KOBELCO **Bi free type Stainless Flux Cored Wires**

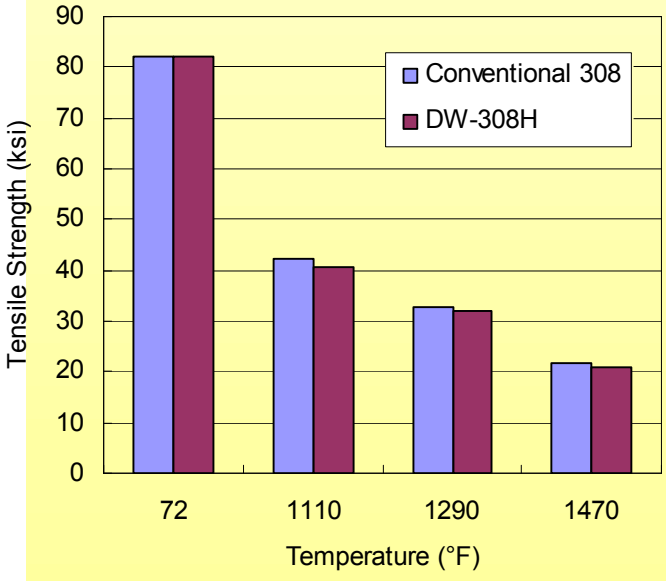
# H-Series for high temperature applications

PREMIARC™ DW-308H
PREMIARC™ DW-308LH
PREMIARC™ DW-316H
PREMIARC™ DW-316LH
PREMIARC™ DW-347H
PREMIARC™ DW-309LH

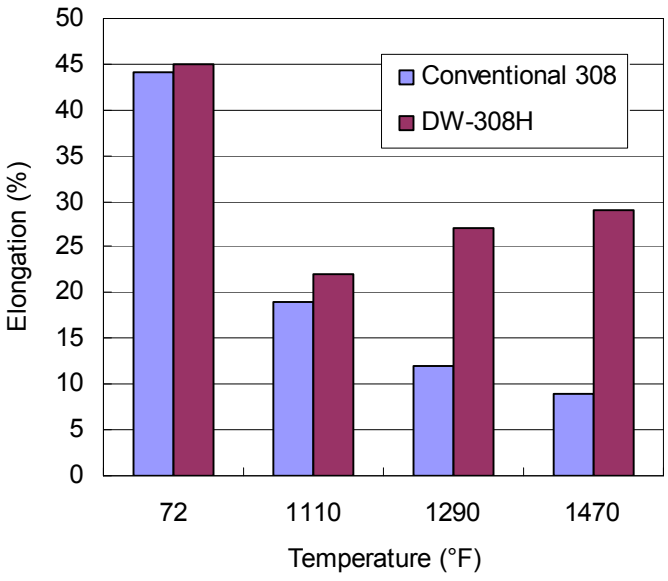
## Outstanding Features

- H-series contains no bismuth in the weld metal. Consequently, the elongation of the weld metal at high temperatures is higher than that of conventional FCWs.
- Even with no bismuth, the slag removability is comparable to conventional FCWs.
- Excellent performance in vertical upward position with either 75%Ar-25%$CO_2$ gas mixture or 100%$CO_2$.


**Bead appearance of DW-308H**




A comparison of high temperature tensile strength




A comparison of high temperature elongation

KOBELCO

PREMIARC™ **DW-308H** AWS A5.22 E308HT1-1, -4

PREMIARC™ **DW-308LH** AWS A5.22 E308LT1-1, -4

PREMIARC™ **DW-316H** AWS A5.22 E316T1-1, -4

PREMIARC™ **DW-316LH** AWS A5.22 E316LT1-1, -4

PREMIARC™ **DW-347H** AWS A5.22 E347T1-1, -4

PREMIARC™ **DW-309LH** AWS A5.22 E309LT1-1, -4

## Typical chemistry of weld metal (0.045" Dia. 75%Ar-25%$CO_2$)

| Alloy | C | Si | Mn | Cr | Ni | Mo | Bi | FN |
|---|---|---|---|---|---|---|---|---|
| DW-308H | 0.06 | 0.45 | 1.36 | 18.97 | 9.42 | - | <0.001 | 5.5 |
| DW-308LH | 0.02 | 0.46 | 1.25 | 18.93 | 9.68 | - | <0.001 | 8.7 |
| DW-316H | 0.05 | 0.38 | 1.39 | 18.75 | 11.60 | 2.40 | <0.001 | 6.0 |
| DW-316LH | 0.02 | 0.48 | 1.38 | 18.64 | 12.13 | 2.39 | <0.001 | 7.5 |
| DW-347H | 0.05 | 0.47 | 1.65 | 19.17 | 9.65 | - | <0.001 | 7.8 |
| DW-309LH | 0.03 | 0.51 | 1.32 | 24.34 | 12.59 | - | <0.001 | 20.3 |

FN=Ferrite Number by WRC Diagram (1992)

## Typical mechanical property of weld metal (0.045" Dia. 75%Ar-25%$CO_2$)

| Alloy | T.S (ksi) | Elongation (%) |
|---|---|---|
| DW-308H | 86 | 43 |
| DW-308LH | 80 | 41 |
| DW-316H | 83 | 42 |
| DW-316LH | 80 | 40 |
| DW-347H | 94 | 38 |
| DW-309LH | 83 | 35 |

Test method: AWS A5.22, welding parameter: 200A-30V (0.045")

**KOBELCO WELDING OF AMERICA INC.**
4755 Alpine suite250 Stafford ,TX 77477
Tel: 281-240-5600 Fax: 281-240-5625
http://www.kobelcowelding.com