

904L Type Flux Cored Wire “DW-A904L”

NEW

PREMIARC™

DW-A904L

■ Applicable code
EN ISO 17633 -A- 20 25 5 Cu N L P M21 2

Feature

- DW-A904L was developed for 904L stainless steel (20Cr-25Ni-5Mo-Cu) which was applied for chemical tanks such as Phosphoric acid and Sulfuric acid
- Possible to weld in all position with quite stable arc and low spatter

■ Chemical composition of all weld metal*

Grade	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	N
DW-A904L	0.03	0.66	1.56	0.024	0.003	1.34	25.3	20.9	4.8	0.13
EN ISO 17633 -A- 20 25 5 Cu N L	≤0.03	≤1.0	1.0 - 4.0	≤0.03	≤0.02	1.0 - 2.0	24.0 - 27.0	19.0 - 22.0	4.0 - 6.0	0.10 - 0.20

Test was conducted in accordance with EN ISO 17633:2010
<Welding current>180A <Type of shielding gas> 80%Ar-20%CO₂
<Interpass temperature> ≤150°C <Pass sequence> 12 passess-6layers

■ Chemical composition of all weld metal

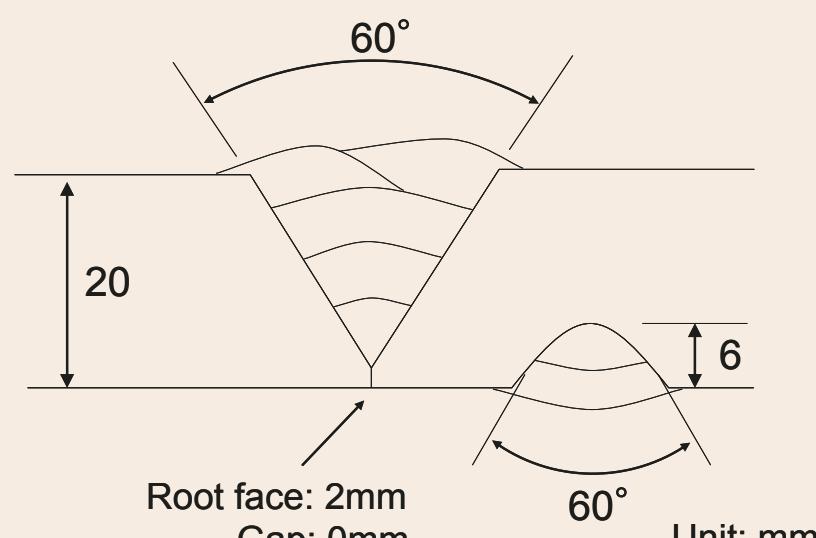
	0.2%P.S (Mpa)	T.S. (Mpa)	EL (%)	vE-196°C (J)
DW-A904L	423	664	36	61
EN ISO 17633 -A- 20 25 5 Cu N L	320	≥510	≥25	---

■ Ferric chloride test (ASTM G48 Practice E)

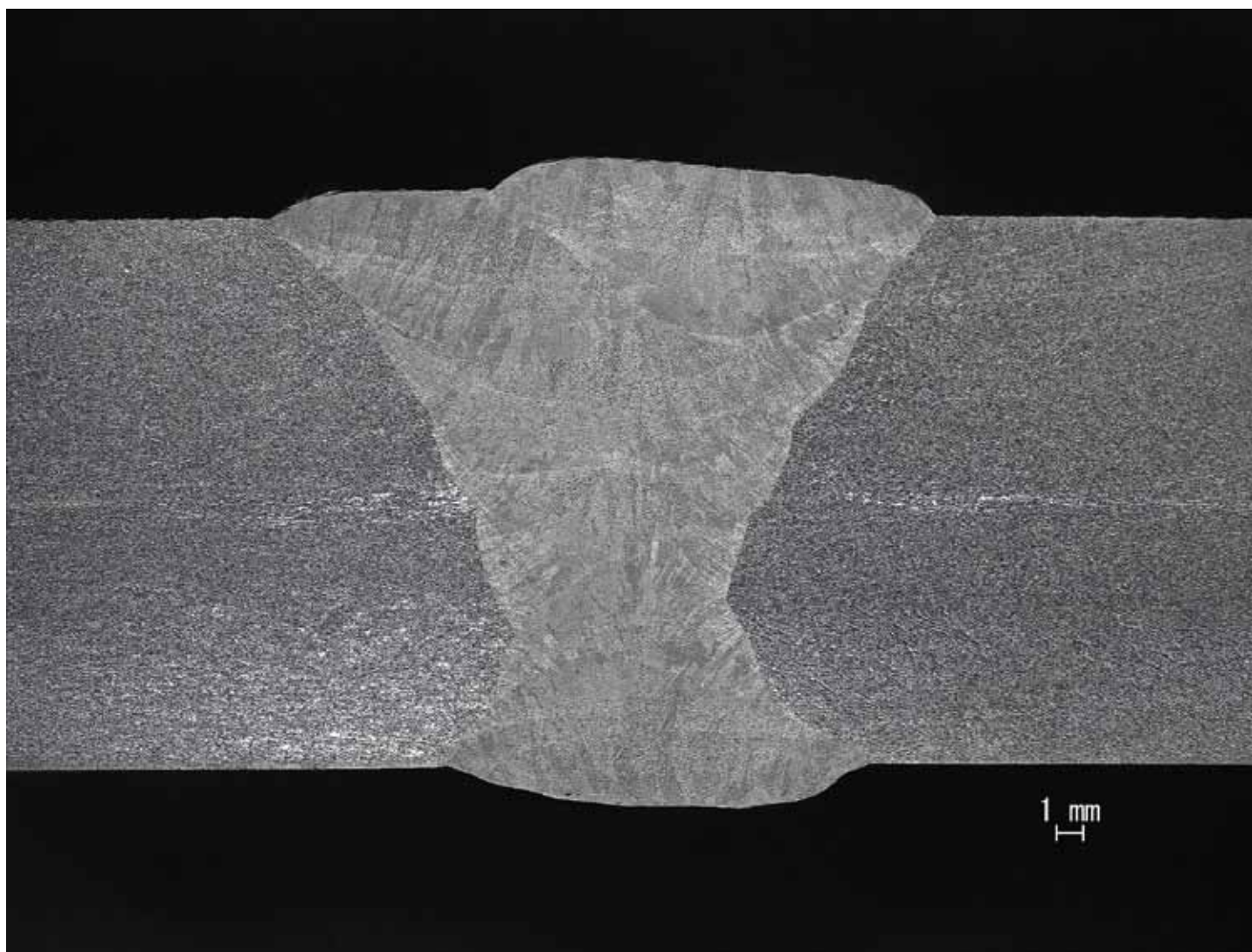
Size of specimen (mm)	Test solution	Time of exposure	Critical Pitting Temperature (°C)
3 x 20 x 30	6%FeCl3 + 1%HCl Solution aq.	24hrs	40

■ Properties of butt joint

Groove preparation and Welding condition

Groove preparation (Vertical up)	Side	Welding current (A)	Arc voltage (V)	Pass	Speed (cm/min)	Heat input (kJ/cm)	Interpass temp. (°C)
	Face	160	25	1	13.5	17.8	< 150
				2	12.4	19.4	
				3	9.9	24.3	
				4	16.3	14.7	
				5	13.5	17.8	
	Root	160	25	1	20.3	11.8	
				2	16.1	14.9	

■ Bead appearance and macrostructure



■ Mechanical properties of butt joint (AWS B4.0/4.0M)

Transversal tensile test		Charpy impact test	
Tensile strength (MPa)	Fractured location	vE-196°C (J)	Lateral Expansion (mm)
612	Base metal	76, 76, 75 Ave. 76	1.17, 1.02, 1.11 Ave. 1.10mm