

Welding Processes

Mechanical Engineering

What each joining process suits, and what it demands in return.

Every fusion weld distorts and leaves residual stress. Plan for both.

Arc processes

Manual stick: site work, tolerates rust

MIG and MAG: fast fill, needs gas

TIG: thin, clean, precise, slow

Submerged arc: thick plate, flat only

Other joining

Resistance spot: sheet, high volume

Friction stir: aluminium, no melting

Brazing: dissimilar metals, no melt

Adhesive: wide area, no heat input

Procedure, filler, preheat and inspection all follow the governing code.
Educational reference only.