

Techalloy® 2209

AWS ER2209

CONFORMANCES

AWS A5.9: 2006 ER2209

UNS S39209

ISO 14343:2009 (22 9 3 N L)



Techalloy® 2209 is used to weld duplex stainless steels such as (Type 2205). The welds offer excellent resistance to stress corrosion, cracking and pitting. The microstructure of the weld metal consists of austenite and ferrite. The ferrite content of the weld metal will be lower than the ferrite content of type 2205 base metal. Welding of duplex stainless steels calls for controlled welding parameters to achieve specified mechanical and corrosion resistant properties.

Applications: Offshore, Oil and Gas, Chemical, Petrochemical

DIAMETERS / PACKAGING

Diameter in (mm)		MIG WIRE 33 lb (15 kg) Wire Basket	TIG 10 lb Tube (30 lb Master Carton)	SAW WIRE 55 lb (25 kg) Coil
0.035	(0.9)	MG2209035667		
0.045	(1.2)	MG2209045667		
1/16	(1.6)	MG2209062667	TG2209062638	
3/32	(2.4)		TG2209093638	SA2209093726
1/8	(3.2)		TG2209125638	SA2209125726

DEPOSIT COMPOSITION

	%C	%Cr	%Ni	%Mo	%Mn	%Si
Requirements AWS ER2209	0.03 max.	21.5 - 23.5	7.5 - 9.5	2.5 - 3.5	0.5 - 2.0	0.90 max.
Typical Performance Techalloy® 2209	0.01	22.7	8.5	3.0	1.4	0.4
	%P	%S	%N	%Cu	FN	
Requirements AWS ER2209	0.03 max.	0.03 max.	0.08 - 0.20	0.75 max.	Not Required	
Typical Performance Techalloy® 2209	0.01	0.001	0.15	0.06	30 - 60	

TYPICAL OPERATING PROCEDURES

Process	Diameter in (mm)	Voltage (volts)	Amperage	Gas Flow	Gas
MIG	0.035 (0.9) 0.045 (1.2) 1/16 (1.6)	26-29 28-32 29-33	160-210 180-250 200-280	30-50 CFH	Argon + 2-5% CO ₂
TIG	1/16 (1.6) 3/32 (2.4) 1/8 (3.2)				
SAW	3/32 (2.4) 1/8 (3.2)	28-33 29-32	275-350 350-450		Lincolnweld® P2000

Material Safety Data Sheets (MSDS) are available on our website at www.techalloy.com

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

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