

Carbon Equivalent

Last Revised: July 26, 2016

Authorities

USAC, CSA G30.18

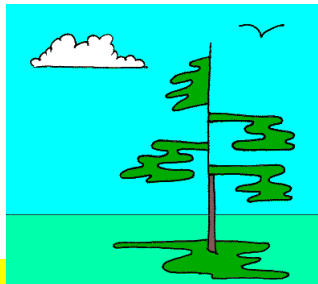
Project Information

Date: February 24, 2018

Project Number:

Project Name:

Description:



Elements Present

Carbon (C) =	0.21	%
Manganese (Mn) =	1.26	%
Phosphorus (P) =	0.01	%
Sulphur (S) =	0.03	%
Silicon (Si) =	0.09	%
Nickel (Ni) =	0.03	%
Chromium (Cr) =	0.03	%
Molybdenum (Mo) =	0.01	%
Vanadium (V) =	0.07	%
Aluminum (Al) =	0.03	%
Arsenic (As) =	0.01	%
Cobalt (Co) =	0.01	%
Copper (Cu) =	0.05	%
Tin (Sn) =	0.01	%
Tantalum (Ta) =	0.01	%
Titanium (Ti) =	0.01	%
Zinc (Z) =	0.01	%
Boron (B) =	0.00	%
Niobium (Nb) =	0.00	%

Carbon Equivalent for Weldability

AWS and IIW

$$CE = C + Si/6 + Mn/6 + Cr/5 + Mo/5 + V/5 + Ni/15 + Cu/15$$

$$CE = 0.46 \text{ OK}$$

Standard CE Formula, Reidar

$$CE = C + Mn/6 + Cr/10 - Mo/50 - V/10 + Ni/20 + Cu/40$$

$$CE = 0.42 \text{ Pre-Heat and Low Hydrogen Electrodes}$$

Deardon and O'Neill (see AWS - Silicon Component Missing)

$$CE = C + Mn/6 + Cr/5 + Mo/5 + V/5 + Ni/15 + Cu/15$$

$$CE = 0.45 \text{ NG}$$

Ilo and Bessyo and P_{CM}

$$CE = C + Mn/20 + Cr/20 + Mo/15 + V/10 + Ni/60 + Cu/20 + Si/30 + 5*B$$

$$CE = 0.29 \text{ OK}$$

Bjorhovde, Reidar

$$CE = C + Mn/6 + Cr/5 + Mo/5 + V/5 + Ni/15 + Cu/15 + Si/6$$

$$CE = 0.46 \text{ OK}$$

Linnert

$$CE = C + Mn/6 + Cr/5 + Mo/4 + Ni/15 + Cu/13$$

$$CE = 0.44 \text{ OK}$$

Cottrell

$$CE = C + Mn/6 + Cr/5 + Mo/5 + V/3 + Nb/(4*C) + 0.0001/S$$

$$CE = 0.46 \text{ OK}$$

Mannesmann

$$CE = C + Mn/20 + Cr/10 + Mo/15 + V/10 + Ni/40 + Cu/20 + Si/25$$

$$CE = 0.29 \text{ OK}$$

Graville

$$CE = C + Mn/16 + Cr/23 + Mo/7 + V/9 - Ni/50 + Nb/8$$

$$CE = 0.30 \text{ OK}$$