

IS 814: COVERED ELECTRODES FOR MANUAL METAL ARC WELDING OF CARBON AND CARBON MANGANESE STEEL

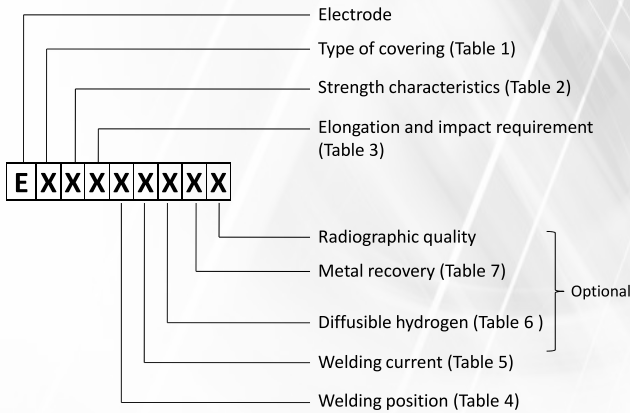


Table 1: Type of covering

Symbol	Type of covering
A	Acid
B	Basic
C	Cellulosic
R	Rutile
RR	Rutile, heavy coated
SB	Semi basic

Table 2: Strength characteristics

Symbol	Tensile strength (MPa)	Yield strength (MPa) min
4	410-510	330
5	510-610	400

Table 3: Elongation and impact requirement

Symbol	% Elongation	Impact (J at ° C)
For 410-510 MPa		
0	16	No requirement
1	20	47 @ + 27
2	22	47 @ + 0
3	24	47 @ - 20
4	24	27 @ -30
For 510-610 MPa		
0	16	No requirement
1	18	47 @ + 27
2	18	47 @ + 0
3	20	47 @ - 20
4	20	27 @ -30
5	20	27 @ -40
6	20	27 @ -46

Table 5: Welding current

Symbol	DC	AC, OCV (V) min
0	+	Not recommended
1	±	50
2	-	50
3	+	50
4	±	70
5	-	70
6	+	70
7	±	90
8	-	90
9	+	90

Table 6: Diffusible hydrogen

Symbol	Diffusible H ₂ (ml/100g weld metal)
H1	Upto 15
H2	Upto 10
H3	Upto 5

Table 7: Metal recovery

Symbol	Metal recovery (%)
J	110-129
K	130-149
L	150 and above

Table 4: Welding positions

Symbol	Position
1	All position
2	All position except vertical down
3	Flat butt weld, flat fillet and horizontal/vertical fillet weld
4	Flat butt weld and flat fillet weld
5	Vertical down, Flat butt weld, flat fillet and horizontal/vertical fillet weld
6	Any other position



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