

# S-705EF X H-14

## Conformances

JIS Z3352 S A CG-I 1

EN ISO 14174-S A CG-I 1 / EN ISO 14171-A-S4

KR 2SMR, 2YSMR

2SR, 2YSR (Max. thick. 25mm)

ABS 2, 2Y

LR 2A, 2YA

BV A2M, A2YM

DNV-GL IIYM ( $t \leq 25\text{mm}$ )

NK KAW2SMP, KAW52SMP

KAW52SP

## Applications

- Shipbuilding (one-side welding)

## Features

- High deposition rate with high input use
- Suitable for one side welding of TMCP steel
- Density : 1.3g/cm<sup>3</sup>

## Current

AC, DC +

## Basicity Index

4.5

## Packages (Flux)

Tin Can 20kg(44lbs)

PE Bag 20kg(44lbs)

## Flux Composition

| Consumable | Chemical Composition, wt%           |                                      |           |                  |     |
|------------|-------------------------------------|--------------------------------------|-----------|------------------|-----|
|            | SiO <sub>2</sub> + TiO <sub>2</sub> | Al <sub>2</sub> O <sub>3</sub> + MnO | MgO + CaO | CaF <sub>2</sub> | FeO |
| S-705EF    | 15                                  | 10                                   | 35        | 10               | 30  |

## Diameter / Packaging

| Diameter<br>mm (in) | Spool           |                 |                   | Basket          |                   |                   |                   |                   |                    | Coil              |                   |                   |                   | Pac               |  |  |  |  |
|---------------------|-----------------|-----------------|-------------------|-----------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--|--|--|--|
|                     | 20kg<br>(44lbs) | 25kg<br>(55lbs) | 100kg<br>(220lbs) | 25kg<br>(55lbs) | 100kg<br>(220lbs) | 200kg<br>(440lbs) | 250kg<br>(551lbs) | 300kg<br>(661lbs) | 500kg<br>(1102lbs) | 200kg<br>(440lbs) | 250kg<br>(551lbs) | 300kg<br>(661lbs) | 350kg<br>(771lbs) | 400kg<br>(881lbs) |  |  |  |  |
| 1.6 (1/16)          | ✓               |                 |                   | ✓               |                   |                   |                   |                   |                    |                   | ✓                 |                   |                   | ✓                 |  |  |  |  |
| 2.0 (5/64)          | ✓               |                 |                   | ✓               | ✓                 | ✓                 | ✓                 |                   |                    |                   |                   | ✓                 |                   |                   |  |  |  |  |
| 2.4 (3/32)          | ✓               | ✓               |                   | ✓               | ✓                 | ✓                 |                   |                   |                    |                   |                   |                   |                   |                   |  |  |  |  |
| 3.2 (1/8)           |                 | ✓               |                   | ✓               | ✓                 | ✓                 | ✓                 | ✓                 |                    |                   | ✓                 | ✓                 | ✓                 |                   |  |  |  |  |
| 4.0 (5/32)          |                 | ✓               |                   | ✓               | ✓                 | ✓                 |                   | ✓                 | ✓                  | ✓                 | ✓                 | ✓                 | ✓                 | ✓                 |  |  |  |  |
| 4.8 (3/16)          | ✓               |                 |                   | ✓               | ✓                 |                   |                   | ✓                 | ✓                  |                   |                   |                   |                   |                   |  |  |  |  |
| 6.4 (1/4)           |                 |                 |                   | ✓               | ✓                 |                   |                   |                   |                    |                   |                   |                   |                   |                   |  |  |  |  |

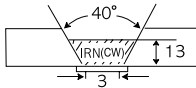
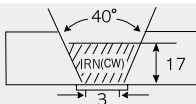
**Typical Chemical Composition of All-Weld Metal(%)**

| Wire | C    | Si   | Mn   | P     | S     | Mo   | BM   | Th.(mm) |
|------|------|------|------|-------|-------|------|------|---------|
| H-14 | 0.10 | 0.20 | 1.23 | 0.017 | 0.011 | 0.80 | AH36 | 15      |
|      | 0.10 | 0.21 | 1.29 | 0.014 | 0.010 | 0.90 | AH36 | 20      |

**Typical Mechanical Properties of All-Weld Metal**

| Wire | 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) | BM   | Th.(mm) |
|------|---------------------------------|---------------------------------|-----------|----------------|--------------------------------|------|---------|
| H-14 | 430 (62,400)                    | 560 (81,300)                    | 23        | 0 (32)         | 60 (44)                        | AH36 | 15      |
|      | 400 (58,000)                    | 550 (79,800)                    | 23        | 0 (32)         | 60 (44)                        | AH36 | 20      |

**Typical Welding Parameters**

| Wire | Dia.<br>(mm) | Th.<br>(mm) | Groove Design<br>(mm)   | Pass | Amp.<br>(A) | Volt.<br>(V) | Speed<br>(cm/min) | Remarks |
|------|--------------|-------------|---|------|-------------|--------------|-------------------|---------|
| H-14 | 4.8          | 15          |  | 1    | 900         | 35           | 22                |         |
| H-14 | 4.8          | 20          |  | 1    | 1000        | 36           | 20                |         |

SAW

SAW

GM/AV

GTAW

FCAW

Non-FERROUS

APPENDIX