



THE 5 BIGGEST DANGERS IN WELDING AND GRINDING AND HOW TO SOLVE THEM

BY ANJA SALDIGK

“You cannot make an omelet without breaking eggs and you cannot weld without producing fumes and gases.”

Personal safety at work is becoming more and more important, this is driven by HSE (Health & Safety Executives). These ever-changing standards and regulations mean that we need to ensure we bring the latest protection that meets these regulations. These legal requirements for employers and employees regarding the use of PPE are to protect us.

Health needs to be our priority.

Personal protective equipment serves as the last line of defense against welding and grinding injuries.

For every danger, there is a solution!



1. DANGER: WELDING ARC

Solution: Eye Protection by welding helmet

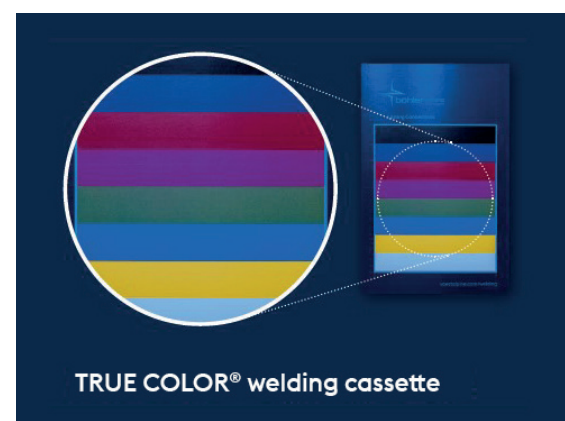
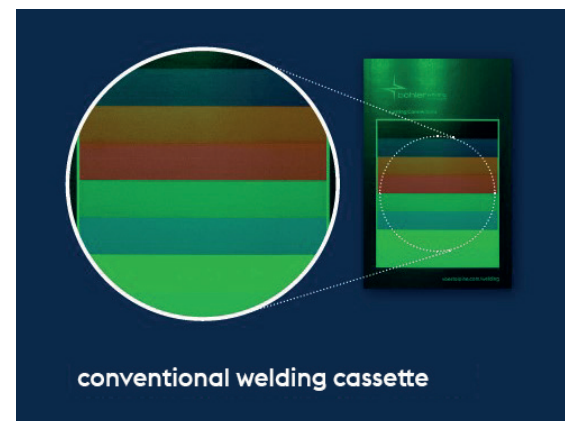
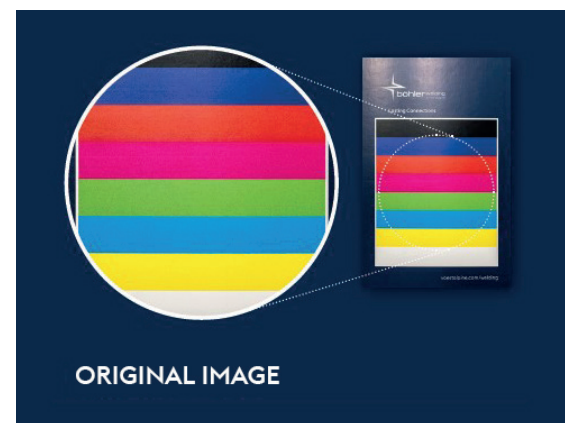


The welding arc produces dangerous UV and IR rays. Our automatic welding helmets are equipped with an auto-darkening filter (ADF) which filters 99.9997% of all UV and IR rays, even if the ADF is not active.

In addition, the ADF is characterized by a so-called “true color technology”. This means the filter lens is blue and not green like in standard welding helmets.

The blue glass provides an optimal view and has the best possible effect against eye fatigue, especially during long-term welding tasks. A clear view of the weld seam ensures efficient welding performance.

Our welding helmets and grinding screens are made of lightweight nylon which provides excellent impact and heat protection against hard and hot welding and grinding particles.

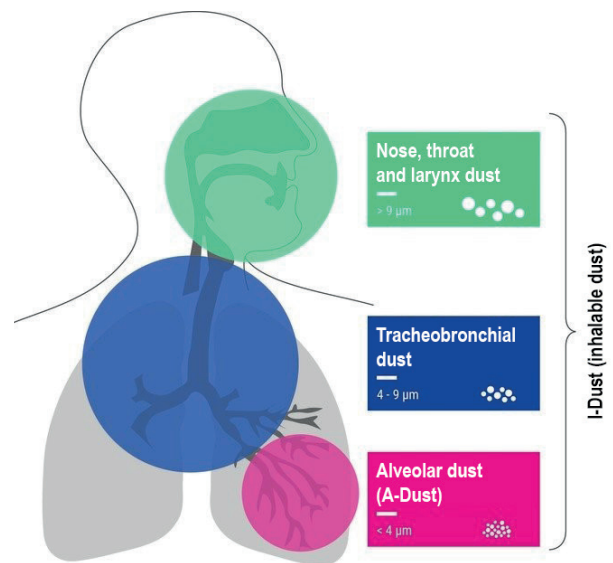


2. DANGER: WELDING FUMES AND PARTICLES

Solution: Respiratory Protection by PAPR system



Welding produces fumes and gases that can penetrate deep into our lungs without us immediately noticing. This is an ongoing problem with welding. We often only feel the consequences of welding fumes years later.

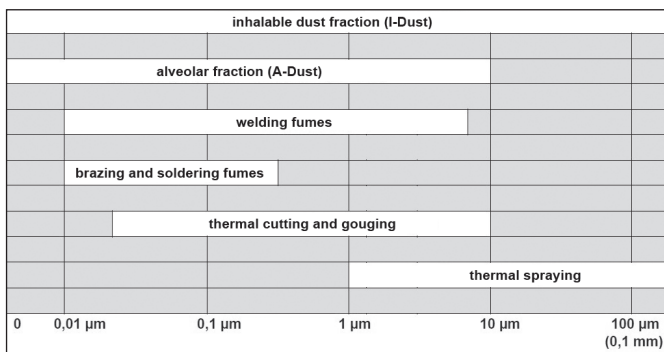


Source "TRGS 528"

The Böhler Welding powered air-purifying respiratory system (PAPR) corresponds to the highest possible technical standard and protects our lungs with filtered breathing air that is 99.8% particle-free by meeting the highest level of certification which is known as TH3.

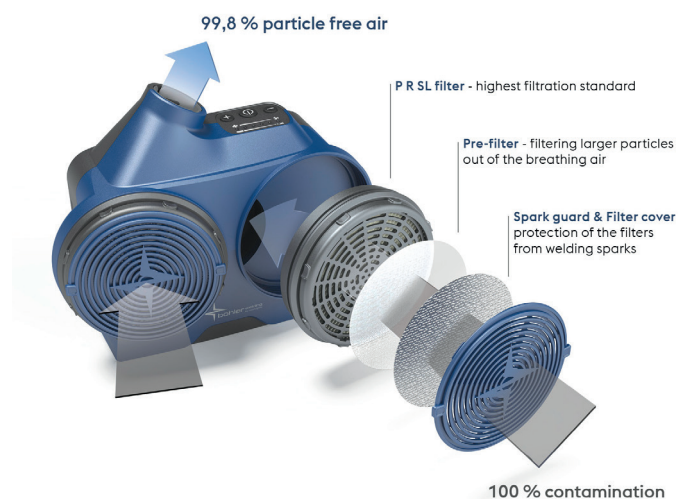
With this, we emphasize once again how important the issue of personal protection is for us.

Figure 1: Size of the particulate hazardous substances from welding processes in relation to the dust fractions according to DIN EN 481



Source "Grafik © VBG"

Furthermore, our PAPR system has the facility to add gas filters with an active carbon medium. These gas filters go beyond protection for not just welding fume but gases. These gases can be carcinogenic when welding in situations that require very high amps.



3. DANGER: HOT AND SHARP OBJECTS

Solution: Protection of hands by welding gloves

Contact with sharp, pointed, rough, and hot objects is one of the most common causes of workplace injuries. In addition, there is an increased electrical hazard when welding.

With our new glove selection, we now offer our customers an even more robust and complete portfolio. They are made of durable leather and aramid fibre stitches, providing temperature resistance and strength. Each type of glove has its own features, which allow us to build a full range of gloves from a classic to an ergonomic shape for every kind of welding process.

With our welding gloves, we meet the highest demands for cutting, tearing, and perforation resistance as well as heat protection - as the last line of defense against hand injuries. Materials and products used in and for our gloves comply with the REACH regulation.



4. DANGER: WELDING & GRINDING PARTICLES AND SPATTERS

Solution: Body Protection by FR leather apparel

Welding and grinding produce hot weld beads, bright arcs, flying sparks, and grinding particles, which not only cause skin irritation but can also lead to serious injuries. Our protective clothing made of leather, combined with breathable and flame-retardant cotton, ensures your perfect protection with maximum wearing comfort and a feel-good effect. Our clothes are certified according to the highest possible ISO standard.

Our gaiters, sleeves, and aprons made of high-quality leather in combination with aramid fiber seams (Kevlar) also protect the welder, e.g. when welding, grinding and cutting in difficult positions like sitting or lying, as well as when welding under more severe thermal conditions and with increased spattering.



5. DANGER: FLYING SPARKS AND SPATTERS

Solution: Head and Face Protection by grinding visor



**“The people who work for us and with us are important to us.
That’s why their best possible protection is also a matter close to our hearts.”**

When grinding weld seams and metal, it is quite possible that grinding particles can get behind conventional protective goggles and into the eye. With our Big Vision, we offer full protection for eyes and face with an unrestricted view of your workplace.

In addition, our Big Vision is also available as Big Vision Air with a fresh air supply for optimal protection of the eyes, face and respiratory tract.

**As renowned welding specialists, we have of course dealt with the greatest risk factors as discribed above and have brought appropriate protective equipment onto the market that not only offers the best possible protection but is also comfortable and affordable.
Apart from that it looks cool.**



ANJA SALDIGK

SALES MANAGER PPE & ACCESSORIES EUROPE

I have been working in the welding industry for 15 years, always in different sales related positions. Meanwhile I am responsible for the sales development of our PPE & Accessories range which we have started with in 2017.

My focus is clearly the support of our global sales teams for this range of products. I enjoy visiting our key customers and providing product trainings to our distributors and my colleagues on a regular base. My aim is always to get as much feedback as possible which we use for a continuous product improvement and new developments in close co-operation with our product management.

We are a great team, and we are all working very hard to make this business successful. I very much enjoy this kind of products as it is quite easy to become passionate about them. I like the approach of becoming a full welding solution provider, and it makes me proud when I see welders working with our personal protection.

JOIN! voestalpine Böhler Welding

We are a leader in the welding industry with over 100 years of experience, more than 50 subsidiaries and more than 4,000 distribution partners around the world. Our extensive product portfolio and welding expertise combined with our global presence guarantees we are close when you need us. Having a profound understanding of your needs enables us to solve your demanding challenges with Full Welding Solutions - perfectly synchronized and as unique as your company.

