

FACT SHEET

Working in the steel industry



The steel industry offers career opportunities in many different fields and often in an international setting. Steel companies are committed to fostering the well-being of their employees and provide them with a safe and healthy work environment. Steel companies around the world also work closely with universities in the development of learning and research initiatives to develop future talent and promote innovation.

Career opportunities

The steel industry employs people with many different skills and diverse knowledge, who have the ability to work in multi-disciplinary teams. Metallurgy, materials science, physics, chemistry, engineering, environment, mathematics, IT, languages, business and accountancy are just a few of the disciplines where expertise is sought after in the steel industry.¹

Steel companies can offer challenging and rewarding careers, often in an international context with opportunities to travel and experience many cultures. Employees can quickly gain experience, responsibility and leadership.

Training and recruitment opportunities are available in most steel companies in various functions, including manufacturing and production, engineering and process development, technology, sustainability, research and development, market and product development, commercial, purchasing and logistics, finance, strategy and human resources.

Employment trends

Steel manufacturing is a competitive global industry. Consolidation within the industry and continual improvements in manufacturing operations has contributed to increased productivity. Hence, employment levels have decreased, despite expanding steel production. Since 1980, employment levels have decreased by around 60%² in developed regions. At a world level, employment levels have decreased by around 50% over the period from 1972 to 2012.³

However, in the coming years, job opportunities are expected to be very good for engineers and skilled production and maintenance workers.

Today roughly 5 million people work in steelmaking (including contractors) and a further 1 million in steel service centres, batch galvanizing plants, steel trading etc. Considering steel's position as the key product supplier to industries such as automotive, construction,

transport, power and machine goods, the steel industry is at the source of employment for many more.

Employee training and education

The impact of innovation

- As the industry continues to introduce technological innovations, the profile of the workforce will evolve and require higher levels of education and training than ever before. This is particularly true with the development of “breakthrough”, or next-generation steelmaking technologies that will be low in CO₂ emissions and result in significant changes to the way that steel is made. In this context, the demand for engineers, computer scientists, business major, and skilled production workers is expected to remain strong.
- This requires a significant skill level throughout the industry for electrical and mechanical systems as well as software and programming.

The steel industry is committed to offering employees the opportunities to further their education and develop their skills. Not only is this a way of enhancing quality of work and productivity but it also boosts employee satisfaction.

- An effective employee training programme limits job turnover and can bring increased innovation in strategies and products, resulting in improved operations.
- On average, steel companies provided each employee with 7.0 training days in 2016.⁵ Employee training refers to instruction provided to enhance the skills, capabilities and knowledge of employees. This training may involve various delivery methods such as classroom instruction, computer-based training, or on-the-job instruction.

- Steel companies around the world also cooperate with universities to provide employees with further educational opportunities.

Developing future talent

Steel companies require graduates from many different disciplines and backgrounds, therefore various initiatives and programs have been developed to provide educational opportunities for potential future employees. These initiatives include scholarships, research sponsorship, internships, e-learning and tours of production plants and research facilities.



Figure 1: World average results and trends - Employee training

steeluniversity

Steel companies around the world face a shortage of talent in fields such as metallurgy, materials science, physics, chemistry, engineering and mathematics.

worldsteel strives to close this gap in the industry through the steeluniversity programme, which is a successful initiative launched in 2003.

steeluniversity provides innovative e-learning resources on steel technologies and interactive simulations of the main steelmaking operations.

The steel industry needs to attract and retain young talent to drive the process of innovation forward. steeluniversity, a worldsteel initiative, is an industry university delivering education and training to current and future employees of steel companies and related businesses. steeluniversity delivers online courses on steel manufacturing, steel applications, ferrous metallurgy, business, environment and safety. A new steel competitive game called steelBusiness has been launched to provide training to understand steel company finances as you run a virtual steel company.

Annual highlights include steelManagement (a four-day residential course on steel business strategy) and steelChallenge (a global competition for young people using a manufacturing simulation).



steelChallenge-10, London, April 2016

Employee safety and health

A safe working environment for all employees is the number one priority for steel companies. Safety requires a permanent 100% commitment from everyone in a steel plant. Most importantly, safety requires commitment from senior management, which sets the culture in which everyone knows that safety must not be compromised for any other objective. The most successful steel companies are also the safest.

- Accidents still occur at steel plants worldwide. However, they are consistently decreasing in proportion to hours worked at most companies.
- The steel industry has seen a steady and notable reduction in the Lost Time Injury Frequency Rate which has gone down from 4.55 in 2006 to 1.0 in 2016, a reduction of 78%.⁶
- To prevent work-related accidents, steel companies implement safety policies to improve employee training and awareness.
- worldsteel, in the cooperation with its members, issued a "Safety and Health Principles Guidance Booklet" which sets out six safety and health principles for the industry.
- In 2014, worldsteel launched its first Steel Safety Day to increase awareness of the main causes of serious incidents with the aim of making the workplace safer. This has now become an annual event.
- Companies adopt Occupational Safety and Health (OSH) Management Systems to report, record and notify work-related injuries, fatalities and incidents.
- A position paper on safety and health was published in 2016. This document is available on worldsteel.org.

Last updated: January 2018

Footnotes

- Study and Work, steeluniversity
- worldsteel estimate
- Core Report Z, Feb. 2014, page 64, World Steel Dynamics, based on a total of 88 companies surveyed over a 40-year period.
- worldsteel estimate, based on Safety reporting data
- Sustainable Steel – Policy and Indicators 2017, worldsteel
- Safety and Health Recognition Programme 2017, worldsteel