



# COMBINED HEAT AND POWER PULP AND PAPER INDUSTRY SOFIDEL AMERICA CORPORATION

## OWNER

**Sofidel America Corporation**

## LOCATION

**Circleville, Ohio, USA**

## PRODUCT

**Two Taurus™ 70 (8.0 MWE) Gas Turbines**

## CUSTOMER VALUE

**Reduced Energy Costs, Lowered CO2 Emissions**

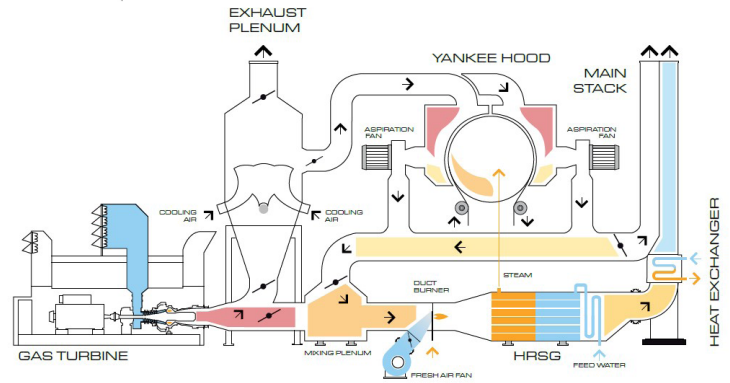
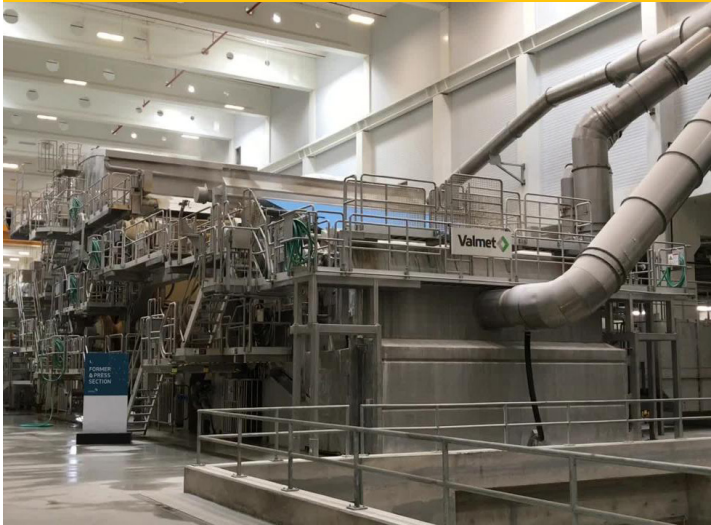
The Sofidel Group is one of the leading manufacturers of paper for hygienic and domestic use worldwide. Sofidel considers sustainability a strategic factor in its growth and is committed to promoting socially and environmentally responsible development. When Sofidel decided to build a new tissue production facility in Circleville, Ohio, they chose to install two Taurus 70 generator sets for combined heat and power (CHP) to optimize their process.

Sofidel's Circleville plant uses natural gas to fire two Taurus 70 combustion turbine generator sets; one unit for each production line. Each power plant produces electricity and uses the high temperature exhaust from the combustion turbine for production and building heating needs. Some of the high temperature exhaust is directly injected into the Yankee hoods to dry the paper. The remaining thermal energy the company does not use for direct drying is routed to a heat recovery steam generator (HRSG) to make steam for the paper

## **Solar® Turbines**

**A Caterpillar Company**

## Combined Heat and Power – Pulp and Paper Industry



making process and then to a final heat exchanger to supply the building's heating. This covers approximately 85% of the production and paper mill thermal loads, all while saving on their energy costs and reducing CO2 emissions by 25,000 tons per year.

The Taurus 70 generator sets were selected for their high efficiency and reliability, and they provide a good match to the Yankee hood drying requirements. The addition of the Taurus 70 with the Yankee hood allows for higher drying capacity of the paper machine and the potential for faster production of hygienic and domestic use paper over traditional manufacturing methods. The generator sets also allow for additional redundancy and flexibility in production, permitting for on-the-fly adjustments of the paper drying process to guarantee paper machine operation and product quality requirements. This flexibility maximizes the overall efficiency of the system, which results in greater value from both an economic and environmental perspective.

Sofidel also entered a Long-Term Service Agreement, using Solar's Equipment Health Management (EHM) program to ensure their units achieve high reliability, availability and optimum performance. This service plan consists of people, processes, and technology and is a fully managed solution to ensure operability of the paper plant without interruption. The EHM program includes a variety of advanced tools and applications such as real-time monitoring, measurable performance and reporting, a condition-based overhaul and maintenance philosophy, and predictive analytics. It also includes information such as equipment details, operation and maintenance manuals, technical bulletins, performance, and other key metrics on the turbines to help ensure the machines are cost effectively producing paper products. All of this information is accessible by both Sofidel and Solar personnel, enabling close collaboration to rapidly resolve problems and ensure the highest levels of equipment availability and performance while optimizing maintenance outages to reduce downtime.

**ENERGY COST SAVINGS**  
**LOWERED CO2 EMISSIONS**  
**REDUNDANCY**  
**HIGHER GLOBAL PLANT EFFICIENCY**

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