Product Data Sheet

Rutile electrode
High manganese stainless

SUPER OPTIMAL 307

Classification

***AWS A* 5.4:** ≈ E 307- 16 ***DIN 8556*:** E 18 8 Mn R 26

DIN EN 1600: E 18 8 Mn R 12 ***Werkstoff Nr:*** 1.4370

Description and applications

Austenitic (non-magnetic) rutile coated electrode for joining and overlaying on manganese steels(up to 14% Mn) and high sulphur and phosphorus containing steels, also for joining dissimilar steels, construction steels to stainless steels, for cushion layers prior hardfacing. Repairing of pieces submitted to shocks or wear by friction. Excellent machinability, easy slag removal, nice aspect of the bead. For civil engineering, railways, cement works (screening steels, digger buckets, crusher jaws...)

Base materials

Screening steels
Tools steels"
Austenitic steels with Mn : type Z 120 M 12, X 120 Mn 12. 1.3401
Spring steels: 45 Cr 4, 1.7035,46 Si 7, 1.5024, 51 Si 7, 1,5025. 56 Si 7, 1.5026 (*) With eventual pre- and post weld heat treatment.

All weld metal mechanical properties

Tensile Strength R_m (N/Mm^2)	Elongation	ISO- V J RT
> 550	> 35	> 75

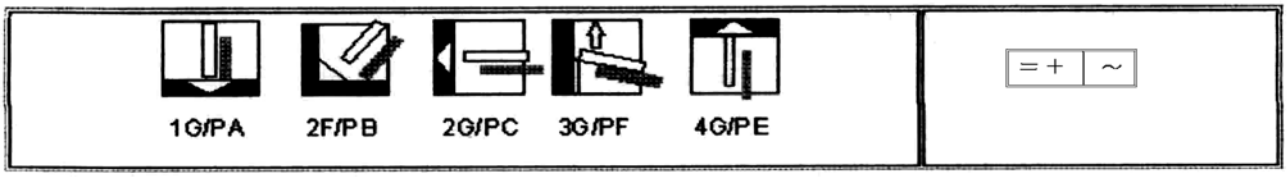
Typical weld metal composition (%)

C	Si	Mn	Cr	Ni	Mo	S	P
0.12	0.50	5.10	19.0	9.00	0.50	0.012	0.015

Amperes (A)

2.50	3.15	4.00
60-90	80-120	100-150

Welding instruction Rebaking (1 hour at 300º C). Never preheat Mn-steel because of its sensitive to hot cracks.



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