



Rutile flux cored wire for high strength steel applicable to post weld heat treatment with Ar-CO<sub>2</sub> mixed gas

AWS A5.29 E81T1-Ni1M

CWB CSA W48-18 E491T-M21P6-Ni1-H8

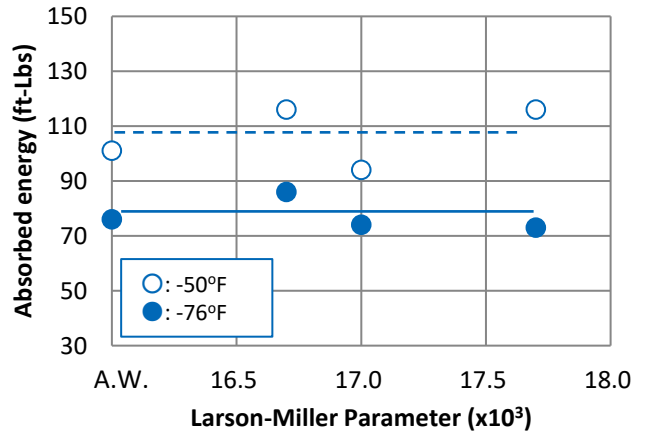
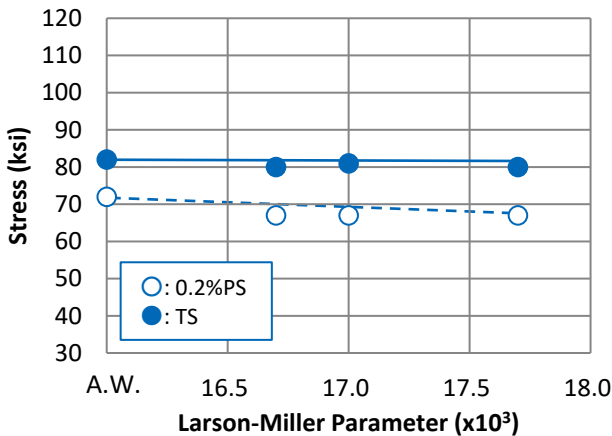
## Features and typical fields of application

- 80 ksi class rutile flux cored wire suitable for post weld heat treatment (PWHT) without adverse degradation of mechanical properties while retaining acceptable mechanical properties
- Excellent impact toughness value down to -76°F in the As-Welded condition and typical PWHT condition
- DW-A55LSR is designed to be used with 80%Ar-20%CO<sub>2</sub> shielding gas. It has a wide welding parameter range which makes this product very versatile for all position welding
- The optimized chemical design of the weld metal provides superior mechanical properties suitable for the most demanding industry specifications

## Mechanical properties of weld metal per AWS A5.29 with typical PWHT conditions

PWHT condition	L.M.P.* (x10 <sup>3</sup> )	0.2% PS (ksi)	TS (ksi)	EI (%)	CVN (ft-lbs)	
					-76°F	-50°F
As Welded	-	72	82	30	76	101
1020°F x 2hr	16.7	67	80	31	86	116
1020°F x 4hr	17.0	67	81	32	74	94
1110°F x 2hr	17.7	67	80	34	73	116

\* Larson-Miller Parameter;  $(T+20)\text{Log}(t)$ , where T: Temperature/K, t: time/h



## Chemical Composition of weld metal per AWS A5.29 (%)

Shielding Gas	C	Si	Mn	P	S	Ni	Others
80%Ar-20%CO <sub>2</sub>	0.07	0.28	1.29	0.008	0.008	0.97	Ti, B



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Diffusible Hydrogen Content per AWS A4.3	Approvals
3.9 mL/100g	ABS, CWB, LR, DNV-GL

### Recommended welding conditions and deposition rate

Wire Dia.	Wire Feed Speed (in/min)	Current (A)	Arc Voltage (V)	Deposition Rate (lbs/hr)	Wire Stick-Out
0.045"	140	120	21-24	4.0	3/4"
	200	160	23-26	6.0	
	290	200	25-28	8.0	
	330	220	25-28	9.0	
	400	250	26-28	10.5	

### Available Products

Wire Dia.	0.045"	Package	28 lbs spool
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#### DISCLAIMER

- Information in this material, such as chemical compositions and mechanical properties, is typical or an example for explaining the features and performances of our products, and it does not mean guarantee unless otherwise it is specified.
- Information contained herein is subject to change without notice. Please kindly contact Kobelco for latest information.



**WARNING:** This product can expose you to chemicals including Nickel and Titanium Dioxide, which are known to the State of California to cause cancer, and Chromium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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