

BS 639: 1986

This specification is divided into two parts, the compulsory strength, toughness and covering (STC) code which appears on each electrode and the additional coding showing efficiency, welding positions, power supply requirements and when appropriate, hydrogen control. Use of this classification system is best illustrated by an example:

Ferromax STC code Additional
E5144BB: **[130 3 1 H]**

Consumable Type - E

E is for covers electrode for manual metal are welding. No other consumables are covered by this specification.

Strength - 51

Designation	TS N/mm	min YS N/mm	min elongation, % when 3rd digit in classification is		
E43xxx	430-550	330	0.1	2	3, 4, 5
E51xxx	510-650	360	20	22	24
			18	18	20

Third Digit - Impact Value - 4

Digit	Temp, C, for 28J ave CVN
Exx0xx	not specified
Exx1xx	+20
Exx2xx	0
Exx3xx	-20
Exx4xx	-30
Exx5xx	-40

Fourth Digit - Impact Value - 4

Digit	Temp, C, for 47J ave CVN
Exxx0x	not specified
Exxx1x	+20
Exxx2x	0
Exxx3x	-20
Exxx4x	-30
Exxx5x	-40
Exxx6x	-50
Exxx7x	-60
Exxx8x	-70

Covering - BB

ExxxxB	Basic
ExxxxBB	Basic, high recovery
ExxxxC	Cellulosic
ExxxxR	Rutile
ExxxxRR	Rutile, heavy cated
ExxxxS	other types

Efficiency - 130

The normal electrode efficiency is the ratio of the mass of weld metal to the mass of core wire consumed for a given electrode. It is quoted to the nearest 10% and is included if the figure is equal to or greater than 110.

Welding Position - 3

1	all positions
2	all positions except vertically down
3	flat and horizontal-vertical
4	flat
5	flat, vertically down and horizontal-vertical
6	any position or combination not included above

Power Supply Requirements - 1

Digit	Polarity for DC	OCV for AC
0	as recommended	not suitable
1	+ or -	50
2	-	50
3	+	50
4	+ or -	70
5	-	70
6	+	70
7	+ or -	80
8	-	80
9	+	80

Hydrogen Controlled Electrodes - H

The letter H is included for electrodes which deposit not more than 15ml diffusible H₂/100g deposited weld metal.

کارخانه: خراسان شمالی / بجنورد / شهرک صنعتی بیدک / خیابان صنعت ۳

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