

Case Study

Respiratory protection under extreme conditions



3M supplied air respiratory protective equipment prove a success in foundries

Noise, heat, dust: Despite all the modern industrial technology, working conditions in foundries are particularly challenging. This is where continuous supplied air respiratory protective equipment shows what it is capable of – not only regarding health protection but also in terms of comfort.

The working areas in foundries, in which airborne contaminants such as dust are particularly high, include the fettling shop. Here, after the cast parts have been roughly deburred in the blasting shop, they are further manually “cleaned”, so any protrusions (excess metal from the casting process) are removed and cast is polished. When processing using pneumatic hammers, grinding discs and cutting discs, the procedure can result in the production of significant quantities of metal particle, sand and even silica dust, which makes it essential to wear respiratory protection at the fettling stations.

Supplied air respiratory protective equipment from 3M has been proven to provide effective worker respiratory protection under these challenging conditions.

3M™ Supplied Air Respirators are designed to deliver clean, breathable air to the worker from a remote source such as a high-pressure compressor. The worker typically wears a small and light-weight belt-mounted regulator which is connected to the fixed air source with a flexible compressed air supply tube. Regulators such as the 3M™ Versaflo™ Regulator V-500E allow the worker to individually control the quantity of airflow, fed via a flexible and lightweight, yet robust breathing tube into their helmet or headtop, to suit the working conditions or their preferences. In addition to the range of 3M™ Versaflo™ helmets and headtops, 3M has supplied air respiratory solutions for tight-fitting half-mask and full-face masks.

In addition to the many configuration options, the 3M™ Versaflo™ helmets, such as the M-307 can provide high levels of respiratory protection, as well as certified head, eye and face protection, meaning several occupational health and safety elements are integrated into a single item of personal protective equipment. The wearers are of course connected via their compressed air supply tube to their location but can work without any time restrictions as the air supply is virtually unlimited.

Optimum solution for stationary work in foundries.

A foundry in Krefeld, North Rhine-Westphalia, which particularly specialises in large metal cast parts, has been using the system for years and is extremely satisfied: According to them, this solution is particularly good for stationary work where high levels of respiratory protection with a need for head, eye and face protection are also

needed. The wearers in the foundry also liked the wide field of vision, the ability to open the visor of the helmet, and the low levels of noise from the flow of clean breathable air into the helmet as positive factors. The helmet head suspension, which can be fully adjusted using a rotating ratchet to adapt to each wearer offers advantages in terms of comfort and ergonomics. The same applies to the bayonet fitting for the breathing tube, which can also be operated easily while wearing work gloves. As a result of these functional elements, the entire system and helmet achieves high acceptance among the wearers.

Additional advantages of 3M systems for companies from the foundry industry include the long service life and easy maintenance of the 3M respiratory protective equipment.

3M Versaflo systems are durable and robust, meaning that they can withstand harsh working conditions and have a long service life when used within foundries. Not only that, the products are easy to clean and maintain, helping to protect your investment and your workers' health.

The simple operation has also enabled the foundry in North Rhine-Westphalia to significantly reduce maintenance costs and the time required for maintaining the PPE.

Contact 3M to get support from our experts and help find the right PPE for your workers

At 3M we have a passion for PPE and we know the challenges and hazards of your profession. With our Versaflo™ supplied air respirators providing integrated protection from airborne hazards, eye, face and head impacts you can be confident of having full safety protection with the added benefit of comfort and enhanced productivity.

Plus, with our wide range of welding, hearing and other PPE, you can have confidence that we will help you find the right solution to keep your workers safe.

Get in contact with us and speak to a 3M personal safety expert for more information.

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