CASE STUDY

OPERATOR PROTECTION AGAINST DUST, SAWDUST, AND WOOD CHIPS

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NEU-JKF Wood Industry

ISSUE :

TAKE THE OPPORTUNITY OF A MOVE TO BRING EQUIPMENT UP TO STANDARD

Following the arrival of a group company on the same site, the historic company (manufacturer of top-of-the-range sailing boats) had to move its woodworking shop to another building. The existing installation was no longer up to standard and no longer provided the necessary performance for the protection of operators and production tools.

The company had a park of 15 machines (saws, machining centre, routers, planer, edge bander, sander and suction tables) and wanted to replace its obsolete centralized sawdust and wood chip extraction system.

The new installation had to ensure complete protection of the operators, guarantee the continuity of the production tools and improve the quality of the products. In addition, the installation had to comply with the ELV (Exposure Limit Value) regulations for the respiratory tract and the latest amendments to the ATEX directive (2014).

SOLUTION :

AN INSTALLATION THAT EFFECTIVELY PROTECTS THE OPERATORS WHILE GUARANTEEING A HIGH QUALITY PRODUCT

The first step was to offer full support in defining the need. These discussions enabled the customer to be guided towards the most suitable dust removal solution(s).

Once the solution had been selected, NEU-JKF Wood Industry installed a compensated and regulated flow suction system. This system ensures an optimum suction rate depending on the number of machines in use at the same time. The centralized suction system is connected directly to the machines on the suction outlets of the machine to protect the operators. On the other side the system is connected to the dust collector.

The originality of the solution lies in the fact that the fan (high efficiency) which ensures the suction is installed after the dust collector, thus placing the whole system in a vacuum. As a result, the material no longer passes through the fan wheel, which leads to better fan efficiency, less maintenance and energy savings. The use of a standard, non-ATEX fan also means savings for the customer.

The waste is evacuated and stored in a 30m3 airtight container via a relay network. From a regulatory point of view, this installation complies with the French Labour Code (R4412-149), which imposes an exposure limit value (ELV) for the respiratory tract of strictly less than 1mg/m3, as well as with the ATEX directives against the risks of explosion. The external discharge is less than 10mg/m3 as required by the standard.