TITANIUM DUST EXTRACTION

After the relocation of a grinding room for orthopaedic technology, RUWAC provided updated individual extraction solution over previous central system for highly reactive titanium dust.

AT A GLANCE

- Vacuuming/ extraction of titanium dust from grinding/ polishing machines.
- Relocation of grinding room
- Central system replaced by individual solutions
- Reducing long distance of travel for highly reactive materials
- individual wet separators

ISSUE

A orthopaedic technology company were relocating their grinding/ polishing room. With the extraction of titanium dust, an Atex rated solution is required.
The room previously used a centralised vacuum system with wet separator, however with the new room location on site, there is a large concern around the distance the material will have to travel within the pipeline, Titanium dust is highly reactive plus it has a large ignition risk whilst in the pipeline.

SOLUTION

RUWAC's approach for the company, was to introduce individual wet separators placed directly to the grinding machines and the drives, this was achieved by means of piping to the outside in an air-conditioned container.
The solution was a RUWAC NA 250 type III-S-RF-D with drive unit Zone 22, identifying according to AtexII3D, housing anti-static throughout made of glass fibre reinforced polyester, no friction and impact sparks.

THE SYSTEM

The systems run at approximately 110mbar, which means approximately 570m^3/h according to the current characteristic curve. (However, for grinding machines it could be more.)

The system has a remote control with overrun and level monitoring (minimum). If the level is too low, the system switches off and the fault is indicated by a red signal light. The fault must be acknowledged at the control cabinet before the system can be put back into operation. providing high safety levels

The drives are equipped with 100% exhaust air and were connected to a pipe to the outside (however, quite loud in the blow-out area). For safety reasons, the drives were additionally provided with residual dust filters.

MACHINE SPECS

Each RUWAC system is built to order to provide specialised solutions, as well as specific customisations if necessary.

Model:	DS 2720
Drive type:	Three-phase current
Identifying:	Zone 22 II3D
Filter:	Residual dust filter 4.8 m^2, mounted under the drive
Power:	7.50kW
Voltage:	3x400Volt 50Hz IE3
Protection type:	IP65