

broki
IDEEN AUS METALL

CASE STUDY

THE RISK OF FIRE UNDER CONTROL WITH SHIELD FIRE SAFETY SOLUTIONS

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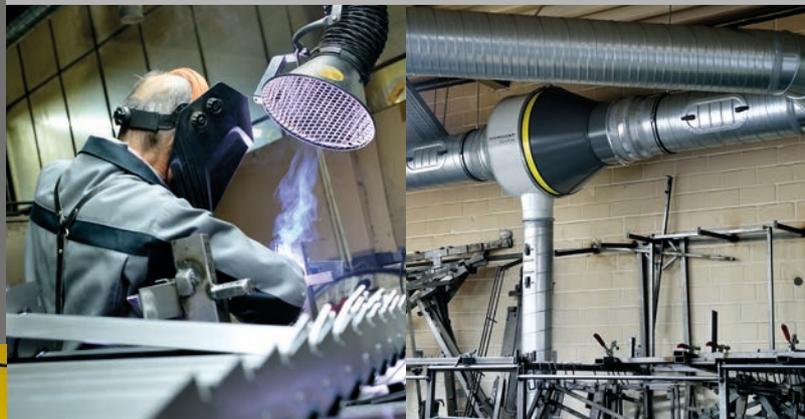
THE CHALLENGE

Since 40 years Broki Metallwaren GmbH & Co. KG has been manufacturing metal components and products, like retail store displays, store racks and shelves. Broki is the leading supplier for individual shop fitting projects in Germany.

Broki has two welding areas where people work in two shifts from 06.00 to 22.00 o'clock. Both welding areas have been equipped with an extraction and filtration system from Plymovent for many years. 14 extraction arms are connected to one central fan and filtration system, a MultiDust® Bank. Although the processes are dry welding activities, the filter cartridges have caught fire three times in the last 40 years. The main problem of these filter fires are sparks and spatter reaching the filter cartridges. Broki needed a solution to deal with that specific risk of fire. On top of that, the insurance company stopped the replacement cost coverage.

Broki Metallwaren is situated in Menden, Germany. 150 people work at the offices and factory. Broki has been manufacturing metal products and components for 40 years.

Broki can handle any metal idea in-house to meet every individual customer need with their state-of-the-art machineries. From laser cutting, grinding, punching, forming, tube punching, tube laser cutting, bending, powder coating to machining. Including the finishing touch: assembly, packaging and logistics.



» We are sure that the SHIELD programme is the ultimate solution to our fire problems. «

QUOTE BY Michael Fabian, Technical Purchasing Manager of Broki Metallwaren (left).

TESTIMONIAL

“The extraction arms of Plymovent have been working perfectly over the years. We have clean workshops for our employees.”

“The only problem that we were still dealing with, was that the filtration units caught fire once in a while. The SHIELD fire safety solutions were recommended by Plymovent and were installed to control that specific risk of fire.”

THE SOLUTION

Broki has been working with Plymovent for many years. After the filter fires it was clear that Broki needed a solution that would reduce this risk of fire.

SHIELD fire safety solutions have been developed –especially– to reduce any risk of fire in the metalworking industry to a minimum. And in the event of a fire, ensure that any consequential damage will be minor. The SHIELD programme contains several components to prevent fire, detect fire and suppress fire in welding fume extraction and filtration systems.

To reduce the risk of fire at Broki three SparkShield units were installed to prevent sparks and spatter from entering the ductwork and reaching the filter cartridges and debris in the dustbin. To detect a fire, Plymovent installed heat, spark and smoke detectors. As soon as a signal is detected, ShieldControl activates the suppression products. The sliding valves cut off the airflow immediately and the FlameShield units (fire extinguishers) extinguish the fire inside the filtration units.

To save valuable floor space, the central fan and filter unit were installed outside. A system control panel makes sure that the system does not waste extra power, making it an energy saving system solution. To keep the system up and running to full satisfaction a Plymovent service/maintenance agreement has been arranged.



MAIN BENEFITS

- The MultiSmart® extraction arms make sure that welding fumes and dust are extracted effectively. Ensuring a clean, safe and healthy working environment.
- The spark arresters ensure that sparks and spatter are intercepted and removed effectively.
- *SHIELD fire safety solutions* make sure that the risk of fire is under control.
- Placing the central fan and filtration unit outside the building saves valuable floor space.
- ShieldControl makes sure that –in the event of a fire– consequential damage is minor.

SYSTEM FACTS

Products

SHIELD fire safety solutions

Prevention

- 2 x SparkShield-500
- 1 x SparkShield-250 incl. inspection hatches and 27 L dustbin

Detection

- Heat detector set
- Spark detector set
- Smoke detector set
- ShieldControl incl. sequential activator

Suppression

- Sliding valves
- Solenoid valve
- FlameShield units (inside MDB-24)

Source extraction

- 14 x MultiSmart® Arm, extraction arm

Central filtration system

- MultiDust® Bank, MDB-24 incl. energy saving SCP (system control panel)

Year of installation

- 2013

Applications

- TIG welding
- MIG/MAG welding
- Laser welding
- Electrode welding

DE-10



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clean air at work

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