

# **Characteristics and Applications:**

TH-45 is a low hydrogen type electrode. The weld metal is sorbite structure (Ferrite + cementite). The weld metal has good mechanical properties, excellent resistance to abrasion accompanied with impact. It is suitable for the welding of shovel tooth, bulldozer blades, crane wheels and buckets.

### Notes on usage:

- 1. Dry the electrodes at 300-350  $^\circ\! \mathbb C$  for 30-60 minutes before using.
- 2. Clean up the contaminations on the steel.
- 3. Use back-step method to prevent arc starting from blowholes and stay for 3-5 seconds before every end-up.
- 4. Maintain short arc length. Moving range should be controlled within 2.5 times of the wire's dia when you are welding with weave method.

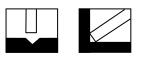
### Typical chemical composition of weld metal (wt%):

С	Mn	Si	Cr
0.17	2.0	0.60	2.0

### Typical hardness of weld metal:

Testing Condition		Vicker's Hardness (HV)	Rockwell's Hardness (HRC)	Shore's Hardness (HS)
As	Interpass temp. $150^{\circ}$ C	430	43	58
Welded	Cont. Build Up	380	38	52
Water Quenching At 900°C		450	45	61

## Welding position:



## Sizes and recommended current range (AC or DC<+>):

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Diameter (mm)	3.2	4.0	5.0
Length (mm)	350	350	450
Amps	80-130	120-180	160-220

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