

Australia's Welding Industry



Next time you're driving down the road, take a look around you: crash barriers, light poles, road signs, the re-bar in the concrete bridge, even the very car you're driving. All of these elements rely on welding. From iconic buildings to local rail networks, Australia's welding industry is a key part of construction, manufacturing and mining. Without welding, we wouldn't have the modern motor car, high-speed trains, or jet planes. We wouldn't be able to generate power. We wouldn't have advanced manufacturing facilities. Our world today simply wouldn't look the same.

Essential to Australia's Economy

Australia's welding industry employs over 78,900 people. At 91%, most Australian welders are full-time employees.

Three industries are the main consumers of steel fabricated products, making up almost 90% of all demand. The industries are: Construction (50.3%), Manufacturing (20.5%) and Mining (17.2%).

Combined, these three industries purchased around \$11.6 billion of steel fabricated products each year. The construction, manufacturing and mining industries are all essential to the strength and prosperity of Australia's economy and, without welding, none of them would be able to operate.



80K

People are employed as welders in Australia



91%

Of Australian welders work full-time



3

Main industries consume steel fabricated products in Australia



\$11.6B

Of fabricated steel purchased each year

Innovation in Welding

Australia's welding and fabrication industry is super diverse – it's made up of around 2,000 small to medium sized businesses. These businesses are able to produce over 1.6 million tonnes of fabricated steel each year, equal to around \$7 billion per year.

Approximately 94% of businesses operating within Australia's welding and fabrication industry are small, with less than 20 employees. Small businesses are an important source of innovation in Australia's economy. Because they're small, they can quickly make changes to respond to different situations and global demand. Small businesses are innovative and very efficient. They are normally great businesses to work for, and Australian small businesses are even competitive on the world stage.



History of Welding in Australia

Welding processes have been practiced for centuries. In fact, evidence suggests that the Sumerians – the earliest known civilisation in the region of southern Mesopotamia – used a similar process to manufacture bronze swords in 3000 BC. Other civilisations have also adopted likeminded techniques, like the ancient Egyptians who were the first to smelt iron from iron ore in 3500 BC. They would create reduced iron, or sponge iron, and then beat it into shape through forge welding.

In Australia, welding began following the discovery of iron ore south of Sydney in the 1800s. A blast furnace was built and welding took off. By 1885, the welding industry was transformed when the first arc welding machine was invented. Technology continued to evolve throughout the 20th Century, as more efficient and sustainable processes like electrical generators took over.

Throughout World War I, welding was essential to both the war effort and construction of major infrastructure. In Australia, welding was a key ingredient for projects such as railway lines, ships and submarines, automobiles, railway stations, boilers and aircraft. World War II did more for welding than any period before, proving that welding not only offered exceptional improvements in productivity, but without it, expansion of industry would simply not be possible.

After World War II, welding in Australia continued to grow with the construction of new oil refineries, power stations, dams, manufacturing plants and ships. General Motors Holden commenced production of Australia's first locally manufactured cars. The 1960s and 1970s have been dubbed the 'Pipeliners' years for Australia's welding industry. With oil and gas discovered across the country, welders were called upon to work across major power projects.

From the 1980s into the 1990s and 2000s, welding has continued to play a major role in Australia's most significant developments—from power generation to infrastructure and manufacturing. Just some of the most iconic projects in this era include: Centrepoint Tower in Sydney (tallest building in Australia at the time), Collins Class fleet at ASC in Adelaide, and Sydney Olympic Stadium (which was the first stadium to use robotic welding techniques).

Today, welding and fabrication has evolved significantly. The industry relies heavily on science and research to leverage its expertise towards modern challenges.

About Weld Australia

Weld Australia is the peak body representing the welding industry in Australia. Our primary goal is to ensure that the Australian welding industry remains locally and globally competitive, both now and into the future. We are a not-for-profit, membership-based organisation.

