



# COMBINED HEAT AND POWER/DIRECT DRYING TISSUE INDUSTRY

## LUCAS GROUP

OWNER  
**Lucart Group**

LOCATION  
**Province of Lucca, Italy**

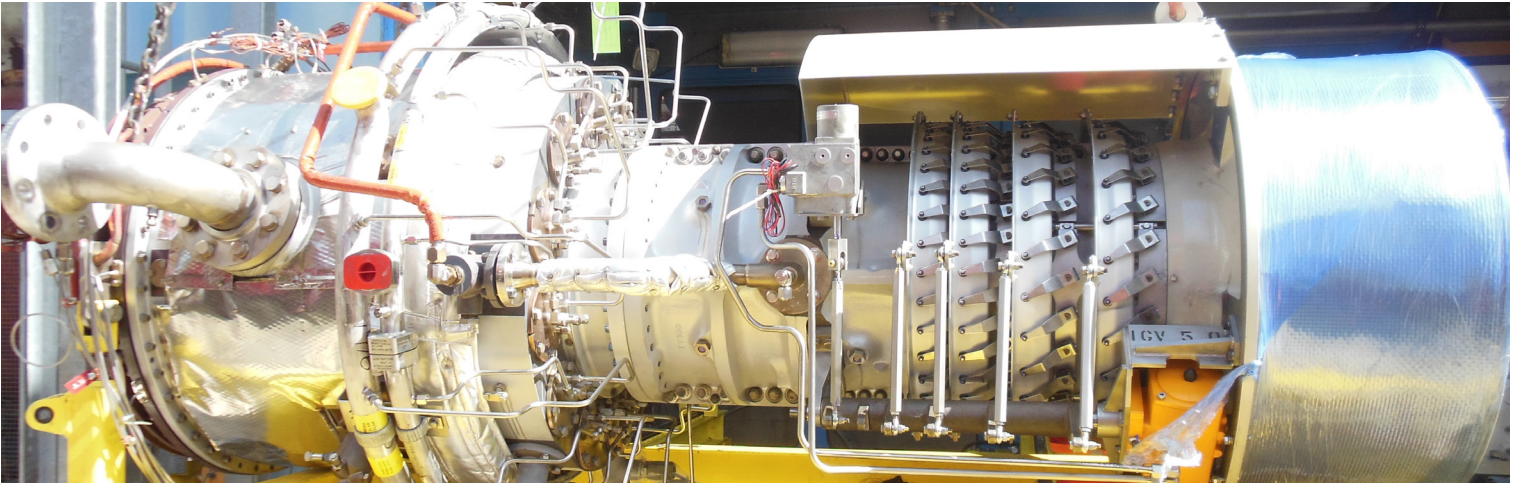
DIRECT DRYING DESIGN AND SUPPLY  
**Valmet**

PRODUCT  
**Taurus 70 (7.5 MWe) Gas Turbine**

The Lucart Castelnuovo di Garfagnana tissue mill is part of the Lucart Group, one of the first European paper and tissue producers. The mill has inaugurated its combined heat and power (CHP) system which is comprised of a Taurus™ 70 gas turbine generator set, an air system with fans, burners, dampers, ducting and instrumentation for the hood, as well as a heat recovery steam generator, an air/air heat recovery and an air/water heat recovery system. The gas turbine flue gases are used to dry the paper without any further gas consumption, improving energy efficiency and reducing greenhouse gas emissions significantly.

**Solar<sup>®</sup> Turbines**  
*A Caterpillar Company*

## Combined Heat and Power/Direct Drying – Tissue Industry



### PLANT DATA

7.5 MWe Taurus 70 Gas Turbine

Yankee Hood Direct Air Drying System (Valmet)

Heat Recovery Steam Generator (Valmet)

Fuel: Natural Gas

### OUR PRODUCTS AND SERVICES

Gas Turbine Package Supply and Auxillary Equipment

Gas Turbine Design

Gas Turbine Commissioning and Installation

Preventive Maintenance

Beneficial Use Overhaul Agreement

**SAVES 15-20% IN ENERGY COSTS**

**SIGNIFICANT EMISSIONS REDUCTION**

**REPLACED INEFFICIENT PROCESS**

**EFFICIENT, SUSTAINABLE POWER**

Using the gas turbine exhaust in the drying process replaced the older system of methane burners, which are now off during normal operations and in full compliance with Lucart's product quality parameters. In addition to the gas savings, drying costs in the tissue production are decreased considerably with the new cogeneration system. The cogeneration system has resulted in a 15 to 20 percent natural gas consumption savings, which correlates to an estimated reduction of CO<sub>2</sub> emissions by 7,000 tons per year and NO<sub>x</sub> reduction of 3.5 tons per year.

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# Solar® Turbines

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