



Welding Safety in Western Australia

An Outlook For 2019

Having worked in the welding safety industry for over 23 years, I have seen more positive change in the last year than I have over the last twenty years and I feel like we're just getting started in WA. Toward the end of 2018 we saw the WA housing market and general growth bottom-out and begin to rebound and it was announced that there would be a number of large-scale iron-ore and lithium mining projects planned to commence in the coming years. The Western Australian welding outlook looks bright in 2019 both from an economy and safety perspective.

The main welding industries and applications in WA The mining of iron ore, gold, lithium, and nickel drives the welding industry in Australia's westernmost state as well as a strong shipbuilding presence. So, the news of large-scale iron ore and lithium projects on the near horizon is great news for WA. Due to the heavy-duty nature of the welding that supports these industries the primary welding application in Western Australia is high amperage MIG welding between 200 and 400 amps. MIG welding at high amps is hot work and produces high levels of welding fume which is basically microscopic particles of hot metal and gases that are small enough and buoyant enough to be released from the welding arc and rise in a cloud of metal fume. If not properly protected, welding fume can pose significant short-term and long-term health risks to welders and workers in close proximity. As an example, it's recommended that even in good environments with forced ventilation that a powered air respirator be worn when MIG welding with materials like aluminium, stainless steel, galvanised steel and non-coated steel.

The big change in welding safety in Western Australia The big change in Western Australia came shortly after the 2017 reclassification of welding fume by the International Agency for the Research on Cancer (IARC). The IARC concluded that there was sufficient evidence in humans that welding fume can cause lung cancer and limited evidence for kidney cancer. As a result, the IARC reclassified welding fume as carcinogenic to humans. Following this news, 2018 witnessed many large, medium and small Western Australian companies completely change their stance on welding fume and the protection of their employees. The 3M Speedglas Welding Helmets with the Adflo PAPR which offer powered air respiratory protection against welding fume have become the "norm" for welders and companies in Western Australia. For me personally, it's great to see the faces on the welders when they experience the refreshingly cool and clean air delivered by the Adflo PAPR for the first time. Not only do the systems keep the welders protected from welding fume, they also keep welders cool in the WA heat.

Speedglas Welding Helmets Speedglas welding helmets with Adflo PAPR also protect the welders' eyes and face from ultra-violet and infra-red radiation, bright visible light, high-speed particles, and certain helmets are also available with integrated over-head safety helmet protection and hearing protection. A recent study performed by a large company in the US found that foreign body eye injuries decreased by over 70% year-on-year after introducing the 3M Adflo Powered Air Purifying Respiratory Protection (PAPR) Systems. This is an often-overlooked positive side-effect of using these welding PAPR systems. Speedglas welding helmets are available with clear grinding visors which means the welder can keep the welding helmets in the safe down-position for the entirety of their workday providing continuous high impact eye and face protection.

What does WA need for welding to remain strong into the future? For the welding industry to remain strong in WA I think we need to make sure that welders, companies and educational bodies training our next generation of welders coming through, understand that while the risk posed by welding fume and welding, in general, is real, protecting themselves from this risk is both easy and readily available. Teaching welders about respiratory and welding safety will ensure welders don't leave the industry due to the potential health hazards. We've experienced that the general level of welding safety knowledge can be low and often misguided. This would be a major step in ensuring welders are fully informed to facilitate positive change.

If you'd like more information on welding safety please contact AWS.

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