

# S-8016.C1

TYPE : Basic

AWS A5.5 / ASME SFA5.5 E8016-C1  
JIS Z3211 E5516-N5 AP L  
EN ISO 2560-A - E46 5 2Ni B 1 2

SMAW

## Applications

S-8016.C1 is designed for welding of 2.5%Ni steel used in machinery for low temperature.

## Characteristics on Usage

S-8016.C1 is a low hydrogen, all position electrode depositing weld metal comprising 2.5%Ni. The deposit is extremely dense and the good mechanical properties make this electrode particularly suitable for weldments to withstand impact as sub-normal temperatures [lowest-60°C(-75°F)].

## Notes on Usage

- ① Dry the electrodes at 350~400 °C(662~752°F) for 60 minutes before use.
- ② Adopt back step method or strike the arc on a small steel plate prepared for this particular purpose because arc striking on the base metal is prone to initiating cracking.
- ③ Keep the arc as short as possible.
- ④ Preheat at 80~100°C(176~212°F). The temperature varies in accordance with the plate thickness and possible.
- ⑤ If each welded pass becomes thicker than acceptable level by high amperage or low speed ratio manipulation, the impact values and yield points will decrease.

## Welding Position



1G 2F 3G 4G  
(PA) (PB) (PF) (PE)

## Current

AC or DC +

## Typical Chemical Composition of All-Weld Metal (%)

C	Si	Mn	P	S	Ni
0.06	0.52	1.03	0.012	0.006	2.38

## Typical Mechanical Properties of All-Weld Metal

YS MPa(lbs/in <sup>2</sup> )	TS MPa(lbs/in <sup>2</sup> )	EL (%)	Temp. °C (°F)	CVN-Impact Value J (ft · lbs)	Heat Treatment
515 (74,800)	592 (86,000)	32.0	-60 (-76)	116 (86)	605 (1121°F) × 1hr. S.R

## Approval

## I Packing

Packet 5 kg (11 lbs)  
Carton 5 kg (11 lbs) × 4 : 20kg(44 lbs)

## Sizes Available and Recommended Currents (Amp.)

Size mm (in)	2.6 (3/32)	3.2 (1/8)	4.0 (5/32)	5.0 (3/16)	6.0 (15/64)
Length mm(in)	350 (14)	350 (14)	400 (16)	400 (16)	450 (18)
F	55~90	90~130	130~190	190~240	250~300
V-up, OH	50~80	80~120	120~170	-	-