

# Basic Electrodes





# AMA 1007 F

**Standards:** DIN 8529 E 51 55 Mn B  
 AWS/ASME SFA - 5.1 E 7016- H8

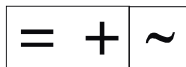
Application / Properties: Multi-purpose electrode for assembly work, workshop and repair welding; also approved for rail joint welding. Smooth and clean weld blending into base metal without undercut. Good gap bridging properties. Owing to its double covering, electrode has a stable and concentrated arc and good suitability for AC welding. It is specially suited for root pass and positional welding. welds arc of X-ray quality.

**Weld metal analysis in % (typical)**

C	Mn	Si
0.08	1.3	0.45

**Mechanical Properties of all-weld metal :**  
 (single values are typical values)

Yield Strength (N/mm <sup>2</sup> )	Tensile Strength (N/mm <sup>2</sup> )	Elongation A5 (%)	ISO-V Impact energy (j)	
			+ 20 °C	- 30 °C
>420	500-640	>22	150	90



Amperage:				
2.5Ø	3.25 Ø	4.0Ø	5.0Ø	6.0Ø
60-90	90-140	135-190	190-260	300-380



**Material:**

Unalloyed Structural steels	St 33 TO St 52-3 St 50-2, St 60-2, St 70-2
Boiler plates	H I, H II, 17 Mn 4
Pipe steels	St 35.8 to 17 Mn 4 StE 210.7 to StE 360.7
Fine grain structural steels	Including corresponding-TM-grades StE 255 to StE 355 WStE 255 to WStE 355 TStE 255 to TStE 355
Cryogenic steels	TT St 35 N u.V
Shipbuilding steels	A, B, D, E
Cast steels	GS-38, GS-52 DIN 1681

Redrying : Required at 300 to 350°C for 2 hrs.



# AMA 1177 F

**Standards:** EN 499 E 42 6 B 42 H 5  
 DIN 8529 E SY 42 76 Mn B  
 AWS/ASME SFA - 5.1 E 7018 - 1 - H4

**Application / Properties:** Electrode for producing crack-free and tough welding joints, also suited for welding steels having a carbon content of up to 0.6%. The weld metal has very low hydrogen content and is resistant to ageing. Approved for rail joint welding. Good gap bridging properties. Owing to its double covering (up to 3.25mm) the electrode has a stable and concentrated arc is therefore well suited for positional welding. Welds are if X-ray quality. CTOD-tested for offshore application.

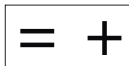
**Weld metal analysis in % (typical)**

C	Mn	Si	S	P
0.06	1.50	0.30	<0.02	<0.02

**Mechanical Properties of all-weld metal :  
 (single values are typical values)**

Yield Strength (N/mm <sup>2</sup> )	Tensile Strength (N/mm <sup>2</sup> )	Elongation A5 (%)	ISO-V Impact energy (J)	
			+ 20 °C	- 60 °C
AW >420	500-640	>22	180	70
SR >420	500-640	>22	160	60

AW= as - welding  
 SR= atress - relieved 15hrs./580C



Amperage:				
2.5Ø	3.25 Ø	4.0Ø	5.0Ø	6.0Ø
65-95	90-140	140-185	180-240	250-330



**Material:**

Unalloyed Structural steels-----St 33 to St 52-3,  
 St 50-2, St 60-2, St 70-2  
 Boiler plates-----H I, H II, 17 Mn 4, 19 Mn 5  
 Pipe steels----- TO St 52.4  
 St 35.8 to 17 Mn 4,  
 StE 210.7 to StE 415.7  
 Including corresponding-TM-grades  
 Fine grain structural steels-----EStE 255 to EStE 420,  
 StE 255 to StE 420  
 WStE 255 to WStE 420  
 Cryogenic steels-----TT St 35 N u.V  
 Shipbuilding steels-----A,B,D,E  
 cast steels-----Gs-38,GS-52

Approval : LR, GL, BV, DNV  
 Redrying : Required at300 to 350°C for 2 hrs.





## AMA 1235 F

### Standards:

DIN 1913  
AWS/ASME SFA-5.1

E51 55 B5  
E 7018-H4

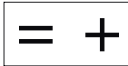
**Application / Properties:** Electrode for producing crack-free and tough welding joints, Weld metal recovery is approx. 115%. The electrode has Good arc stability. Welds are X-ray quality. Suitable for welding steels having up to 0.4% C.

### Weld metal analysis in % (typical)

C	Mn	Si	S	P
0.08	1.40	0.50	<0.02	<0.02

خواص مکانیکی فلز جوش خالص:

Yield Strength (N/mm <sup>2</sup> )	Tensile Strength (N/mm <sup>2</sup> )	Elongation A5 (%)	ISO-V Impact energy (j)	
			+20 °C	-30 °C
>400	500-620	>22	140	80



Amperage:			
2.5Ø	3.25 Ø	4.0Ø	5.0Ø
65-90	90-130	140-180	190-230



### Material:

Unalloyed Structural steels St 33 ,St 37,St 44, St 52-3,  
St 52-2  
Boiler plates H I,H II, 17 Mn 4 Pipe steels  
St 35.8,St 37.0,St 37.4,USt 37.0,St 44.0,St 44.4,St 45.8  
St 52.0,St 52.4,StE 210.7,StE 290.7,StE 320.0,StE 360.7  
Including corresponding-TM-grades  
Fine grain structural steels StE 255, StE 285, StE 315,  
StE 355 WStE 255, WStE 285,WStE 315,WStE 355  
Shipbuilding steels A,B,D,E  
cast steels GS-38,GS-45,Gs-52

Redrying : Required at 300 to 350°C for 2 hrs.



# AMA 1280 M

**Standards:** EN 499 E - 42 3 B 42 H10  
 DIN 1913 E 51 54 B H10  
 AWS/ASME SFA - 5.1 E 7018 - H8

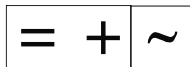
**Application / Properties:** Electrode for producing crack-free and tough welding joints, Weld metal recovery is approx. 115% . Smooth and clean welds blending into base metal without undercut. Good gap bridging properties. Owing to its double covering (up to 3.25mmØ) the electrode has a stable and concentrated arc is therefore ideally suited for root pass and positional welding. Welds are X-ray quality. Suitable for depositing layer on steels having higher carbon Content (up to .4).

**Weld metal analysis in % (typical)**

C	Mn	Si	S	P
0.07	0.5	1.1	<0.02	<0.02

**Mechanical Properties of all-weld metal :**  
 (single values are typical values)

Yield Strength (N/mm <sup>2</sup> )	Tensile Strength (N/mm <sup>2</sup> )	Elongation A5 (%)	ISO-V Impact energy (j)	
			+ 20 °C	- 30 °C
>420	500-610	>22	150	70



Amperage:				
2.5Ø	3.25 Ø	4.0Ø	5.0Ø	6.0Ø
65-90	100-140	140-190	190-250	260-340



**Material:**

Unalloyed Structural steels-----St 33 ,St 37,St 44, St 52-3, St 52-2  
 Boiler plates-----H I, H II, 17 Mn 4 , 19Mn 5  
 Pipe steels-----St 35.8, St 37.0, St 37.4, USt 37.0, St 44.0, St 44.4, St 45.8, St 52.0, St 52.4, StE 210.7, StE 290.7, StE 320.0, StE 320.0, StE 360.  
 Including corresponding-TM-grades  
 Fine grain structural steels-----StE 255, StE 285, StE 315, StE 355 WStE 255, WStE 285, WStE 315, WStE 355  
 Shipbuilding steels----- A, B, D, E  
 cast steels-----GS-38 to Gs-52

Redrying : Required at 300 to 350°C for 2 hrs.