

OPERATOR PROTECTION AGAINST DUST, SAWDUST, AND WOOD CHIPS

MESLIN WOODWORK - MANUFACTURE OF CUSTOMER WINDOWS



Previous installation

ISSUE:

ATEX COMPLIANCE

Following a visit by an inspection organisation, the Meslin woodworking shop wished to review its central vacuum installation. The old installation no longer complied with ATEX standards. It was located in a separate room inside the building, which was very dusty.

This company specialises in the manufacture of special, made-to-measure wooden windows, particularly for the renovation of old buildings. This growing company wanted to continue investing in industrial equipment in order to increase its capacity, productivity and staff comfort.

This involved bringing the installations up to standard, with a central vacuum system and modifications to the existing internal network. **NEU-JKF Wood Industry**, a specialist in air treatment in the wood sector, was able to meet the expectations of the Meslin woodworking facility through its expertise and the technical solutions recommended.

SOLUTION :

ATEX INSTALLATION IN GALVANISED SHEET METAL AND MODIFICATION OF THE INTERNAL NETWORK

The existing systems in the workshop were correctly sized for the requirements. It was not necessary to change them. The network was simply adjusted and adapted on some sections that needed it.

However, it was necessary to completely replace the dust collection system, which was obsolete and no longer met the standards.

Two dust collectors were therefore installed outside the workshop, with explosion events located on the roof, allowing for safe installation and compliance with ATEX standards. Also, this installation was designed in galvanised sheet metal: the workshop being 2km from the sea, this material offered the advantage of better resistance to ensure the longevity of the equipment installed.

Variable flow fans were installed, allowing the flow rates to be adapted according to whether or not the machines are switched on simultaneously. The variation of the fan flow rates is made possible by an automated solution: by measuring the pressure in the suction manifold, the frequency converter can be controlled.

Some machines have also been equipped with automatic hatches, with dampers on each suction antenna. These dampers are controlled when the tools are started and open and suck in as soon as the machine is started.

The solution presented by NEU-JKF Wood Industry offered several advantages:

- Increased safety with the ATEX compliance of the various equipment;
- Commitment to compliance with the Exposure Limit Value $< 1\text{mg}/\text{m}^3$;
- Energy efficiency thanks to the vacuum operation and the frequency-controlled fan;
- An outdoor installation in galvanised sheet metal.

