

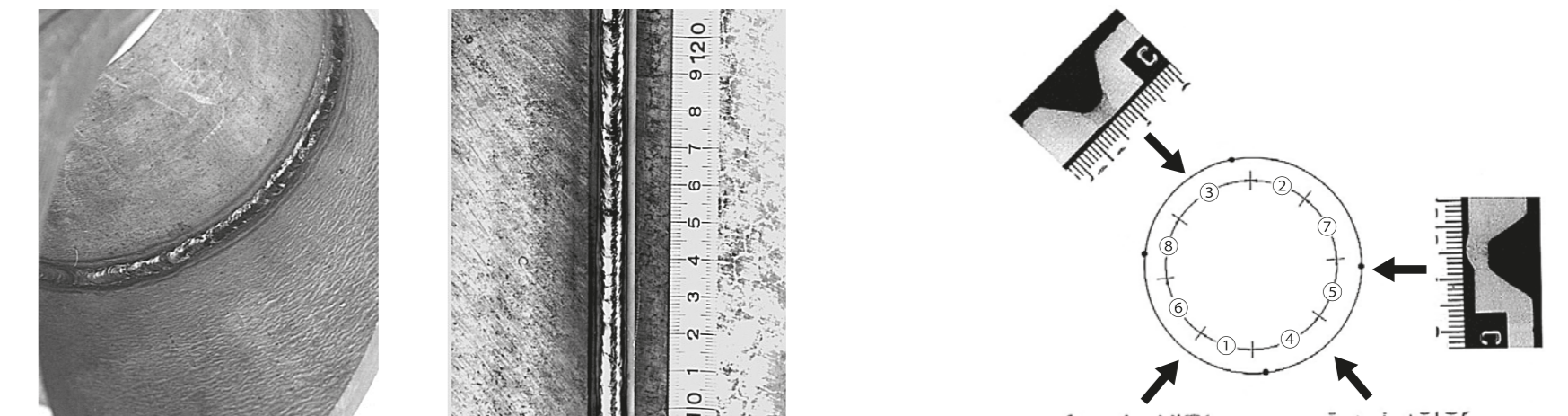
# Flux Cored Wire for Stainless Steel - Keep on Going Forward

## Series of Flux Cored Wire for Stainless Steel

Steel type		Standard flux cored wire		"LP" series		"XR" & "XR all position" series		"TG-X" series	
		Trade name	AWS A5.22	Trade name	AWS A5.22	Trade name	AWS A5.22	Trade name	AWS A5.22
304L	Cryogenic Temp.	PREMARC™ DW-308LT	E308LT0-1/4	PREMARC™ DW-308LTP	E308LT1-1/4	—	—	—	—
	Low carbon (0.04% Max)	PREMARC™ DW-308L	E308LT0-1/4	PREMARC™ DW-308LP	E308LT1-1/4	PREMARC™ DW-308L(P)-XR	E308LT0-1/4	PREMARC™ TG-X308L	R308LT1-5
316L	Cryogenic Temp.	PREMARC™ DW-316LT	E316LT0-1/4	PREMARC™ DW-316LTP	E316LT1-1/4	—	—	—	—
	Low carbon (0.04% Max)	PREMARC™ DW-316L	E316LT0-1/4	PREMARC™ DW-316LP	E316LT1-1/4	PREMARC™ DW-316L(P)-XR	E316LT0-1/4	PREMARC™ TG-X316L	R316LT1-5
Dissimilar metals	General	PREMARC™ DW-309L	E309LT0-1/4	PREMARC™ DW-309LP	E309LT1-1/4	PREMARC™ DW-309L(P)-XR	E309LT0-1/4	PREMARC™ TG-X309L	R309LT1-5
		PREMARC™ DW-309MoL	E309LMoT0-1/4	PREMARC™ DW-309MoLP	E309LMoT1-1/4	—	—	—	—
Duplex	Standard	PREMARC™ DW-329A	E2209T0-1/4	PREMARC™ DW-329AP	E2209T1-1/4	—	—	PREMARC™ TG-X2209	—
		—	—	PREMARC™ DW-2209	E2209T1-1/4	—	—	—	—

## TG-X Series of Flux Cored Stainless Filler Rod

TG-X series can eliminate back shielding in pipe joint welding.



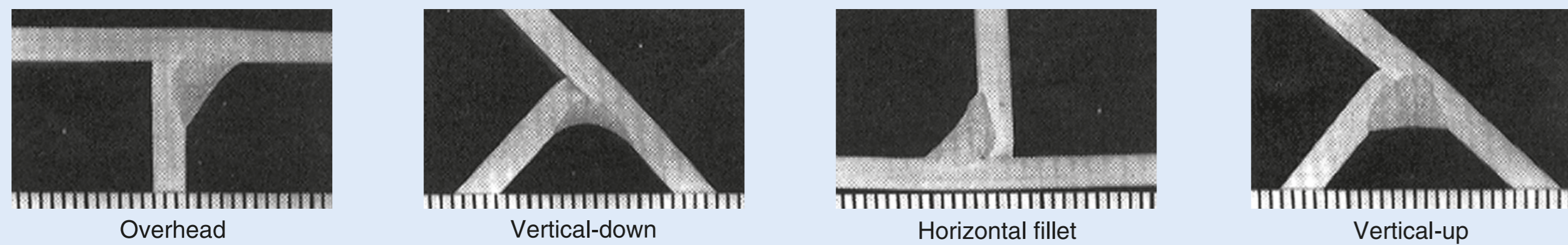
Glossy, regular bead appearance of the reverse (left) and face (right) surfaces of the root pass weld made by GTAW with a TG-X308L filler rod on a Type 304 pipe joint without back shielding.

Macrostructures of TG-X308L welds made on a 304-type stainless steel pipe (12T×150mmØ) in 5G position.

## LP Series: All Position Type Flux Cored Wire

Unsurpassed usability in vertical-up, vertical-down & overhead position

Cross-sectional weld profiles of DW-308LP (Wire size: 1.2 mmØ) with 304-type base metal (Plate thickness: 3 mm).



## DW-410NiMo: The Best Choice for Hydropower Turbine Components

DW-410NiMo offers excellent weldability in all position welding. (AWS A5.22/5.22M E410NiMoT1-1/4)

### Chemical composition of all weld metal

C	Cr	Ni	Mo	Mn	Si	P	S	Cu
0.015	11.6	4.3	0.55	0.52	0.34	0.024	0.004	0.03

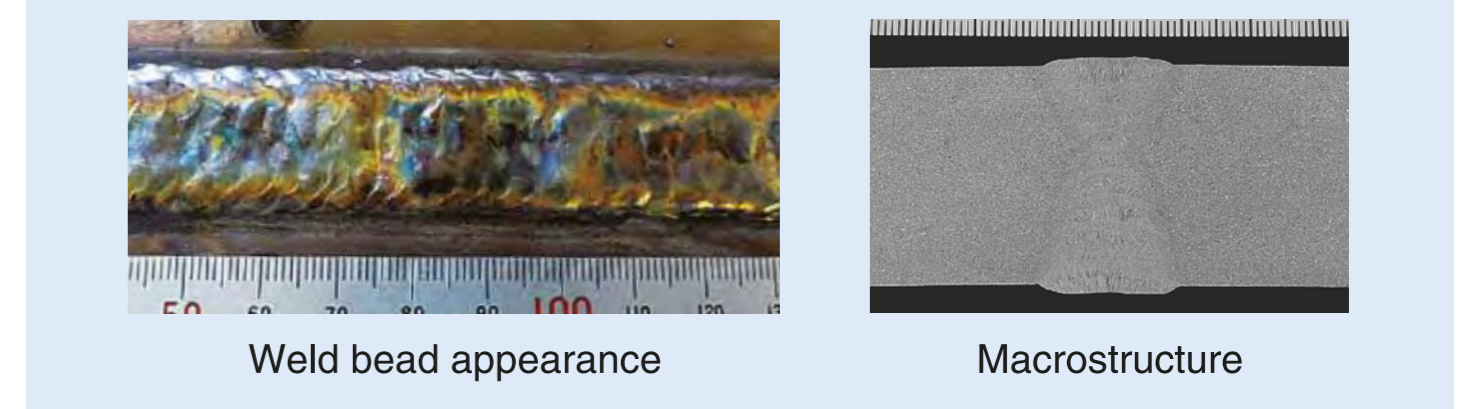
### Diffusible hydrogen content of all weld metal (cc/100g)

200A	280A
4.0, 4.7, 4.2 (Avg. 4.3)	5.2, 6.4, 6.1 (Avg. 5.9)

### Mechanical properties of all weld metal

PWHT	Tensile Test (Room Temperature)			Absorbed energy (J)	
	0.2%PS (MPa)	TS (MPa)	EI (%)	-20°C	0°C
600°Cx 1hr, Air cooling	846	926	17	42, 41, 40 Avg. 41	46, 42, 43 Avg. 44
600°Cx 25hr, FC*	699	855	20	51, 52, 49 Avg. 51	51, 52, 55 Avg. 53

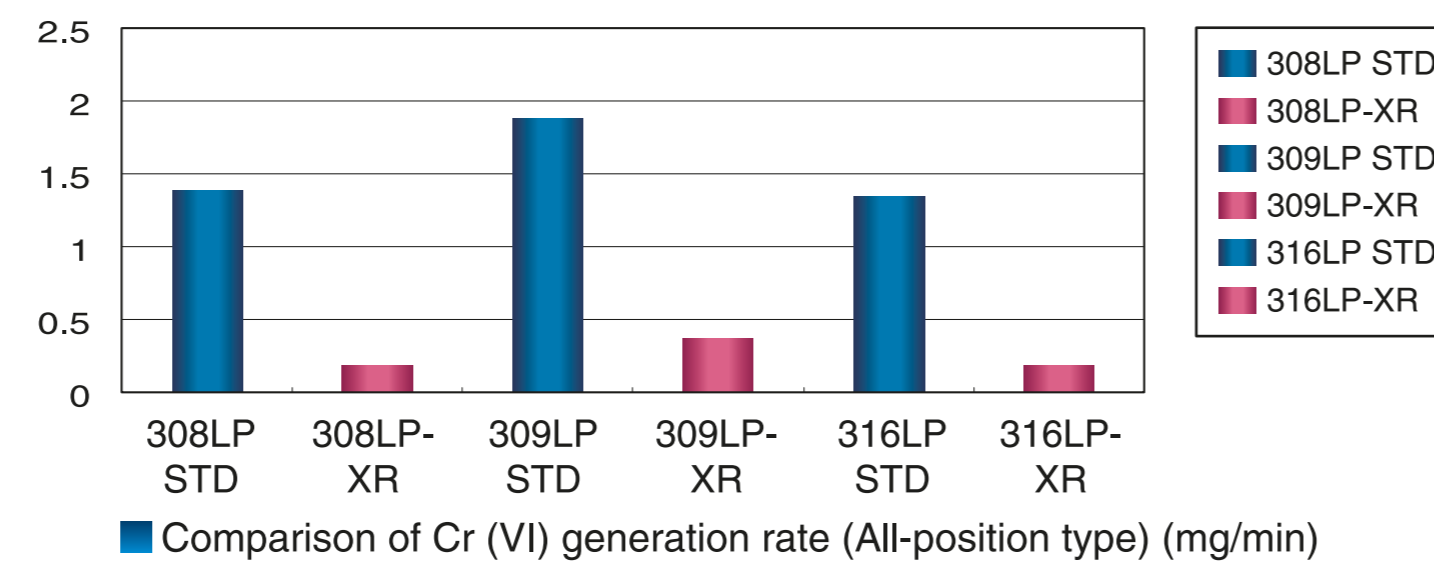
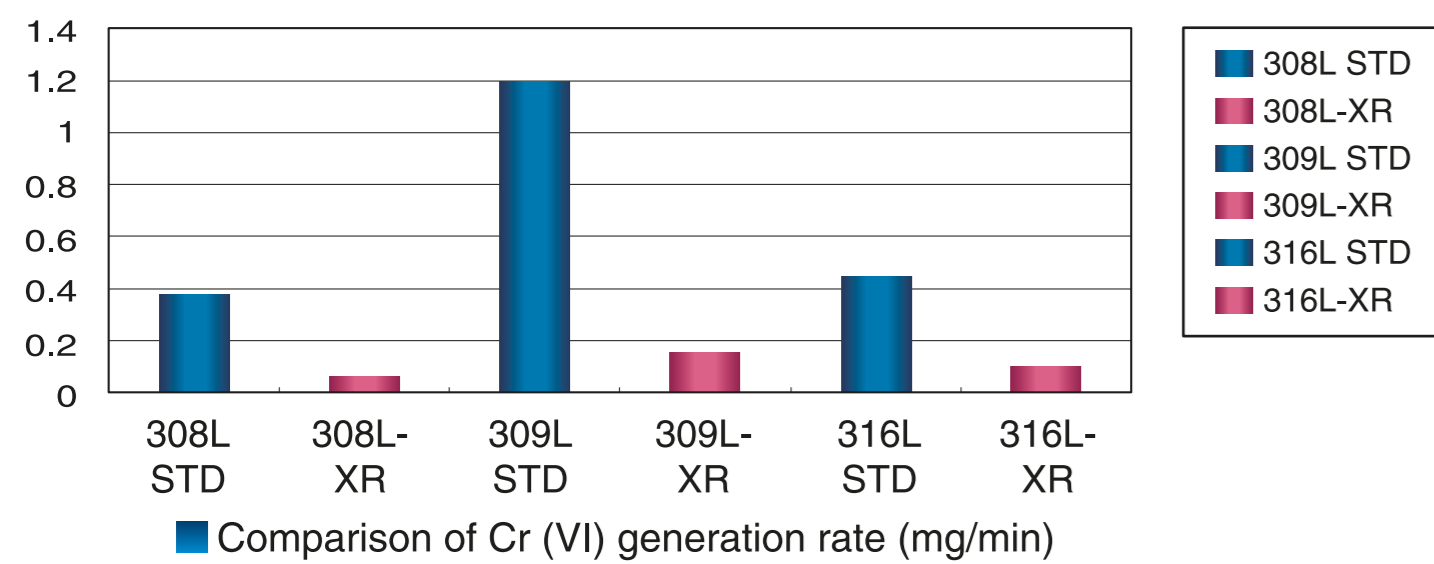
\*Furnace cooling to ambient at 40°C/hr



※45° Vertical-Upward (slope): 240A-31V

## XR Series: Low Cr (VI) Emission Flux Cored Wire

XR series can reduce Cr (VI) emission in welding fume by 80 to 90%.



Macrostructure of DW-308L-XR



Macrostructure of DW-308LP-XR

## NEW DW-A904L: 904L Type Stainless Steel

(EN ISO 17633 -A- 20 25 5 Cu N L P M21 2)

### Chemical composition of all weld metal

C	Si	Mn	P	S	Cu	Ni	Cr	Mo	N
0.03	0.66	1.56	0.024	0.003	1.34	25.3	20.9	4.8	0.13

### Mechanical properties of all weld metal

Tensile Test (20°C)			Absorbed energy (J)
0.2%PS (MPa)	TS (MPa)	EI (%)	-196°C
423	664	36	61

### Pitting corrosion test result by ASTM G48 Practice E

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

Weld bead appearance  
※Vertical-Upward:  
160A-26V

