

# Superflux55ULT × H-14

TYPE : Neutral

AWS A5.17/ASME SFA5.17 F7A(P)8-EH14  
 JIS Z3183 S502-H  
 EN ISO 14174 S A FB 1 / EN ISO 14171 S4

SAW

## Applications

Multi-layer welding of various kinds of structures such as shipbuildings, offshore structures and pressure vessels.

## Characteristics on Usage

It produces the weld metal which has excellent impact value at low temperature down to -60° C (-76° F) and CTOD at low temperature. As the hydrogen content of weld metal is extremely low, it shows excellent resistance to crack. Tandem, multi-electrode can be performed. AC power source is recommendable because DC makes inferior quality.

## Notes on Usage

- ① Dry the flux at 300~350° C (572~662° F) for 60 minutes before use.
- ② Suitable welding condition for 1st pass in the groove is 500~550A, 26~30V and 30~40Cpm to prevent hot cracking and obtain good slag removal.
- ③ Preheat at 50~100° C depending on kind of base metal and plate thickness.

| Approval   | I Current | I Basicity Index |
|--|-----------|------------------|
| KR, ABS, LR, BV, DNV, GL, NK<br>TÜV, CE-Mark, DB | AC, DC +  | 2.5              |

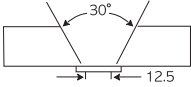
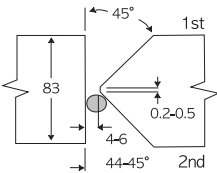
## Typical Chemical Composition of All-Weld Metal (%)

| Wire | C    | Si   | Mn   | P     | S     | Ti    | B      | BM      | Th.(mm) |
|------|------|------|------|-------|-------|-------|--------|---------|---------|
| H-14 | 0.09 | 0.21 | 1.34 | 0.019 | 0.012 | 0.018 | 0.0015 | SS400   | 25      |
|      | 0.08 | 0.26 | 1.40 | 0.020 | 0.009 | 0.020 | 0.0018 | EH36-TM | 83      |

## Typical Mechanical Properties of All-Weld Metal

| Wire | YS                        | TS                        | EL  | Position of fracture | CVN-Impact Value J (ft · lbs) |               | BM      | Th. (mm) |
|------|---------------------------|---------------------------|-----|----------------------|-------------------------------|---------------|---------|----------|
|      | MPa(lbs/in <sup>2</sup> ) | MPa(lbs/in <sup>2</sup> ) | (%) |                      | -40°C(-40° F)                 | -62°C(-80° F) |         |          |
| H-14 | 530 (76,900)              | 580 (84,200)              | 30  | -                    | -                             | 120 (88)      | SS400   | 25       |
|      | 510 (74,000)              | 570 (82,800)              | 32  | -                    | 150 (110)                     | 110 (81)      | EH36-TM | 83       |

## Typical Welding Conditions

| Wire | Dia. (mm) | Th. (mm) | Groove Design (mm)  | Pass         | Amp. (A) | Volt. (V) | Speed (cm/min) | Remarks              |        |
|------|-----------|----------|---|--------------|----------|-----------|----------------|----------------------|--------|
| H-14 | 4.0       | 25       |  | 1~13         | 570      | 30        | 40             | AWS A5.17            |        |
|      |           |          |   | 1st {        | 1        | 220       | 25             | 21                   | (FCAW) |
| H-14 | 4.8       | 83       |  | 2            | 270      | 30        | 25             | (FCAW)               |        |
|      |           |          |   | 3            | 550      | 30        | 35             |                      |        |
|      |           |          |   | 4~27         | 650      | 34        | 40             | Both Side Multi-pass |        |
|      |           |          |   | Back Gouging |          |           |                |                      |        |
|      |           |          |   | 2nd {        | 28       | 550       | 30             | 35                   |        |
|      |           |          |   | 29~51        | 650      | 34        | 40             |                      |        |