

# Game-changer: transforming wood panel production with IPCO's ProRelease System

## In a nutshell

### CUSTOMER

One of Europe's top wood producers.

### CHALLENGE

Wood panels sticking to belt press, leading to:

- ⚠️ **HIGH MAINTENANCE COSTS**  
Frequent cleaning and downtime, increased operational expenses.
- ⚠️ **HEALTH AND SAFETY RISKS**  
Excessive use of release agents posed risks to the workforce.
- ⚠️ **QUALITY CONCERNS**  
Sticking issues affected the quality of the final product.

### SOLUTION

In collaboration with the customer, IPCO developed a game-changing solution for the application of release agents in wood panel production: the ProRelease System.

### RESULTS

- ✔️ **90% REDUCTION IN RELEASE AGENT CONSUMPTION**  
Saving 30 liters an hour.
- ✔️ **CLEANER BELT**  
For a superior final product.
- ✔️ **REDUCED ENVIRONMENTAL FOOTPRINT**  
Less release agent, less water, less waste, less storage space and fewer delivery journeys.
- ✔️ **LESS DOWNTIME FOR MAINTENANCE**  
Improved productivity.
- ✔️ **AUTOMATED SYSTEM.**  
Simplified operations
- ✔️ **BETTER HEALTH AND SAFETY**  
Enclosed spray system reduces workplace health risks.



## In-depth: case study

### Persistent sticking, operational setbacks

For over two decades, IPCO has been a trusted partner to a major wood producer. The customer approached us recently with a critical issue: wood panels consistently stuck to the steel belts during production, leading to frequent downtime for cleaning and maintenance, in turn resulting in increased operational costs.

The customer produces wood panels ranging from 5-25 mm thickness, but the intense production process often means panels stick to the steel belt press, even with generous use of release agents.

Release agents are commonly used on steel belts to prevent sticking, which improves product quality, protects equipment, and reduces maintenance and downtime.

However, the high temperatures, pressures and moisture involved in wood panel production often means standard spraying systems for release agents struggle to work effectively in this challenging environment.

With wood panels sticking, the customer was faced with constant disruptions to the production process, leading to significant bottlenecks and substantial downtime for cleaning, as well as increased maintenance costs. Moreover, exposure to excessive release agents posed health and safety risks for the workforce.

### Innovative solution: IPCO's ProRelease System

After two years of rigorous research and development with the customer at our state-of-the-art product testing facility, we created the ProRelease System, an innovative spray system designed to apply a uniform layer of release agent onto the steel belts.

Our ProRelease System creates a fine mist through self-cleaning nozzles that ensure better coverage and significantly reduce the amount of release agent required.

The spray nozzles are positioned to ensure a homogeneous application of the liquid, while compressed air creates the required spray pattern. A second air supply cleans the system to ensure optimum performance at all times. The entire spray bar system is enclosed in a chamber that eliminates waste and prevents spray from entering the workplace.

Installation of the ProRelease System is quick and straightforward, typically taking just 1-2 days, including testing. Its simple, compact design makes it easy to fit into most production environments. Once installed at our customer's factory, we provided training for their operators, ensuring they can confidently and efficiently use the system.

The entire system is automated, transforming what was once a manual, labor-intensive process into a highly-efficient operation. And to maintain peak efficiency, the whole system can be monitored remotely by IPCO.

System features:

#### NEBULIZER TECHNOLOGY

Delivers a fine mist for even coverage.

#### SELF-CLEANING NOZZLES

Minimize maintenance and downtime.

#### AUTOMATED CONTROL BOX

Simplifies operation, requiring minimal training.



**Impact: Transforming production lines**

The implementation of the ProRelease System has yielded remarkable results for the customer:

✔ **COST SAVINGS**

90% reduction in the consumption of release agents – that's a massive 30 liters an hour during operation. Additionally, the self-cleaning mechanism reduces maintenance costs and downtime.

✔ **ENHANCED PRODUCT QUALITY**

A cleaner belt means a superior final product. This has led to a significant reduction in the need for post-production sanding and grinding.

✔ **INCREASED PRODUCTIVITY**

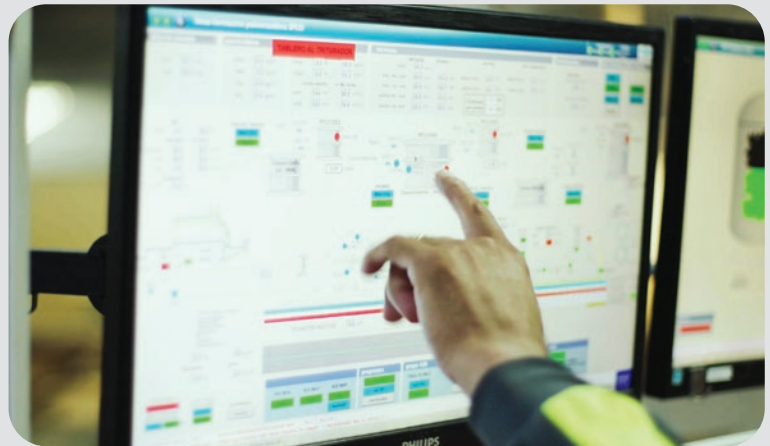
Less downtime for maintenance means more production time, boosting overall productivity. The automated system also simplifies operations, requiring minimal training for the customer's team.

✔ **IMPROVED HEALTH AND SAFETY**

The enclosed spray system prevents the release agent from entering the workplace environment, reducing health risks for workers.

✔ **INCREASED SUSTAINABILITY**

Reduced use of chemicals and water, combined with less waste from reduced sanding and grinding, has made the production process more sustainable. The ProRelease System also requires less storage space and fewer delivery journeys, further minimizing its environmental footprint.



**Looking forward: Expanding horizons**

The success of the ProRelease System in the wood-based panel industry is just the beginning. We plan to expand this innovative solution to other verticals across different manufacturing processes.

The entire system is automated, transforming what was once a manual, labor-intensive process into a highly efficient operation

The close partnership we have with this client exemplifies how collaboration and innovation can lead to breakthrough solutions that address industry challenges.

As Oscar Gil, Managing Director at IPCO Spain, says: "The potential applications of the ProRelease System are vast. We are excited to explore new industries and continue our commitment to innovation and sustainability.

"Our customers rely on us for smart solutions, so if you have an idea, we are here to collaborate. Let's discuss your vision and see how we can bring it to life together."



The heart of this innovation lies in its simplicity and effectiveness. It's designed to be user-friendly and efficient, ensuring that our client's production line runs smoothly with minimal intervention.

EDUARDO ZUMAETA BACKSTRÖM, MECHANICAL DESIGN ENGINEER, IPCO SWEDEN

**IPCO has a long history of delivering advanced technological solutions for various industrial processes. With over 120 years of experience in steel belt technology, we have continuously pushed the boundaries of innovation.**

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