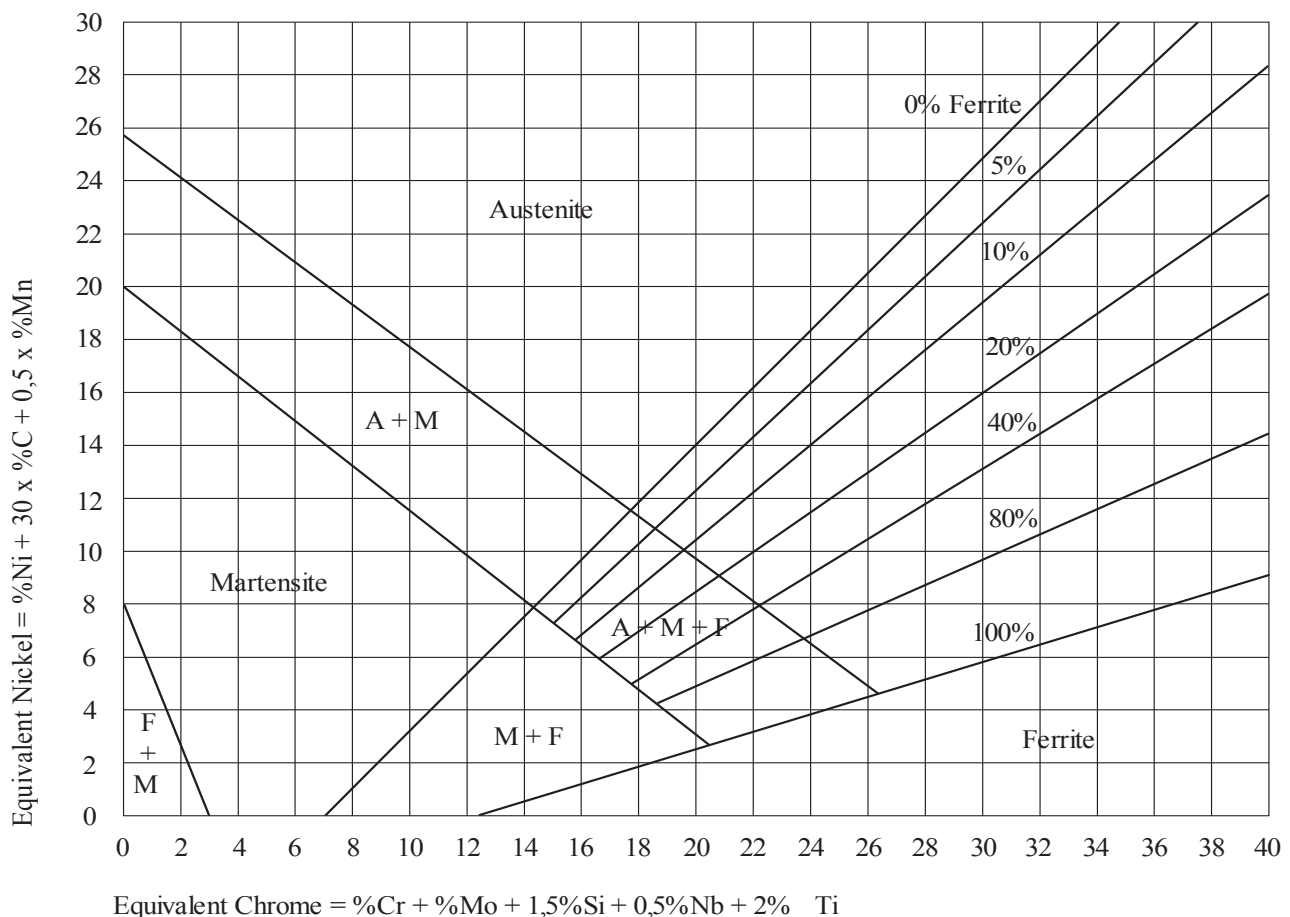


# Schaeffler diagram



The Schaeffler diagram is an important tool for predicting the constitution of your stainless steel weld deposit. Depending on the alloying elements it contains, the Schaeffler diagram provides information on the various phases (structures) present.

The chromium equivalent is calculated from the weight percentage of ferrite-forming elements (Cr, Si, Mo, Nb, W) and the nickel equivalent is calculated from the weight percentage of austenite-forming elements (C, Ni, Mn, Cu, N). The position in the Schaeffler diagram defined by the Cr- and Ni-equivalents gives the proportions of martensite, austenite and ferrite in the resulting microstructure.

Other constitution diagrams (e.g. Delong, WRC-1992) exist, and are preferred by many workers. They work in the same way, but give different weightings to the effect of the various elements.