



**Duplex Stainless Flux-cored wire for All position welding**

***AA-2209Pi***

**(High impact toughness version)**

➤ Classification

- AWS A5.22 E2209T1-1/4
- EN ISO 17633-A T 22 9 3 N L P C/M 1

➤ Features in comparison with Standard AA-2209P

- Higher impact toughness for low temperature requirement
- Lower Ferrite content
- More suitable for all position welding  
(Flatter bead can be obtained on vertical up position)

➤ Typical all weld metal properties

**Chemical composition of all weld metal (%)**

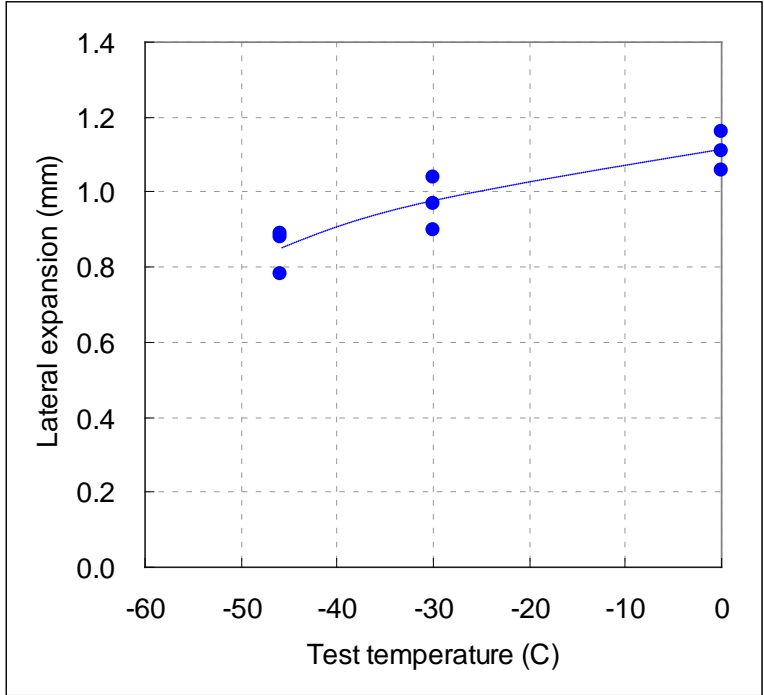
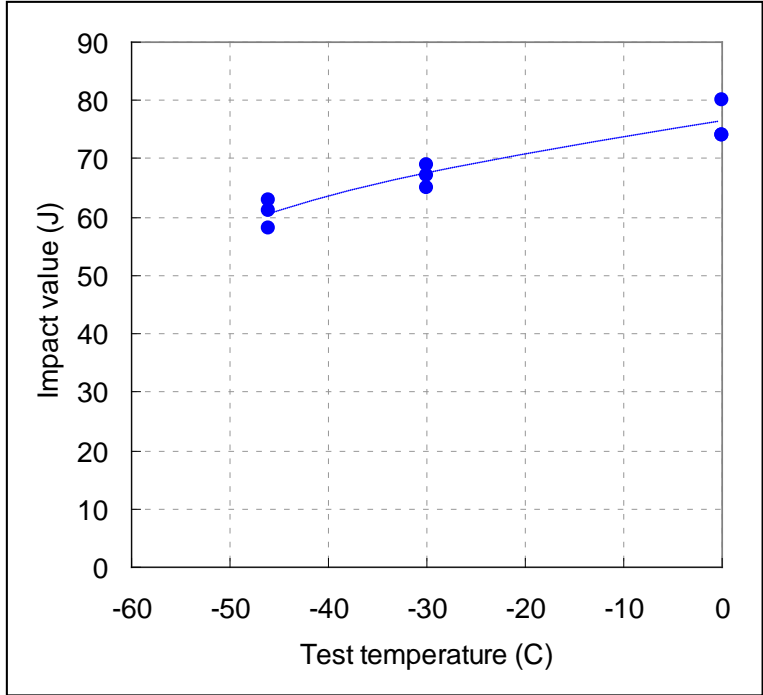
| C    | Si   | Mn   | P     | S     | Ni   | Cr    | Mo   | N    | PRE  | FNW  |
|------|------|------|-------|-------|------|-------|------|------|------|------|
| 0.03 | 0.54 | 0.82 | 0.015 | 0.003 | 9.35 | 22.49 | 3.43 | 0.15 | 36.1 | 36.6 |

PRE: Cr+3.3Mo+16N, FNW: Ferrite number by WRC diagram (1992)

**Tensile properties of all weld metal**

| 0.2%PS (MPa) | TS (MPa) | EL (%) |
|--------------|----------|--------|
| 612          | 815      | 29     |

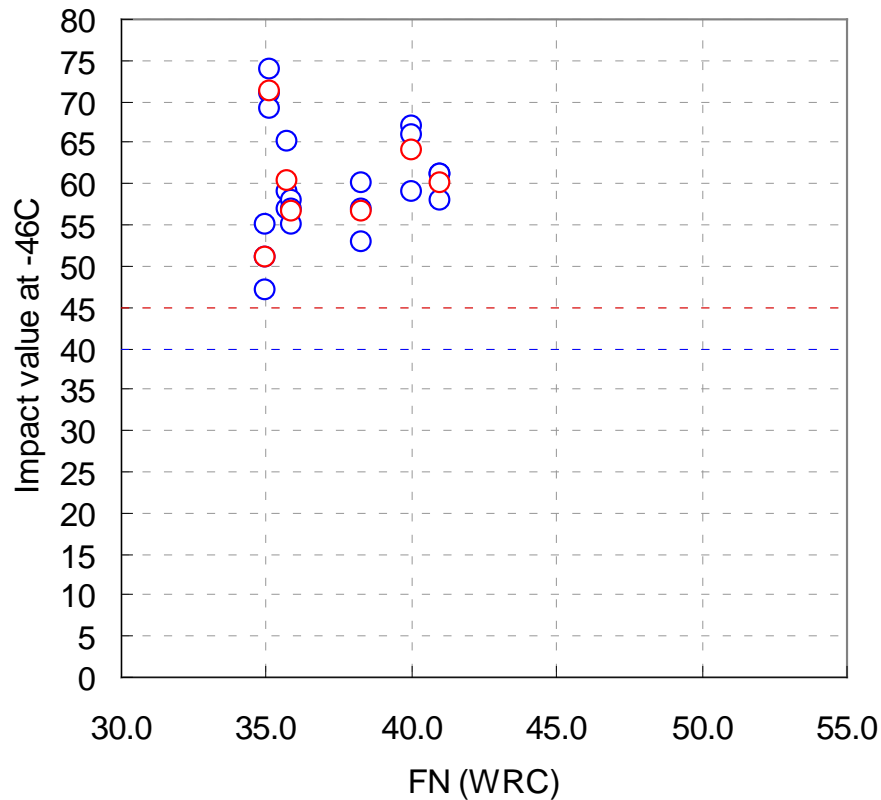
**Impact properties of all weld metal**



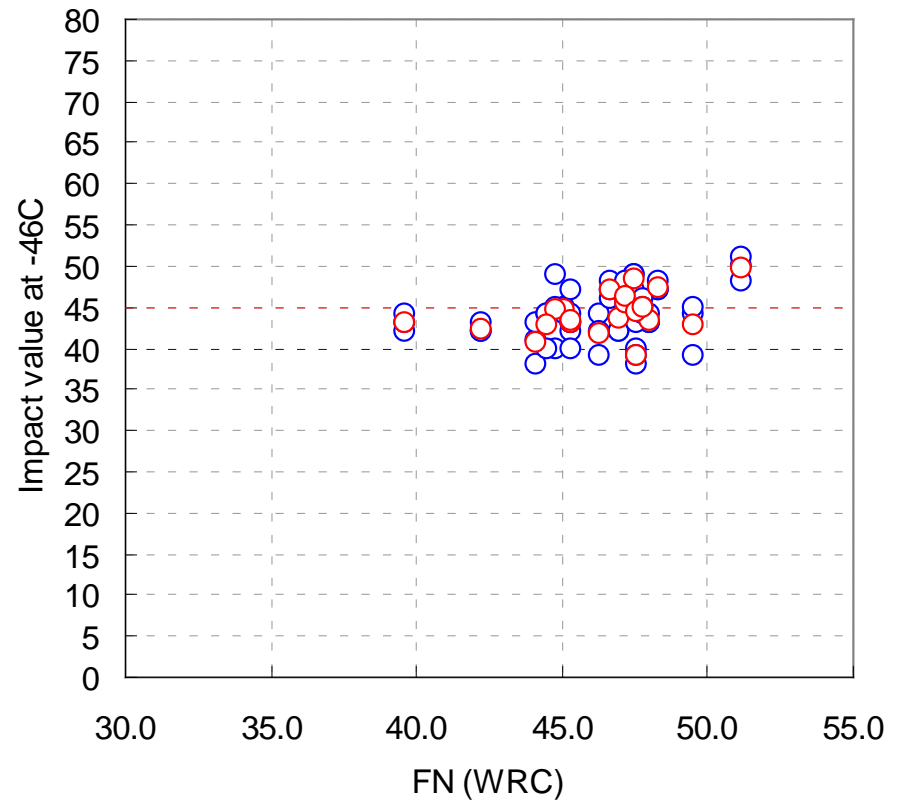
➤ Impact properties of all weld metal at -46C as a function of FNW

(All results are from actual inspection certificate in 2008-2010)

**AA-2209Pi (high impact version)**



**AA-2209P (Standard type)**



➤ Pitting corrosion properties

|                                       |            |            |
|---------------------------------------|------------|------------|
| Temperature (C)                       | 20         | 25         |
| Corrosion loss (g/m <sup>2</sup> ,hr) | 0          | 0.0028     |
| Results                               | No pitting | No pitting |

In accordance to ASTM G48

Corrosive solution: 10%FeCl<sub>3</sub> 6H<sub>2</sub>O + HCl(1/20N)

Immersion time: 24hrs