Inweld 12018M

Chemical Composition of AWS A5.5 E12018M

C	Mn	Si	P	Ni	Cr	Mo	V	Fe
0.10	1.30-2.25	0.6	0.030	1.75-2.50	0.30-1.50	0.30-0.55	0.05	Balance

Single values are maximum unless otherwise specified.

Description and Applications

These low-hydrogen electrodes were originally designed for military applications sucha as welding HY80 and HY100 type steels. To achieve desired weld-metal properties and soundness, these electrodes have small alloy additions (especially some Ni) and require careful control of moisture in the electrode covering and from other sources of hydrogen. The latter must be maintained during electrode fabrication, packaging, transport and site storage.

These electrodes are usually employed without subsequent postweld heat-treatment. However, hydrogen release treatments at lower temperatures (typically less than 500ºF) are often applied. In the as-welded condition, the weld-metal mechanical properties conclude ultimate tensile strength minimums ranging from 90-120ksi (620-830MPa) and good notch toughness at temperatures ranging from 0ºF to -60ºF (-18ºC to -51ºC). With these properties, the E(X)X01YM(1) type electrodes are suitable for joining many high-strength, low-alloy or microalloyewd steels to themselves or to lower strength steels, including carbon steels.

Procedure

Typical Weld Metal Properties

	AWS Spec (ksi)
Average As-Welded Hardness:	
Tensile Strength:	120,000
Yield Strength:	108 to 120,000
Elongation:	18%

Recommended Parameters

Wire Diameter	Voltage	Amperage