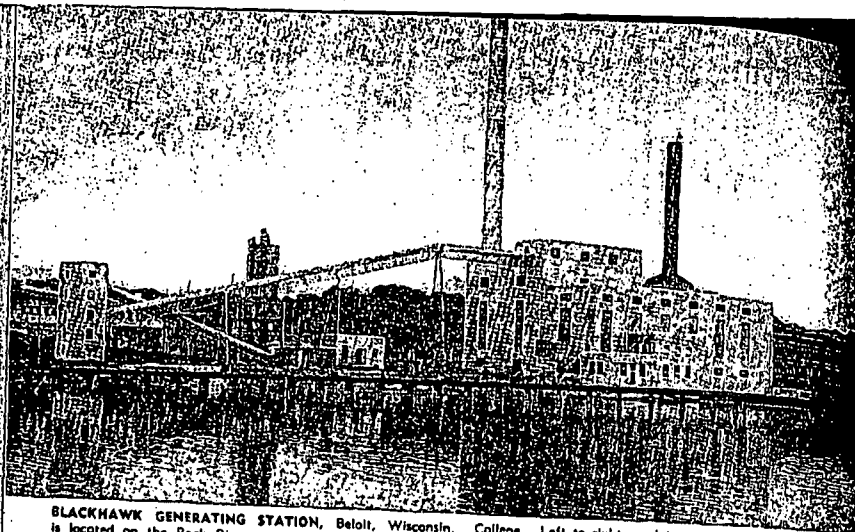
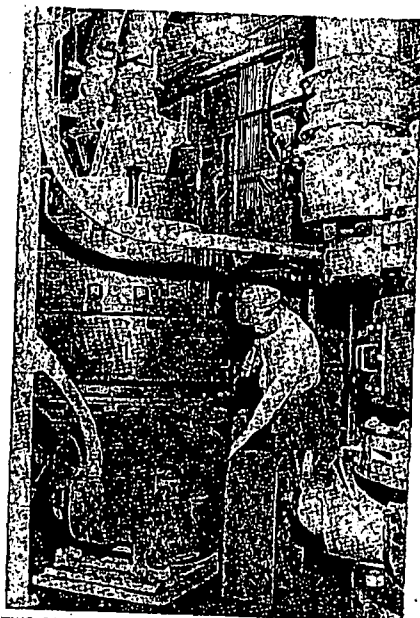
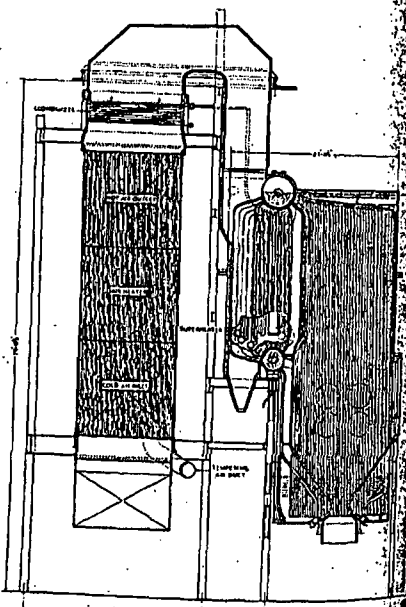




BLACKHAWK GENERATING STATION, Beloit, Wisconsin, is located on the Rock River, across the street from Beloit College. Left to right: coal junction house, ash silo, crusher house, main plant; dark building houses low-pressure unit.



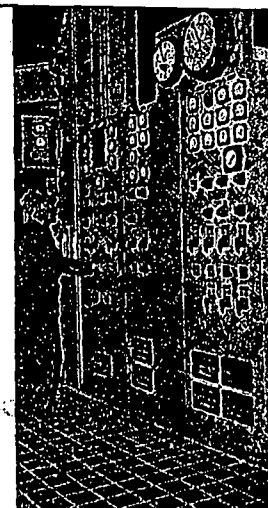
TWO BALL-AND-RING PULVERIZERS serve the single boiler, at right, by directly feeding four powdered-coal burners.



STEAM-GENERATOR CAPACITY equals 275,000 lb per hr. It has integral-furnace boiler, economizer, tubular air heater.



GENERATOR UNIT rated 25,000 kw at 80% pf uses steam at 850 psig. Hydrogen-cooled generator has four coolers removable during operation.



GENERATOR CONTROL PANEL is located on turbine operating floor near unit.

New One-Boiler-Per-Turbine Unit Increases System Capacity by 20%

Here's an example of generating stations that are helping to meet America's urgent demand for electric energy. A brief description of the Blackhawk Generating Station of Wisconsin Power and Light Co by L M Abrahamson, district plant manager

APPLYING THE TERM typical installation to any plant excites immediate criticism. Features are pointed out that are not found anywhere else. Though each plant does have its unique aspects, the Blackhawk Generating Station is an installation that can be termed typical in a statistical sense. Its steam pressure and temperature, 850 psig, 900 F., are conditions most frequently used in plants now under construction and going into service; other factors—such as the use of four bleed points, one boiler per turbine, pulverized-coal firing, use of economizer and tubular air heater,

conservative furnace-heat release, and even the boiler steaming capacity—will all be found in plants making up the largest single statistical group in the national expansion program. We can conclude that Blackhawk represents the trend of sound central-station engineering practice today.

Service Area. Wisconsin Power and Light Co serves an area in south central Wisconsin that runs about 180 miles north and south and 120 miles east and west. Generating capacity prior to the Blackhawk installation was 42,796 kw in hydro plants and 80,270

kw in steam plants. Annual energy received over interconnections ran about 11% of total generation. Placing Blackhawk in service January 1947 raised the system capacity by about 20%. Since this new extension follows the unit-design basis it reflects the increasing reliability of this class of equipment that has developed over the years.

Blackhawk Generating Station consists of a 25,000-kw extension and the former 10,000-kw Deloit Station in Beloit, Wisconsin. The plant is located on the extreme southern end of the system. A 66-kv line is under construction running east and west from Beloit, reinforcing the present transmission outlets from the plant.

Sargent & Lundy, Chicago, designed the extension; a second 25,000-kw unit now on order will start in March 1950. This plant and the other principal stations—Edgewater, at Sheboygan on Lake Michigan, and the hydro stations at Prairie du Sac and Kilbourn—