# PF-200S/US-90B91 TRUSTARC™

**Flux and wire combination for 9%Cr-1%Mo-V-Nb steel**

**Features:**
- Applied for ASTM A387 Gr.91 and equivalents
- Excellent creep rupture strength

**Classification:** AWS A5.23 F9PZ-EB91-B91

**Type of flux:** Bonded
**Redrying of flux:** 200~300℃x1h
**Polarity:** AC

## Packaging data

| Flux | Mesh | Can |
|---|---|---|
| **PF-200S** | 10x48 | 20kg |
| **Volume mm** | | 240W, 350H, 240L |
| **Wire** | **ϕ mm** | **Coil** |
| **US-90B91** | 2.4<br>3.2 | 25kg<br>25kg |
| **Volume mm** | | 430W, 90H, 430L |

## Composition (wire mass%)

| | Typical | Guaranty [a] |
|---|---|---|
| **C** | 0.11 | 0.07~0.13 |
| **Si** | 0.29 | 0.50 |
| **Mn** | 0.51 | 1.00 |
| **P** | 0.005 | 0.015 |
| **S** | 0.004 | 0.015 |
| **Cu** | <0.01 | 0.10 |
| **Ni** | 0.14 | 1.00 |
| **Cr** | 8.95 | 8.5~10.5 |
| **Mo** | 1.00 | 0.85~1.15 |
| **V** | 0.19 | 0.15~0.25 |
| **Al** | <0.002 | 0.04 |
| **Nb** | 0.06 | 0.02~0.10 |
| **N** | 0.04 | 0.03~0.07 |
| **Mn+Ni** | 0.65 | 1.40 |
| **Co** | 0.39 | - |

Note: [a] Single values are maximum.

## Composition (weld metal mass%)

| | Typical | Guaranty [a] |
|---|---|---|
| **C** | 0.09 | 0.08~0.13 |
| **Si** | 0.25 | 0.80 |
| **Mn** | 0.66 | 1.20 |
| **P** | 0.005 | 0.010 |
| **S** | 0.005 | 0.010 |
| **Cu** | 0.01 | 0.25 |
| **Ni** | 0.12 | 0.80 |
| **Cr** | 9.01 | 8.0~10.5 |
| **Mo** | 1.01 | 0.85~1.20 |
| **V** | 0.19 | 0.15~0.25 |
| **Al** | <0.01 | 0.04 |
| **Nb** | 0.05 | 0.02~0.10 |
| **N** | 0.04 | 0.02~0.07 |
| **Mn+Ni** | 0.78 | 1.40 |
| **Co** | 0.36 | - |

Note: [a] Single values are maximum.

## All-weld mechanical properties

| | Typical | Guaranty |
|---|---|---|
| **0.2%YS (MPa)** | 600 | 538min. |
| **TS (MPa)** | 730 | 621~758 |
| **El on 4d (%)** | 23 | 17min. |
| **PWHT (℃xh)** | 760x2 | 760±15x2 |