

Outershield® 550-H

High strength rutile cored wire

Classification

AWS A5.29-98 : E101T1-K3MJ H4
 EN 12535-00 : T 55 4 Z P M 1 H5

General description

All position gas shielded rutile flux cored wire, for high strength steel grades for welding pipes and plates
 Outstanding operators appeal
 Excellent mechanical properties (CVN >50J at -40°C)
 Very low hydrogen H_{DM} <5 ml/100g)
 Superior product consistency with optimal alloy control
 Good wire feeding

Welding positions



Current type/Shielding gas

DC +
 Ar+ (>5-25)% CO₂ (EN 439: M21)
 15-25 l/min

Approvals

Chemical composition (w%), typical, all weld metal

Shielding gas	C	Mn	Si	P	S	Ni	Mo	H _{DM} ml/100g
M21	0.04	1.4	0.2	0.012	0.010	2.0	0.3	3

Mechanical properties, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V (J) -40°C
Required: AWS A5.29-98			min. 610	690-800	min.15	min. 27
EN 12535-00			min. 550	640-820	min.18	min. 47
Typical values	M21	AW	700	730	19	60

Packaging and available sizes

Unit type	Net weight/unit (kg)	Diameter (mm)
		1.2
Plastic spool S200	4.5	X
Wire reel B300	15	X

Outershield® 550-H: rev. EN 15

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Materials to be welded

Steel	Code	Type
Pipe material	API 5LX	X52, X60, X60, X65, X70, X80
Fine grained steel	EN 10137-2	S500 - S550

Calculation data

Diameter (mm)	Electrical Stick-out (mm)	Wire feed speed (cm/min)	Current (A)	Arc Voltage (V)	Deposition Rate (kg/h)	kg Wire/ kg weld metal
1.2	20	445	130	20-22	1.6	1.20
		700	180	23-25	2.5	1.20
		950	220	25-27	3.4	1.20
		1270	265	27-29	4.5	1.20
		1590	305	30-32	5.9	1.20

Welding parameters, optimum fill, shielding gas Ar + (>5 - 25)% CO₂

Diameter (mm)	Current/ Voltage	Welding position				
		PA/1G	PB/2F	PC/2G	PF/3G up	PE/4G
1.2	(A)	230-280	230-280	200-240	200-240	160-220
	(V)	26-32	26-32	25-32	25-28	23-30