

Welder qualification tests according to ISO 9606-1 and the range of qualification for shielding gases

Supplementary fillet weld test: NO (completed in conjunction with a butt weld qualification) Job knowledge: Acceptable

	Test piece		Range of qualification	
	135 MAG / GMAW	135 MAG / GMAW	135, 138	135, 138
Welding process(es);	D Dip/Short	D Dip/Short	D, G, S, P (All)	D, G, S, P (All)
Transfer mode	P Plate	P Plate	P; T	P; T
Product type (plate P or pipe T)	BW Butt weld	BW Butt weld	BW	BW
Type of weld	5.1	5.1	1 to 11	1 to 11
Parent material group(s)	FM3	FM3	FM1, FM2, FM3	FM1, FM2, FM3
Filler material group(s)	S	S	S, M; Root only S	S, M; Root only S
Filler material typ(s)	EN ISO 14175-M21	EN ISO 14175-M21	-----	-----
Shielding gas / flux	-	-	-----	-----
Auxiliaries	DC+ (= +)	DC+ (= +)	-----	-----
Type of current and polarity	-	-	-----	-----
Material thickness t (mm)	12.0 (≥ 3 Layers)	12.0 (≥ 3 Layers)	≥ 3.0	≥ 3.0
Deposited thickness s (mm)	-	-	fix: ≥500; rot.: PA ≥75	fix: ≥500; rot.: PA, PC ≥75
Outside pipe diameter (mm)	PF (3G up)	PC (2G)	PA, PF; (F, Vu)	PA, PC; (F, H)
Welding position(s)	ss nb	ss nb	ss (nb, mb, gb, fb), bs	ss (nb, mb, gb, fb), bs
Weld details	-	-	-----	-----
Single layer (sl) / Multi layer (ml)				

Additional information: -----
Parent metal: 13CrMo4-5 (1.7335), Filler: ISO 21952-A G CrMo 1 Si (Union I CrMo, Böhler)

WelderCert.com

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When certifying welders' examinations on the standard form to ISO 9606-1, they stand out directly: The two dashes lines within the range of the fields shielding gas and auxiliaries.

So here is nothing to enter and according to German reading that means: The field is devalued. There is no range. Only use the specified shielding gas. Another interpretation of the dash line could be: There is no range here, there are no restrictions.

If you look at the certification practice, then you see increasing deviations from the requirements of the standard. Since variations in the range of the shielding gas are technically possible, entries such as "gleichartige Schutzgase" or "geeignete Schutzgase" are used. In English-speaking countries, you can do even less with the dash line and you use terms such as "unlimited" or "similar".

I believe that this does not correspond to the intentions of the creators of the standard. With the introduction of the ISO 9606-1: 2012 they wanted to say goodbye to the inaccurate statements in the respective national language.

I always recommend specifying the exact name of the filler material. This also provides information on the choice of shielding gas to the holder of the certificate via the data sheet of the filler material,

Why we do not place the shielding gas and auxiliaries boxes outside the text block with the 'Range of qualification' column? Then there are no longer discussions around the range of the shielding gas and we would have a consistent certification practice.

I am recommending anyone who thinks that only software designers who are trying to digitally transform standards are complaining about this, to read the article of the well-known welding expert Alireza Samimi Mottaghi.

<http://www.weldfabtechtimes.com/article/international-standards-for-welder-qualification-iso-9606-series-qualification-test-of-welders-fusion-welding-part-2-aluminum-and-aluminum-alloys-non-conformities/>