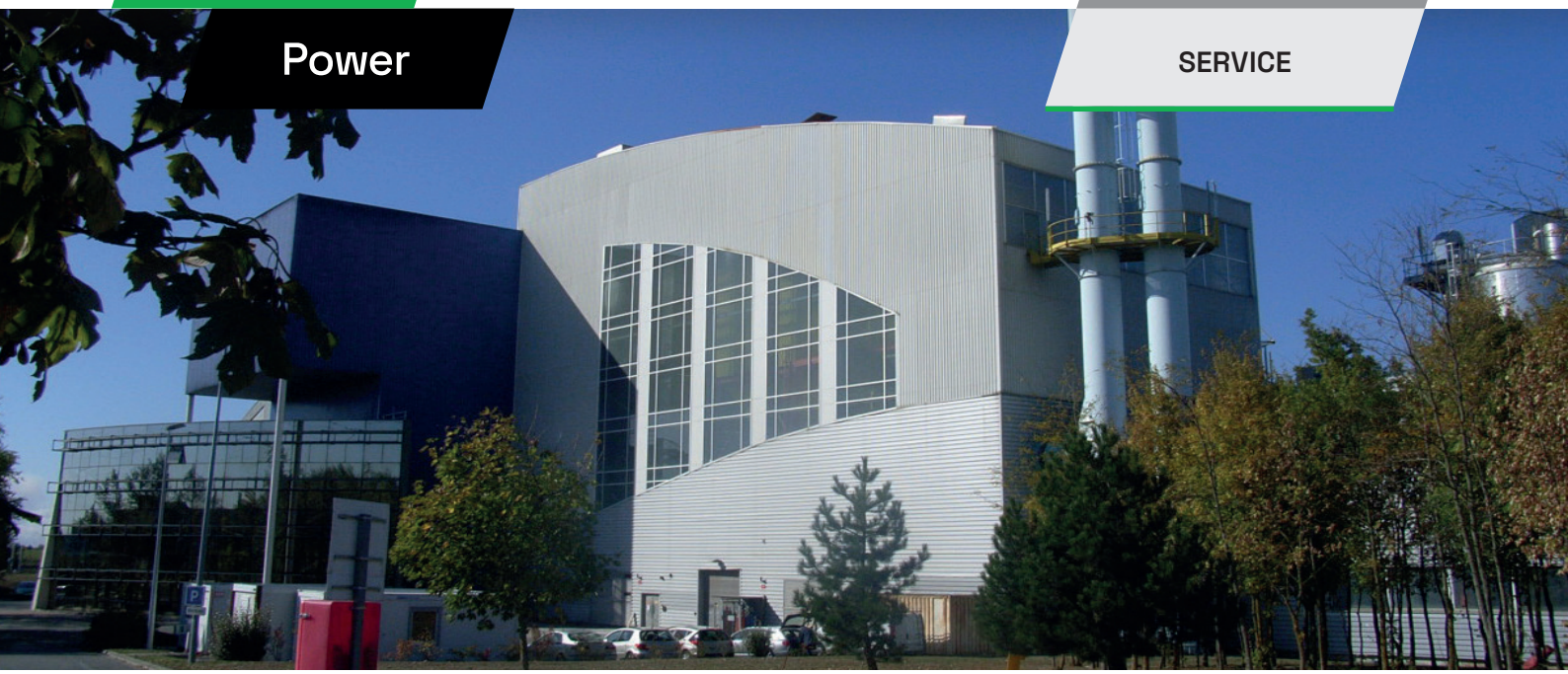
Power

CASE STUDY

SERVICE



Nidec Power helps get the Saran MSW incineration plant up and running again after the floods of 2016

OWNER: ORVADE (A SUBSIDIARY OF VEOLIA) - ORLÉANS, FRANCE

NIDEC POWER HANDLED THE REPAIRS TO THE INCINERATOR ALTERNATOR AND ELECTRICAL INSTALLATION AND UPGRADED THE CONTROL SYSTEM.

The French company, Orvade (a subsidiary of Veolia) operates the main municipal solid waste (MSW) treatment plant for the Orléans metropolitan area at its site in Saran, north of the city. In addition to a waste incineration plant, the site also houses a recoverable waste sorting facility.

At the end of May 2016, torrential storms swept through Europe causing extensive flooding in many areas. The worst hit regions in France were in the center of the country. In Orléans, 2 months' worth of rain - over 126 mm - fell in just 4 days. 63.4 mm of rainfall was recorded for 30 May 2016 alone.

The Saran waste treatment plant was hit hard, with water levels rising to 1.5 m inside the buildings. The machine room was not spared, forcing an emergency shutdown of the incinerator turbine, and the electrical cabinets were totally submerged.

To recondition the alternator and the electrical protection, connection and control cabinets, Orvade turned to Nidec Power, which also has a facility in Orléans, just a few miles from Saran. Since installing the equipment in 1995, Nidec Power has performed regular maintenance operations on the alternator, including a full rewinding of the rotor in 2007, and was therefore fully conversant with the machine and its history.

To carry out the work required, Nidec Power offered a turnkey service. This involved on-site unwiring, removal of the alternator, a complete overhaul at Nidec's facility, and full re-installation back at the MSW plant. The need to replace the control cabinets presented an ideal opportunity to upgrade the control system with the installation of a D700 digital automatic voltage regulator, also manufactured by Leroy-Somer™. This device features extremely useful mains paralleling and operating data tracking functions.

“According to Stéphane Amancy, Service Development Manager at Nidec Power, « This project is a perfect illustration of our service capabilities. Despite the challenge of coordinating all the different parties involved, we were able to schedule and complete the operation to remove the alternator from the plant in less than 3 days to be able to start repairs in our workshops. Our electrical installation expertise meant we were able to implement concrete improvements whilst managing the entire project.»

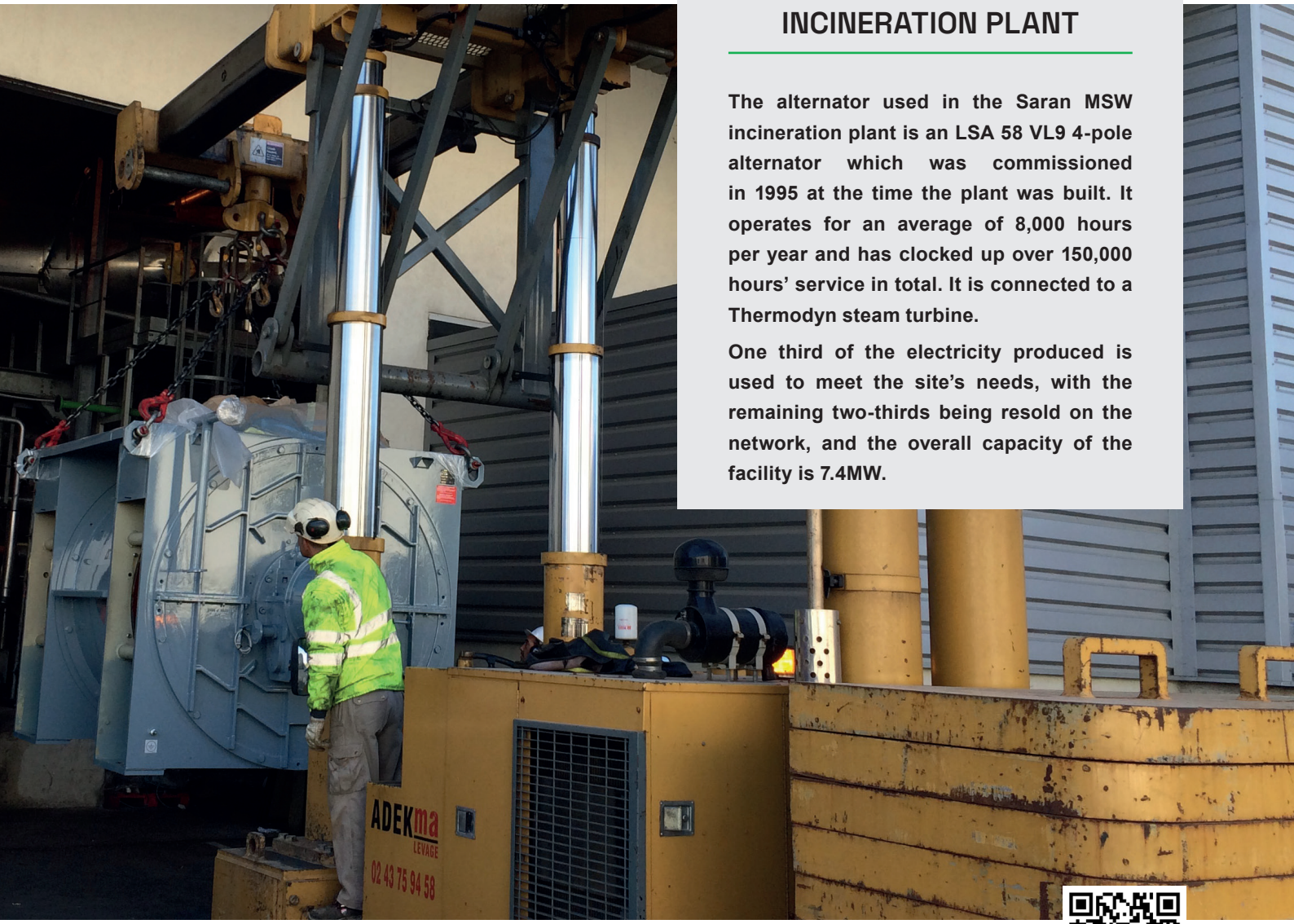
Frédéric Groussier, Site Maintenance Manager at the Orvade plant agreed. « Nidec Power has been extremely responsive. In spite of the difficulties encountered at the outset, their teams were ready to go and were present on-site to get started as soon as the green light was given. The handling operations were carried out using heavy lifting gear with four hydraulic jacks to maneuver the 29-tonne alternator. The new facility has been up and running since 20 November 2016, and we have been able to reconnect to the grid, with the power factor regulation functioning well. »”

Nidec Power is firmly established in the field of municipal solid waste (MSW) incineration in France, supplying equipment to more than 40 sites across the country. The majority of this equipment is used for energy recovery purposes, whereby heat released by the incineration process is converted into usable heat or electricity.

SARAN MSW INCINERATION PLANT

The alternator used in the Saran MSW incineration plant is an LSA 58 VL9 4-pole alternator which was commissioned in 1995 at the time the plant was built. It operates for an average of 8,000 hours per year and has clocked up over 150,000 hours' service in total. It is connected to a Thermodyn steam turbine.

One third of the electricity produced is used to meet the site's needs, with the remaining two-thirds being resold on the network, and the overall capacity of the facility is 7.4MW.



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