FLUXOFIL 35

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 35 is a seamless copper coated basic flux cored wire suitable for the welding of creep resistant boiler and pipe steels for operating temperatures up to 530 °C, as well as fine grain structural steels. Quiet and stable arc with low spatter loss and easy slag removal produce a uniform and smooth weld bead surface which is free from porosity.

Classification	
EN ISO	17634-A: T MoL B C 2 H5
EN ISO	17634-A: T MoL B M 2 H5
AWS	A5.36: E70T5-C1PY-GH4
AWS	A5.36: E80T5-M21PY-GH4

Approvals	Grade
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Mo
0.05	1.1	0.3	0.010	0.010	0.5

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -20 °C
620°C x 1h	≥ 470	550-690	≥ 22	>70

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : C1, M21

Materials

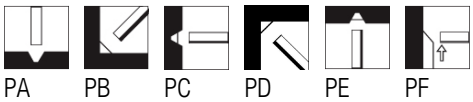
S(P)235-S(P)460, 16Mo3

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281235
1.6	W000281237

FLUXOFIL 36

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 36 is a seamless copper coated basic flux cored wire suitable for the welding of Cr Mo-alloyed boiler and pipe steels for high creep rupture strength up to 570 °C. Quiet and smooth fusion and low spatter loss with easy slag removal produce uniform and smooth weld beads which are free from porosity.

Classification	
EN ISO	17634-A: T CrMo1 B C 2 H5
EN ISO	17634-A: T CrMo1 B M 2 H5
AWS	A5.36: E80T5-C1PY-B2H4
AWS	A5.36: E80T5-M21PY-B2H4

Approvals	Grade
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Mo
0.08	0.8	0.3	0.010	0.010	1.2	0.4

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) +20 °C
690 °C x 1h	≥ 470	550-690	≥ 20	≥ 120

Gas test: 100% CO2

Shielding Gas - EN ISO 14175 : C1, M21

Materials

13CrMo4-5, 13CrMoSi5-5; G17CrMo5-5

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281239
1.6	W000281240

FLUXOFIL 37

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 37 is a seamless copper coated basic flux cored wire, suitable for the welding of Cr Mo-alloyed boiler and pipe steels, for high creep rupture strength up to 600 °C. Quiet and smooth running and low spatter loss with easy slag removal produce uniform and smooth beads which are free from porosity.

Classification	
EN ISO	17634-A: T CrMo2 B C 2 H5
EN ISO	17634-A: T CrMo2 B M 2 H5
AWS	A5.36: E80T5-C1PY-B3H4
AWS	A5.36: E80T5-M21PY-B3H4

Approvals	Grade
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Mo
0.1	0.8	0.4	0.010	0.010	2.4	1.1

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) +20 °C
700°C x 1h	≥ 470	550-690	≥ 20	≥ 100

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : C1, M21

Materials

10CrMo9-10,12CrMo9-10;A387 Gr.22, Cl 1 si 2,A 182 Gr.F 22,A 336 Gr.F22

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281244
1.6	W000281245

FLUXOFIL 38 C

MIG/MAG Cored Wires
Chromium-Molybdenum steels

FLUXOFIL 38C is a seamless copper coated basic flux cored wire, suitable for the welding of Cr Mo V-alloyed steels for high creep rupture strength up to 600 °C. Quiet and smooth running and low spatter loss with easy slag removal produce uniform and smooth weld beads which are free from porosity.

Classification	
EN ISO	17634-A: T Z B M 3 H5
AWS	A5.36: E70T5-M21PY-GH4

Approvals	Grade
TÜV	●

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	V
0.1	0.7	0.3	0.010	0.010	1.3	0.3	0.9	0.25

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) +20 °C
950°C x 0,5h + 700°C x 16h	≥ 400	483-655	≥ 22	≥ 47

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : C1, M21

Materials

G17CrMoV5-11

Storage
Keep dry and avoid condensation

Current condition and welding position
DC+

PA PB

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281247
1.6	W000281248

FLUXOFIL 40

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 40 is a seamless flux-cored wire electrode with basic slag for gas-shielded metal arc welding of unalloyed steels with yield strengths of up to 460 MPa. The weld metal is very crack resistant, good toughness down to -60°C and very low hydrogen content. Stable operating characteristics and low spatter formation with short, spray and pulsed arc applications alike. Safe side wall fusion and very good gap bridging characteristics. Preferably used under mixed gas. The use of CO2 for short and spray arc processes is possible.

Classification	
EN ISO	17632-A: T 46 6 1Ni B M 2 H5
AWS	A5.36: E80T5-M21A4-GH4

Approvals	Grade
DB	●
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Ni
0.06	1.3	0.4	≤ 0.010	≤ 0.010	1.0

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -60 °C
As Welded	≥ 470	550-680	≥ 20	≥ 60

Gas test: M21

Shielding Gas - EN ISO 14175 : M21

Materials

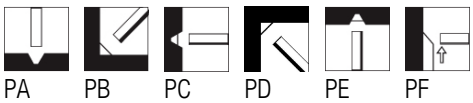
S(P)275-S(P)460

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281180
1.4	W000281181
1.6	W000281182

FLUXOFIL 41

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 41 is a seamless copper coated basic cored wire for welding of high strength steels with minimum yield strength of 550 MPa. operating features include low spatter loss, easy slag removal and uniform bead appearance.

Classification	
EN ISO	18276-A: T 55 4 1NiMo B C 2 H5
EN ISO	18276-A: T 55 4 1NiMo B M 2 H5
AWS	A5.36: E90T5-C1A0-GH4
AWS	A5.36: E90T5-M21A0-GH4

Approvals	Grade
DB	●
RMRS	5Y50 H5
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Ni	Mo
0.07	1.3	0.4	0.01	0.01	1.1	0.4

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -40 °C
As Welded	≥ 550	640-760	≥ 18	≥ 60

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : C1, M21

Materials

S(P)500, S550, HY 80

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281197
1.4	W000281198
1.6	W000281199

FLUXOFIL 42

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 42 is a seamless copper coated basic flux cored wire for the welding of high-strength fine grain structural steels with minimum yield strength of 690 MPa. Operating features include low spatter loss, easy slag removal and uniform bead appearance.

Classification	
EN ISO	18276-A: T 69 6 Mn2NiCrMo B M 2 H5
AWS	A5.36: E110T5-M21A4-K4H4

Approvals	Grade
ABS	3YQ690SA
ABS	4YQ690SA H5
BV	3Y69 MS H5
BV	4Y69 MS H5

Approvals	Grade
DB	●
DNV	IIIY69MS H5
DNV	IVY69MS H5
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo
0.06	1.5	0.3	0.01	0.01	0.4	2.3	0.4

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				-40 °C	-60 °C
As Welded	≥ 690	770-895	≥ 17	≥ 80	≥ 47
580 °C x 2 h	≥ 690	770-895	≥ 17	≥ 80	≥ 47

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

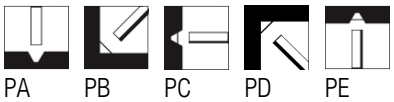
S620, S690, HY 100

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



PA PB PC PD PE

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281205
1.6	W000281207

FLUXOFIL 45

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 45 is a seamless copper coated basic flux cored wire for welding high-strength fine grain structural steels. Quiet and smooth running with low spatter loss and easy slag removal producing uniform and smooth beads which are free from porosity. The mechanical properties of the weld depend on the cooling conditions and are influenced by the heat input and interpass temperature.

Classification	
EN ISO	18276-A: T 89 4 Z B M 2 H5
AWS	A5.36: E130T5-M21A4-GH4

Approvals	Grade
DB	●
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo
0.09	2	0.5	0.01	0.01	1	1.8	0.4

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -40 °C
As Welded	≥ 890	940-1034	≥ 15	≥ 47

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

S890

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281221

FLUXOFIL 48

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 48 is a seamless copper coated basic flux cored wire for gas-shielded metal arc welding of weathering and fine grain structural steels such as Patinax or Cor-ten. The weld metal is resistant to atmospheric corrosion. Low spatter loss, easy slag removal, smooth and uniform bead appearance. The weld metal is very crack-resistant, cold-tough down to 60°C with very low hydrogen content.

Classification	
EN ISO	17632-A: T 46 6 Z B M 2 H5
AWS	A5.36: E80T5-M21A8-GH4

Approvals	Grade
DB	●
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Ni	Cu
0.05	1.1	0.25	0.010	0.010	1.2	0.5

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -60 °C
As Welded	≥ 470	550-680	≥ 20	≥ 47

Gas test: M21

Shielding Gas - EN ISO 14175 : M21

Materials

S235J0W; S235J2W; S355J0W; S355J2W; S355K2W

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281195
1.6	W000281196

FLUXOFIL M 41

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL M41 is a seamless copper coated cored wire for welding of high strength steels with minimum yield strengths of 550 MPa. Stable operating characteristics and low spatter formation with short, spray and pulsed arc applications alike. Safe side wall fusion and very good gap bridging characteristics. To be used under mixed gas only.

Classification	
EN ISO	18276-A: T 55 5 Z M M 1 H5
AWS	A5.36: E90T15-M21A5-G-H4

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Ni	Mo
0.06	1.7	0.6	≤ 0.015	≤ 0.015	0.6	0.3

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -50 °C
As Welded	≥ 550	640-760	≥ 22	≥ 47

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

S(P)460-S(P)500, S550, HY 80

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B200	B300
Diam(mm) / weight(kg)	5.0	16
1.2	W000289134	W000385490
1.6		W000289131

FLUXOFIL M 42

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL M42 is a seamless copper coated metal cored wire for welding of high strength steels with minimum yield strength of 690 MPa with outstanding welding characteristics in the short-arc and spray-arc ranges. Almost spatter-free when welding in the spray-arc range. Good restriking, even with a cold wire tip, thus being suitable for robotic applications. Characteristic features: good side wall fusion, smooth and finely rippled welds without undercut into the base metal. Little formation of silicates on the weld surface, so that multi-pass welds can be made without inter-run cleaning. Due to the easily controllable weld pool in the short-arc range, FLUXOFIL M 42 is suitable for positional welding.

Classification	
EN ISO	18276-A: T 69 4 Mn2NiCrMo M M 1 H5
AWS	A5.36: E110T15-M21A4-G-H4

Approvals	Grade
ABS	4Y 690 MS H5
BV	4Y 69 MS H5
DB	●
DNV	IVY 69 MS H5
LRS	4Y 690 MS H5
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo
0.05	1.5	0.5	0.01	0.01	0.4	2	0.4

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)
				-40 °C
580°C x 2 h/furnace (*)	≥ 690	770-896	≥ 17	≥ 80
As Welded (**)	≥ 690	770-896	≥ 17	≥ 80

Gas test: (*) M21, (**) 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

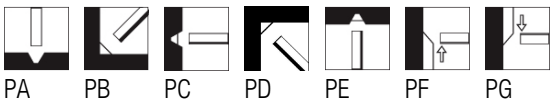
S620, S690, HY 100

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type	B300	DRUM	
Diam(mm) / weight(kg)	16	16	200
1.2	W000281216		W000281217
1.6	W000281219	W000281220	

FLUXOFIL M 48

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL M 48 is a seamless copper coated metal flux cored wire for gas-shielded metal arc welding of weathering and fine grain structural steels such as Patinax or Cor-ten. The weld metal is resistant to atmospheric corrosion. The weld metal corrosion behaviour is adapted to these steel types. Stable operating characteristics in short, spray and pulsed arc applications alike. Safe side wall fusion and very good gap bridging characteristics. To be used with Ar/CO2 gas shielding.

Classification	
EN ISO	17632-A: T 46 3 Z M M 1 H5
AWS	A5.36: E81T15-M21A0-W2-H4

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Cu
0.05	1.1	0.4	≤ 0.020	≤ 0.020	0.6	0.5	0.5

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -30 °C
As Welded	≥ 470	550-680	≥ 24	≥ 47

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

S235J0W; S235J2W; S355J0W; S355J2W; S355K2W

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16.0
1.2	W000281193
1.4	W000281194

FLUXOFIL MC466M

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL MC466M is the seamless copper coated metal cored wire for welding with M21 gas. It is designed for welding of steels with Re 355-460 MPa and meets impact requirements at -60°C. Excellent weldability for single and multipass welds in semiautomatic and robotic applications. Exceptional performance cause of new formula and optimized fill ratio. Applicable for welding on CV and Pulse welding modes. Weld metal is characterized by very low content of diffusible Hydrogen- below 4 ml/100g.

NEW

Classification	
EN ISO	17632-A: T 46 6 M M 1 H5
AWS	A5.18: E70C-6M H4
AWS	A5.36: E70T15-M21A8-CS1-H4

Approvals	Grade
ABS	5Y460
BV	SA5Y46 H5
CWB	E490T15-M21A6-CS1-H4
DNV-GL	V Y46MS(H5)
LR	Pending
RINA	5Y46
TUV/DB	in development

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.06	1.40	0.55	≤ 0.010	≤ 0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -60 °C
As Welded	>460	≥ 550	≥ 25	≥ 50
620°C/2h	>420	>500	≥ 30	≥ 60

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

S235-S460 M/N L

Shipbuilding steels A, B, D, DH, F, FH VL E,F 32 - 46

X42 - X65

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300	BS300	S200
Diam(mm) / weight(kg)	16	16	5
1.2	W000404204		W000414204
1.4		W000404206	

FLUXOFIL 14 HD S

MIG/MAG Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 14 HDS is a seamless copper coated rutile flux cored wire with an enhanced degree of fill. Due to an easily controllable weld pool, it features outstanding welding properties. FLUXOFIL 14 HDS can be welded in all positions with only one parameter setting. The enhanced degree of filling results in higher current carrying capacity and deposition rate, thus increased welding speeds may be used which leads to a saving of time and costs. Low spatter loss, easy slag removal, finely rippled and pore-free welds are produced without undercut.

Classification	
EN ISO	17632-A: T 46 4 P M 1 H5
EN ISO	17632-B: T 554T1-1MA-UH5
AWS	A5.20: E71T-1M-JH4
AWS	A5.36: E71T1-M21A4-CS1-H4

Approvals	Grade
ABS	3Y400SA H5
ABS	3Y400SA H5
BV	SA3Y40M H5
BV	SA3Y40M H5
DB	●
DB	●
DNV	IIIY40MS H5

Approvals	Grade
DNV	IIIY40MS H5
GL	3Y40H5S
GL	3Y40H5S
LRS	3Y40S H5
LRS	3Y40S H5
TÜV	●
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	Ni
0.05	1.2	0.55	0.4

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -40 °C
As Welded	≥ 460	550-650	≥ 22	≥ 50

Gas test: M21

Shielding Gas - EN ISO 14175 : M21-ATAL

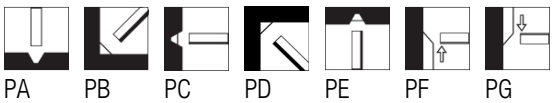
Materials

Shipbuilding steels A,B,D,E,AH32 to EH36

S(P)235-S(P)460, GP240-GP280

Storage
Keep dry and avoid condensation

Current condition and welding position
DC+



Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	**16.0**
1.2	W000281112
1.4	W000281113
1.6	W000281114

FLUXOFIL 18 HD

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 18HD is a seamless copper coated special rutile cored wire for gas-shielded metal arc welding of weathering steels such as Patinax or Cor-ten. The weld metal corrosion behaviour is adapted to these steel types. Excellent weldability. Very good slag removal, smooth weld bead surfaces without undercutting into the base metal. Very good mechanical property values and highly X-ray proof. Can be welded in all positions with one parameter setting. Preferably used under mixed gas. The use of CO2 is possible.

Classification	
EN ISO	17632-A: T 50 3 Z P M 1 H5
AWS	A5.36: E81T1-M21A0-G-H4

Approvals	Grade
RINA	

CE

Chemical analysis (Typical values in %)

C	Mn	Si	Cr	Ni	Cu
0.04	1.1	0.5	0.6	0.6	0.7

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -30 °C
As Welded	≥ 500	560-690	≥ 21	≥ 47

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

S235J0W; S235J2W; S355J0W; S355J2W; S355K2W

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B200	B300
Diam(mm) / weight(kg)	5.0	16.0
1.2	W000281188	W000281189
1.4	W000281190	W000281191
1.6		W000281192

FLUXOFIL 20 HD

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 20HD is a seamless copper coated rutile flux cored wire for gas-shielded metal arc welding of fine grain steels with operating temperatures from -40°C up to +450°C. The enhanced degree of fill, results in a higher current carrying capacity and deposition rate. It can be welded in all positions using only one parameter setting (24 volts, wire feed 9 m/min, wire dia. 1,2 mm). The weld metal produced features excellent mechanical-technological properties and a hydrogen content of hydrogen < 5 ml per 100g deposited weld metal. Low spatter loss, easy slag removal producing finely rippled, pore-free welds without undercut. To be used under mixed gas

Classification	
EN ISO	17632-A: T 46 4 1Ni P M 1 H5
AWS	A5.29: E81T1-Ni1M JH4
AWS	A5.36: E81T1-M21A4-Ni1-H4
EN-ISO	17632-B:T554T1-1MA-N2-UH5

Approvals	Grade
ABS	4Y46SA H5
BV	SA4Y46M H5
DB	●
DNV-GL	IVY46MS H5
LRS	4Y46S H5
RMRS	4Y46S H5
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Ni
0.06	1.3	0.4	≤ 0.010	≤ 0.010	≤ 1.0

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -40 °C
As Welded	≥ 470	550-680	≥ 24	≥ 60
580 °C x 2 h/f.	≥ 470	550-680	≥ 24	≥ 47

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

S(P)275-S(P)460

X42 - X70

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300	BS300
Diam(mm) / weight(kg)	16	16
1.2	W000281133	W000281333
1.4	W000281134	
1.6	W000281135	

FLUXOFIL 21 HD

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

Good NDT soundness of welds, easy slag removal, very little spatter.

FLUXOFIL 21 HD is the original seamless copper coated rutile flux cored wire for welding of steels with Re 355 – 460 MPa in CO2 shielding gas. Formula of blend and degree of fill guarantee good productivity and impact of min 47J at -40degC. Weld metal shows hydrogen content below 4 ml/100g of weld metal. The wire delivers welder friendly arc characteristics and can be welded in all positions using starting parameters of 24 volts and WFS between 7 and 9 m/min (1,2 mm).

Classification	
EN ISO	17632-A: T 46 4 1Ni P C 1 H5
AWS	A5.29: E81T1-Ni1C- JH4
AWS	A5.36: E81T1-C1A4-Ni1-H4

Approvals	Grade
ABS	5YQ460 H5
BV	SA4Y46M H5
LRS	4Y46S H5
RINA	4Y46 S H5

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Ni
0.07	1.4	0.4	≤ 0.015	≤ 0.015	0.9

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -40 °C
As Welded	≥ 490	570-670	≥ 22	≥ 60

Gas test: C1

Shielding Gas - EN ISO 14175 : C1

Materials

S(P)275-S(P)460

Storage

Keep dry and avoid condensation.

Current condition and welding position

DC+

Packaging data

Packaging Type	B300 SEAPACK	B300 XN2	S200
Diam(mm) / weight(kg)	16	16	5
1.2	W000402449	W000374002	W000401103

FLUXOFIL 25

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 25 is a seamless copper coated rutile flux cored wire with a fast-freezing slag, suitable for the welding of creep resistant boiler and pipe steels, for operating temperatures up to 530 °C, as well as fine grain structural steels. Due to its easily controllable weld pool, it features outstanding welding properties in all positions. Low spatter loss, finely rippled welds without undercut.

Classification	
EN ISO	17634-A: T MoL P M 1 H5
AWS	A5.36: E81T1-M21PY-A1-H4

Approvals	Grade
TÜV	●

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Mo
0.05	1.1	0.4	0.01	0.01	0.5

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) 20 °C
As Welded	≥ 490	550-650	≥ 22	≥ 70
620°C x 1h	≥ 470	550-690	≥ 22	≥ 70

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

S(P)235-S(P)460, 16Mo3

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16
1.2	W000281233

FLUXOFIL 29 HD

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 29HD is a seamless rutile flux cored wire for gas shielded metal arc welding of high-strength fine grain structural steels with minimum yield strength of 690 MPa. Very good slag removal, smooth seam surface without undercutting into the base metal. Good mechanical property. Can be welded in all positions with one setting of parameters.

Classification	
EN ISO	18276-A: T 69 4 Z P M 1 H5
EN ISO	18276-B: T763T1-1MA-Z-UH5
AWS	A5.29: E111T1-GM-H4
AWS	A5.36: E111T9-M21A2-GH4

Approvals	Grade
ABS	2Y69 (add. 47J@-40°

CE

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Ni	Mo
0.06	1.4	0.4	≤ 0.010	≤ 0.010	2.9	0.35

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -40 °C
As Welded	≥ 690	770-895	≥ 17	≥ 47

Shielding Gas - EN ISO 14175 : M21

Materials

S620, S690, HY 100

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300
Diam(mm) / weight(kg)	16.0
1.2	W000278606

FLUXOFIL 464M

FCAW/MCAW Cored Wires
C-Mn and low-alloy steels

FLUXOFIL 464M is the seamless copper coated flux cored wire for welding with M21 gas. The wire is characterized by reduced emission of welding fumes with fume class 5b. The consumable is designed for welding of steels with Re 355-460 MPa and meets impact requirements at -40°C. Excellent operator appeal due to new flux formulation and exceptional arc stability. Very good performance in vertical up and positional welding, including root passing on ceramic backing. Weld metal is characterized by very low content of diffusible Hydrogen - below 4 ml/100g.

NEW

Classification	
EN ISO	17632-A: T 46 4 P M21 1 H5
AWS	A5.20: E71T-1M-JH4
AWS	A5.36: E71T1-M21A4-CS1-H4

Approvals	Grade
ABS	4Y400
BV	SA4Y46 H5
CWB	E491T1-M21A4-CS1-H4
DNV-GL	IV Y40MS(H5)
LR	4Y46S H5
RINA	4Y40
TUV/DB	pending

Chemical analysis (Typical values in %)

C	Mn	Si	P	S
0.07	1.5	0.5	≤ 0.010	≤ 0.010

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -40 °C
As Welded	≥ 460	≥ 550	≥ 23	≥ 76

Gas test: 82% Ar+18% CO2

Shielding Gas - EN ISO 14175 : M21

Materials

S(P)235-S(P)460M/N

Shipbuilding steels D, E, EH, VL E 32 - 46

X42 - X65

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+

Packaging data

Packaging Type	B300	BS300	S200
Diam(mm) / weight(kg)	16	16	5
1.2	W000404203	W000414203	W000424203