



# Metal Fabrication Glossary: Quick-Reference Guide

At JAS Welding Services Ltd, your family-run experts in certified structural steel fabrication, installation, metal repairs, gates, railings, spiral stairs, and on-site welding across Essex, Norfolk, Suffolk, London, and beyond—we're proud to hold BS EN 1090 EXC2 with UKCA marking. We know that terms like "fillet weld" or "galvanizing" can be confusing if you're new to metalwork or structural projects. This simple glossary explains key terms in plain English, helping builders, homeowners, developers, and businesses understand our services better. Use it as a handy reference when planning your next project—whether it's a custom railing, structural beam installation, or machinery repair. Download this as a branded PDF from our website (with your logo, contact details, and a call-to-action like "Need expert fabrication? Contact JAS for a free quote!").

We've kept it concise, alphabetical, and focused on the most relevant terms for our clients.

## A

- Arc Welding — A general term for welding processes that use an electric arc to generate intense heat, melting the metal to join pieces. Common types include MIG, TIG, and stick welding.

## B

- Balustrade — A protective railing system along stairs, balconies, terraces, or elevated areas. It typically includes a top handrail, vertical supports (balusters or spindles), and a bottom rail. In metalwork, balustrades are often fabricated from steel or aluminium for durability and style—custom designs are common for homes or commercial properties.
- Base Metal — The main piece of metal being welded or fabricated (e.g., the steel beam or plate itself, as opposed to added filler metal).



- **Butt Joint / Butt Weld** — A joint where two pieces of metal are placed edge-to-edge (approximately in the same plane) and welded together. Often used for seamless connections in beams, pipes, or plates; may require edge preparation like beveling for stronger welds.
- **BS EN 1090** — The UK/European standard for the execution (fabrication and assembly) of steel and aluminium structures. It ensures quality, safety, and compliance with building regulations. We are certified to EXC2 level, suitable for most structural work like buildings and installations.
- **F**
- **Fillet Weld** — A triangular-shaped weld that joins two surfaces at roughly right angles (e.g., attaching a bracket to a beam or welding a T-joint). It's one of the most common weld types in structural and general fabrication—strong, versatile, and efficient.
- **Filler Metal** — Additional metal (usually in rod or wire form) added during welding to fill gaps and strengthen the joint.
- **G**
- **Galvanizing (Hot-Dip Galvanizing)** — A corrosion-protection process where fabricated steel is dipped into a bath of molten zinc (around 450°C). This creates a durable, metallurgically bonded zinc coating that protects against rust for decades—ideal for outdoor gates, railings, structural steel, and exposed metalwork in harsh UK weather.
- **M**
- **MIG Welding (Metal Inert Gas)** — Also called GMAW (Gas Metal Arc Welding). A fast, versatile arc welding process using a continuous wire electrode fed through a gun, shielded by inert gas. Great for thicker materials and production work—commonly used in our shop for structural steel and repairs.
- **T**
- **TIG Welding (Tungsten Inert Gas)** — Also called GTAW (Gas Tungsten Arc Welding). A precise process using a non-consumable tungsten electrode and inert gas shielding. Produces clean, high-quality welds—perfect for stainless steel, aluminium, or detailed work like custom railings.
- **U**
- **UKCA Marking** — "UK Conformity Assessed" – the post-Brexit UK equivalent of CE marking. Required for structural steel products in Great Britain to show compliance with safety and performance standards (like BS EN 1090). Our fabrications carry this marking for full regulatory approval.

#### *Other Key Terms*

*Execution Class (EXC) – Levels (EXC1–EXC4) in BS EN 1090 that define the required quality and oversight based on project risk. EXC2 (our certification) covers typical building structures, ensuring reliable performance without overkill for everyday jobs.*

*Welding Procedure – A documented set of instructions (parameters like current, speed, and technique) to ensure consistent, high-quality welds—essential for compliance in certified work.*

*This glossary covers the basics clients often ask about. If a term isn't here (e.g., something project-specific), just ask—we love explaining the details! Ready to put these terms into action? Whether you need a bespoke gate, structural steel install, or on-site repair, JAS Welding Services Ltd has the expertise and certifications to deliver safely and on time.*