

# TL-56

JIS Z 3212 D5016  
AWS A5.1 E7028

## Characteristics and Applications:

TL-56 is an iron powder type, 490 N/mm<sup>2</sup> high tensile steel electrode. It is specially designed for the speed gravity welding in shipbuilding, bridges and vehicles with good mechanical properties, good crack resistance, high recovering rate (about 140%) and effective electrode efficiency (about 14%).

## Notes on Usage:

1. Dry the electrodes at 150°C for 30-60 minutes before use.
2. Clean up the contaminations on the base metal to avoid porosity and crack.
3. Use back-step method to prevent arc starting from blowholes.
4. Do not exceed the range of proper currents. Over heat input might decrease the impact toughness.

## Typical chemical composition of weld metal (wt%)

C	Mn	Si	P	S
0.07	0.80	0.25	0.02	0.010

## Typical mechanical properties of weld metal

YS (MPa)	TS (MPa)	EL %	CVN , J	
			0°C	-20°C
490	540	26	98	82

## Welding position



## Sizes and recommended current range (AC or DC <+>)

Diameter (mm)		3.2	4.0	5.0	5.5	6.0	7.0
Length (mm)		350	450	550	550	550	550
					700	700	700
Amps	F, H-fillet	120-160	160-200	200-240	230-270	250-300	300-350

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