



AVEVA

CUSTOMER CASE STUDY

Production Downtime and Inefficiencies Dramatically Reduced at Lassila & Tikanoja with Help of Wonderware Software

Lassila & Tikanoja - www.lassila-tikanoja.fi/en
Industry - General manufacturing

Goals

- Enable efficient work cycles and arrange timing of auxiliary and maintenance work so less production time is spent on these issues
- Seamless connection with existing corporate software and automation equipment from various manufacturers

Challenges

- Existing equipment and software from different manufacturers is part of production line
- Efficiently collect and convert plant-level data into usable information

AVEVA Solution

- System Platform
- Historian
- Historian Client
- Information Server®

Results

- Plant has achieved a 20% increase in operating time

KERAVA CITY, Finland — Sustainable fuel and power sources are supplied in a variety of ways. From solar to wind power to the use of recycled plant materials to create biofuel, the development of alternative energy sources is on the rise to help combat the rising cost of fossil fuels and electricity as well as address environmental issues that impact our planet. Lassila & Tikanoja is doing its part to support this global sustainable energy focus by creating a thriving business processing wood waste into recycled fuel.

At its plant in Kerava City, Lassila & Tikanoja crushes various types of recycled wood waste to be used in the production of fuel. The facility's robust machines process a variety of wood materials each day, such as pallets and demolished buildings, into fuel for use in furnaces which operate the furnaces of boiler plants. The output capacity is high and as the main production equipment for the plant, their utilization rate is also high and cannot be hindered by unnecessary standstills. To ensure the consistent operation of its processing facility, Lassila & Tikanoja has standardized its factory operations on AVEVA software from AVEVA.

Processing wood waste into recycled fuel is a messy job and requires powerful yet versatile heavy-duty machinery. Batches of wood are fed into the plant's primary grinder to remove metal, and the wood is then crushed into fine particles to be used as a fuel source. With particles of wood dust circulating around the factory floor, it is vital that equipment is kept clean in order to run at maximum capacity.

"During the winter periods, the system needs a lot of cleaning and other repairs to combat the effects of the finely processed wood material that settles into its mechanisms," said Simo Vihavainen, Lassila & Tikanoja maintenance manager. "After using the equipment consistently through two severe winters, our last maintenance check brought some significant problems to our attention which required us to address our maintenance program."

The company found that it needed an accurate, more streamlined method to manage the maintenance processes and equipment at its facility including the automated collection of critical process data.

The automation software had to provide: a standardized program in modular form from a supplier that could provide extensive support; easy integration with existing control systems from different manufacturers; and system scalability for future growth.

The AVEVA System Platform and its various software applications were selected as the solution to power Lassila & Tikanoja manufacturing processes.

"Not having "The AVEVA solution has helped in finding and eliminating the issues which slow down production. It has improved the operating time of the plant by approximately 20% as well as handles the production and work time management of the plant. I believe that many more benefits are still to come."

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Simo Vihavainen,
Maintenance Manager, Lassila & Tikanoja, plc.

AVEVA System Platform Provides 20% More Operating Time

"The old adage stills holds true – what you cannot measure, you also cannot adjust. This is why automated data collection and data processing offered by the AVEVA solution is providing the company with a systematic improvement of operations," Vihavainen said.

Automating the collection of data has given operators and management clear and concise numeric information about the plant's utilization rate and capacity.

The measured results serve as the basis for identifying the types of issues occurring in the plant and then prioritizing them in order of priority for the maintenance team.

The AVEVA solution clearly pinpointed the bottlenecks in the production line enabling operators to change the order of side works, such as cleaning the line, which resulted in an increased utilization rate. The data showed the time required to complete these side works, allowing staff to more effectively schedule operations and maintenance. Staff are now provided with usable data to review the actual operating time and ensure it complies with the planned operating time.

“The AVEVA solution has helped us find and eliminate issues which slow down production. We estimate that AVEVA software has improved the operating time of the plant by approximately 20%. In addition, the AVEVA solution handles the production and work time management of the plant. I believe that many more benefits are still to come,” Vihavainen said.

AVEVA System Platform operates as an “Industrial Operating System” by providing common services to plant operators such as visualization, configuration, deployment, communication, security, data connectivity, data storage and management, and people collaboration. These services allow Lassila & Tikanoja staff to build a single, unified “Plant Model” that logically represents its industrial process, equipment and systems, making the design and maintenance of these systems more efficient, more flexible and with less risk.



Working with efficiency. Photograph courtesy of Lassila & Tikanoja.

Powerful Data Historian Enhances Reporting and Performance Metrics Analysis

AVEVA Historian provides the company with an easy, cross-site reporting and performance metrics tool that enables personnel to access plant data via a high-performance, real-time database. The software solution is capable of handling the tremendous amounts of process data generated by the Lassila & Tikanoja automated Industrial facility.

During the initial process of crushing recycled wood, the wood waste is fed via a weighing machine which is connected to the monitoring system. The AVEVA software provides data on the tonnage added and the machines' utilization rates. The causes of any machine failures are noted by the operator via a pre-determined list of errors, or they note the equipment number and the reason for a stop of the factory line.

The collected data provides valuable information on why machines were stopped, which is usually for dust removal, lunch breaks, blockage or the tripping of an overload relay. Staff can develop production delay reports that illustrate the most serious and frequently reoccurring faults, enabling the team to determine how to address and resolve them. The removal of these faults is the most important task of the maintenance team and results in increased efficiency in plant maintenance.

“The AVEVA system is user-friendly and has not hindered the actual work of operators. It has also allowed flexible editing of reports, and the easy retrieval of information has helped in the development work that covers the whole process,” Vihavainen said.

AVEVA Software Enables Quicker Troubleshooting, Enhancing Overall Production

Another key component of the company's production strategy is the AVEVA Historian Client application which collects data from the plant's PLCs during plant operation and analyzes the data.

AVEVA Historian Client seamlessly connects to the company's Microsoft® Office software and produces reports in either Word or Excel. In addition, the open architecture model of the AVEVA software enables easy connection to automation equipment from different manufacturers.

Plant Monitoring Made Easy

Operators can more effectively process plant data via AVEVA Historian Client. The data can be quickly aggregated and display plant performance metrics and production data to operations, maintenance and engineering personnel via the company's intranet. This allows monitoring of the plant from any place inside or outside of the facility.

The AVEVA software solutions have enabled Lassila & Tikanoja to implement a common plant model that reduces complexity and integrates its people, information and processes to achieve consistent high quality in its industrial manufacturing process. At the same time, they allow plant personnel to more easily pinpoint problems in processes and to better manage quality reporting which ensures timely production and analysis of historical data and results in a more efficient production process.

With the support of AVEVA and its AVEVA software solutions, Lassila & Tikanoja can continue to turn waste into power to fuel the future.



Working with efficiency. Photographs courtesy of Lassila & Tikanoja.

