

# WELDREAM™

Leveraging the strengths of the Nippon Steel Group, WELDREAM Advance offers an array of optimal welding materials tailored to match high-performance steel for superior quality, and workability. Below, we introduce WELDREAM Advance products are introduced below along with illustrative application examples.

## 1 Welding material for 780 N/mm<sup>2</sup> Class steel delivering high quality and efficiency

Our products have been utilized both domestically and internationally, encompassing submerged arc welding materials <NB-250H / Y-80M (for AC)>, <NB-250J / Y-80J (for DC)>, FCW "SF-80A" suitable for all positions, and electrode "L-80SN."



### Applications

Welding of 780N/mm<sup>2</sup> class steels including offshore structures (R&C), shipbuilding (SEP ships), and building steel frames, etc.

### Features

- 1 Even when welding thick plate, a low defect rate with good mechanical properties and good weldability.
- 2 Seamless FCW SF-80A is optimal for onsite welding because the flux does not easily absorb moisture.
- 3 Additionally, we also provide a full line-up including solid wire "YM-80C" and "YM-80A."

## 2 Welding material designed exclusively for CORSPACE™, a coating cycle extension steel

The coating cycle can be extended as compared to that of ordinary steel, leading to life-cycle cost reduction.

- "PX Series" (SMAW, GMAW, FCAW, SAW)

### Applications

Welding structures exposed to corrosive environments prone to salt damage, including steel bridges, harbor cranes, and unloaders.

### Features

- 1 To inhibit the progress of corrosion in the welded part, the welding material contains a very small amount of Sn (tin), which is also present in the steel material.
- 2 Because the JIS symbol is the same as that of the welding material for ordinary steel, it is possible to manage the welding work in accordance with the conventional technical standards such as road bridge specifications.
- 3 Since its launch, the product has been adopted in bridge projects by over a dozen companies.

CORSPACE Base metal strength class	SMAW	GMAW	FCAW	SAW
400N/mm <sup>2</sup> 490N/mm <sup>2</sup>	L-55·PX	YM-26·PX	SF-1·PX SM-1F·PX	YF-15/ Y-D·PX YF-800/ Y-D·PX
520N/mm <sup>2</sup>	—	YM-55C·PX	—	YF-15B/ Y-DM3·PX NF-820/ Y-D·PX
570N/mm <sup>2</sup>	L-60·PX	YM-60C·PX	SF-60·PX SM-60F·PX	YF-15B/ Y-DM·PX NF-820/ Y-DM·PX

## 3 Welding material exclusively for sulfuric/hydrochloric acid dew-point corrosion resistant steel S-TEN™

Welding materials are effective in sulfuric/hydrochloric acid dew-point corrosive environments and are excellent for LCC.

- "ST Series" (SMAW, FCAW, GTAW, SAW)

### Applications

Exhaust gas containing sulfuric acid / hydrochloric acid is subjected to flue gas treatment, waste incineration, and power generation facilities.

### Features

- 1 The welded part exhibit the same level of corrosion resistance as the base metal
- 2 Welding under the same conditions as that for ordinary steel is possible.

Steel type	SMAW	FCAW	GTAW	SAW
S-TEN1	ST-16M	SF-1ST	YT-1ST	Y-1ST/ NB-1ST
S-TEN2	ST-16Cr ST-03Cr	FC-23ST	—	—

## 4 Welding material for NSGP™ Steel, a highly corrosion-resistant steel plate for crude oil tankers that contribute to air pollution prevention by eliminating paint.

- "GP Series" (SMAW, FCAW, SAW)

### Applications

Welding of NSGP steel applied to VLCC tank bottom plate and surface of upper decks (ceiling parts).

### Features

- 1 Weld metals inhibit corrosion and thinning caused by heavy oil. The developed welding material that matches the NSGP steel because conventional welding materials cause significant corrosion and thinning in the welded part.
- 2 Certification for each ship classification (NK, ABS, LR, DNV)

## 5 Welding material for duplex stainless steel contributing to strengthening national land resilience and reducing life cycle cost.

In addition to the FCW "FC-2120" dedicated for (SUS821L1), we provide an extensive line-up of products for various duplex stainless steels, from lean to super.

### Applications

Construction of chemical tankers, sluice gates, seawater pumps, and scrubbers.

### Features

- 1 The corrosion resistance of the welded part is equivalent to that of the base metal
- 2 The tensile strength of the weld metal is higher than that of Type 308, enabling the weight reduction of the structures.



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