

# SM-110

High tensile steels

## Conformances

AWS A5.28/ ASME SFA5.28 ER110S-G

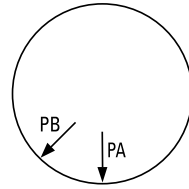
## Applications

- 0.3Cr-1.9Ni-0.5Mo-alloyed, High strength steel

## Features

- Excellent TS and impact value at low temperature
- Stable arc with High-Current
- Low spatter

## Welding Position



## Current

DC +

## Shielding Gas

Ar + CO<sub>2</sub>

## Diameter / Packaging

| Diameter    | Spool       |              |              | Ball Pac       |                |                |
|-------------|-------------|--------------|--------------|----------------|----------------|----------------|
|             | 5kg (11lbs) | 15kg (33lbs) | 20kg (44lbs) | 250kg (551lbs) | 300kg (661lbs) | 350kg (771lbs) |
| 0.8 (0.033) | √           | √            | √            | √              | √              | √              |
| 0.9 (0.035) | √           | √            | √            | √              | √              | √              |
| 1.0 (0.040) | √           | √            | √            | √              | √              | √              |
| 1.2 (0.045) | √           | √            | √            | √              | √              | √              |
| 1.4 (0.052) | √           | √            | √            | √              | √              | √              |
| 1.6 (1/16)  | √           | √            | √            | √              | √              | √              |

### Typical Chemical Composition of the Wire(%)

| C     | Si   | Mn   | P     | S     | Cr   | Ni  | Mo   |
|-------|------|------|-------|-------|------|-----|------|
| 0.089 | 0.75 | 1.83 | 0.011 | 0.012 | 0.30 | 1.9 | 0.52 |

### Typical Mechanical Properties of All-Weld Metal

|   | YS<br>MPa(lbs/in <sup>2</sup> ) | TS<br>MPa(lbs/in <sup>2</sup> ) | EL<br>(%) | Temp<br>°C(°F)        | CVN-Impact Value<br>J (ft-lbs) |
|---|---------------------------------|---------------------------------|-----------|-----------------------|--------------------------------|
| As welded with 80% Ar + CO <sub>2</sub> | 700 (103,000)                   | 858 (124,400)                   | 19.4      | -40 (-40)<br>60 (-76) | 82 (60)<br>69 (51)             |
| As welded with 90% Ar + CO <sub>2</sub> | 725 (105,100)                   | 871 (126,300)                   | 17.2      | -40 (-40)<br>60 (-76) | 71 (53)<br>60 (45)             |

### Typical Welding Parameters

| Diameter, Polarity<br>Shielding Gas  | CTWD<br>mm(in) | Wire Feed Speed<br>m/min (in/min) | Amp.<br>(A) | Volt.<br>(V) | Deposition Rate<br>kg/hr (lb/hr) |
|--------------------------------------|----------------|-----------------------------------|-------------|--------------|----------------------------------|
| <b>1.2mm (0.045in), DC +</b>         |                |                                   |             |              |                                  |
| Mixed Gas (80%Ar + CO <sub>2</sub> ) | 20 (3/4)       | 3.7 (145)                         | 150         | 17.5         | 1.9 (4.2)                        |
|                                      |                | 6.2 (244)                         | 200         | 24           | 3.1 (6.8)                        |
|                                      |                | 11.2 (440)                        | 280         | 30           | 5.6 (12.3)                       |