

# Extraction and Separation at the Wire Drawing Process



## TASK

Extremely fine wires are made of almost all types of metal. The largest portion of wires is made of steel and is used in a lot of various industries (steel cables, tire wires, nails, fences, welding wires, etc.). In many cases, the surfaces are also topically treated (galvanized, plastic-coated, painted, etc.). The following considerations only focus on the drawing process.

When drawing steel, which is mostly hot or cold rolled, alloyed steel is used as a base material. Depending on the type of steel, foreign substances are created during the welding process, which have to be extracted and separated.

These are:

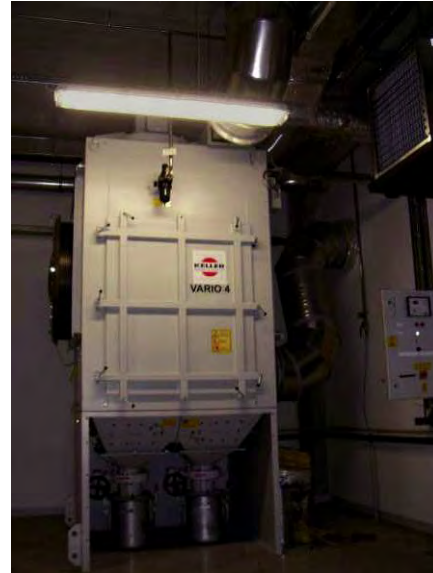
- Scales dust
- Swarf and abrasion from grinding material
- Drawing soap (Calciumstearate and Natriumstearate)

Since these are combustible/explosive dusts (ST1), it is necessary to elaborate a safety concept according to the ATEX guide- lines 137 (Operator/Employer/Plant for wire drawing) and 95 (Manufacturer/Placer/Manufacturer of wire drawing machines) to minimize the risk of explosions.

To avoid dangers to health and to adhere to the legal conditions treating those dusts, well-engineered separating systems are needed.

## SOLUTION

Keller uses longtime experience and substantial knowledge of extraction and separation process. We are able to offer an appropriate solution for your wire-drawing application needs.



Decentralized filter with flameless pressure discharge



Centralized filter with constructive explosion protection

## ADVANTAGES

- Optimal dust collection and air volume balancing and thus minimal air volumes, investing costs, operating costs and required space
- System design taking into consideration the latest and most important guidelines
- Individually designed separating systems
- Substantial knowledge of the drawing processes
- Competent After-Sales Service with extensive assistance, spares inventory availability, and short reaction times
- Air ventilation taking into consideration the TRGS 560
- Cost-saving explosion and fire protection alternatives
- Container exchange resp. dust discharge during system operation
- High-efficiency dust filter
- Discharge systems, depending on the dust amount
- Filter and separation technology with exhaust air after treatment systems
- System technology with constructive explosion protection after hazard analysis in coordination with the customer
- Solutions for centralized systems for entire manufacturing plants or decentralized per drawing line, depending on the requirements