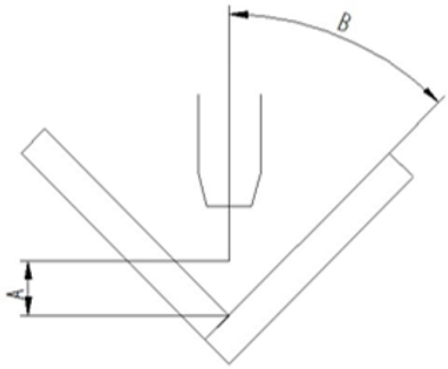
The test weld, that is closest to the selected simulation, is this *Single pass (fillet weld) in an inside corner joint in 13 mm plate thickness*

Base material	Thickness mm	Joint	Joint preparation	Welding process	Filler metal/flux	Shielding gas	Backing gas
SDX 2507 EN1.4410	13	L		SAW (UP)	25 9 4 NL Ø2.4 mm SWX220		

Joint preparation

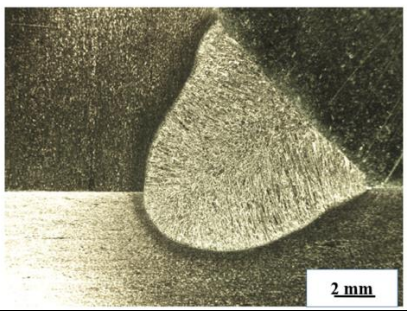


B was 45°. Stick-out was 22-24 mm.

The test weld was performed as a fillet weld in an inside corner and was intended to correspond to a complete single pass weld.
Welding position PA.

Welding current A	Voltage V	Heat input kJ/mm	Wire feed speed m/min	Welding speed cm/min	Number of passes
475	29.2	1.6	10.8	53	1

Cross section of the weld



Measured ferrite fraction in the weld (the rest is assumed to be austenite), and the ferrite fraction more in detail in different regions of the weld, are shown in the table below. The fraction is measured using image analysis.

The ferrite fraction is an average value based on several measurements using image analysis in each location and the standard deviation in average values were around 4%.

Heat input kJ/mm	Weld	Top of the weld	Middle of the weld	Bottom of the weld
1.6	56%	57%	56%	57%

Measured ferrite fraction in the HAZ	
Very close to the fusion line	56%
About 0.4 mm from the fusion line	54%

Nitrides precipitated in the middle of ferrite grains and on the ferrite/ferrite grain boundaries in the HAZ. Traces of nitrides were also found in the weld zone. No traces of sigma phase were found.