

Actuating Variable	Strive	Objective
Preheating Temperature	> 100°C	Avoiding delayed stress cracking in weld metal
Interpass Temperature	100... 300°C	Enabling of partially martensitic transformation in the single weld layers (improved toughness, reduced residual stresses)
Cooling Temperature (before Annealing)	Max. 100°C Min. 80°C	Avoiding pearlite transformation in weld deposit. No Cold cracks in large parts
Post Heat Treatment	Annealing 500... 600°C	Hardness Reduction resulting in improved toughness. Reduction of residual stresses
Filler Material	Similar to Base Material	Similar mechanical material properties compared with Base Material

Optimal Welding Conditions for SMAW of Base Material G-X5 CrNi 13-4 (Martensitic Stainless Cast Steel)*

(*) According to OERLIKON Schweißmitteilungen 104 (Feb. 1984)