## CSM-90T

For $620 \mathrm{~N} / \mathrm{mm}^{2}$ class high tensile strength steel

| AWS | A5.29 | E90T1-GC |
| :--- | :--- | :--- |
| KS | D 7104 | YFW-C602M |
| JIS | Z3313 | T622T15-0CA-N2-H10 |

## Applications

Butt, fillet welding of $620 \mathrm{~N} / \mathrm{mm}^{2}$ high tensile strength steels of structure such as ships, bridges, buildings and storage tanks etc.

## Characteristics

((1) CSM-90T is a metal type flux cored wire for flat \& horizontal fillet welding with $\mathrm{CO}_{2}$ gas shielding.
(2) Its deposition rate is 10~30\% higher compared with a solid wire, so total cost is saved.
(3) It provides excellent usability with stable arc, less spattering better bead appearance and less quantity of welding fume comparable to solid wire.

## Notes on usage

(1) The optimum flow of $\mathrm{CO}_{2}$ for shielding is 20~25 $\ell / \mathrm{min}$.
(2) The distance between tip \& base metal is to be $15 \sim 25 \mathrm{~mm}$.
(3) Protect the weld with a screen to prevent blowholes caused by wind where the wind velocity is $2 \mathrm{~m} / \mathrm{sec}$ and more.
(4) Thick heavy plate should be welded under proper preheating \& interpass temperature.

Typical chemical composition of weld metal (\%) (Shielding gas : $100 \% \mathrm{CO}_{2}$ )

| C | Mn | Si | P | S | Ni | Mo |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.06 | 1.60 | 0.65 | 0.014 | 0.012 | 0.89 | 0.16 |

## Typical mechanical properties of weld metal

(Shielding gas : $100 \% \mathrm{CO}_{2}$ )

| $\begin{gathered} \mathrm{YP} \\ \mathrm{~N} / \mathrm{mm}^{2}(\mathrm{MPa}) \end{gathered}$ | $\begin{gathered} \mathrm{TS} \\ \mathrm{~N} / \mathrm{mm}^{2}(\mathrm{MPa}) \end{gathered}$ | $\begin{gathered} \text { EL } \\ \% \end{gathered}$ | IV (J) |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | $-20^{\circ} \mathrm{C}$ | $-30^{\circ} \mathrm{C}$ |
| 584 | 693 | 24.0 | 56 | 47 |

Size \& recommended current range ( $\mathrm{DC}+$ )

| Dia. mm (in) |  | $1.2(0.045)$ | $1.4(0.052)$ | $1.6(0.062)$ |
| :---: | :---: | :---: | :---: | :---: |
| Amp. | F \& H-F | $180 \sim 340$ | $200 \sim 360$ | $200 \sim 400$ |

