

Case story | VACON® NXC

Optimized flow at Gestamp Biomass in Soria, Spain



Gestamp Biomass is part of the Gestamp Corporation, a European multinational leader in steel services, automotive components and renewable energy. With goals of flow optimisation and improved control of mechanical equipment, the installation of VACON® AC drives has created energy savings and given greater process control to Gestamp's biomass power plant based in Soria, Spain.

Power for the grid

In the last 15 years, Gestamp Biomass has designed and built boilers producing over 100 MWe from biomass. The Gestamp power plant in Soria has been successfully burning forest-based biomass to produce electricity which is fed into the medium-voltage grid. Using a feed-in-

tariff scheme, the local utility company pays Gestamp for the electricity supplied.

Robust, reliable solutions

In the summer of 2013, due to their reputation for being robust and reliable, a range of VACON® NXC and VACON® NXP AC drives were installed to control the pumps, fans, conveyors and screws in the plant's power island.

Three VACON® NXC AC drives were delivered to control the operation of fans responsible for air flow to the biomass burner, and two VACON® NXC drives were chosen to optimise water flow to the boiler. In addition, 10 VACON® NXP units (from 9 to 105 amps) were selected to run auxiliary devices. Gestamp also had

access to Vacon's multi-purpose control application which provides a wide range of parameters for the control of motors.

Enclosed VACON® NXC AC drives were chosen due to the challenging environment in the plant, and the low harmonic solution meets the most demanding requirements for clean power. Smaller units were enclosed by a local panel builder.

Commissioning took place throughout the summer and production successfully restarted in November 2013.

All units have been easily integrated into the plant's automation system and are controlled and monitored using

Profibus DP technology. Additionally, an Ethernet bus enables local use of NCDrive software, for example, to control parameters.

An important member of the project team was the plant's Engineering, Procurement and Construction (EPC) contractor, the Madrid-based GHESA Engineering and Technology. GHESA has widespread experience with different types of biomass installations and has carried out numerous feasibility studies. Due to successful negotiations and good cooperation, GHESA chose Vacon to be the AC drive supplier for the plant.

A satisfied customer

In the past, the Company has used drives provided by competitors. Throughout the project, Gestamp was greatly impressed with Vacon's global technical solutions and competitiveness:

"The performance and reliability of the equipment, together with the technical service provided during plant start-up has confirmed our decision to trust in Vacon was the right one", explains Jorge Freire, Electricity, Instrumentation and Control Manager, Gestamp Biomass.

New plants are coming in the next months. Featuring on Gestamp's vendor list, Vacon has established itself as a preferred drives supplier for the Company and is in pole position to get new orders.

In detail:

Located in Madrid, Gestamp Corporation has three main business lines: Gonvarri Steel Industries Gestamp Automoción and Gestamp Renewables (which is comprised of Gestamp Solar, Gestamp Wind and Gestamp Biomass). With total sales in 2013 of over EUR 9 billion,



the Corporation employs more than 35,000 people at 125 plants in 25 countries worldwide. Gestamp Biomass develops, builds and operates its own plants worldwide and supplies fuel to various biomass power plants. To date, the Company has facilities with 115 MW under development in Spain and 70 MW under construction in the United States.

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Cover photo: The Gestamp Biomass power plant in Soria, Spain uses forest-based biomass to produce electricity for the grid.

This case story was originally released before the merger of Vacon and Danfoss Power Electronics was fully completed on 15 May 2015. As a result, Vacon as a company brand no longer exists and contact persons mentioned in the story may have changed. Future case stories on VACON® products will be released on behalf of the new organization – Danfoss Drives – which is part of the Danfoss Group.



From left to right: Tapio Majaniemi, VP, Central & South Europe and Africa, Vacon, Jorge Freire, Electricity, Instrumentation and Control Manager, Gestamp Biomass, Santiago Martín, VP, Latin America, Vacon.