

# Luoyang Peony Welding Material Group Co.,Ltd

For excellent Quality&Service We provide

## About Luo Yang Peonyweld

LUOYANG PEONY WELDING situated in the historically and culturally famous city of Luoyang- a modern industrial city, is one of the largest manufacturers of welding consumables in China.

LUOYANG PEONY commenced operations in 1985,a leading manufacturer of Submerged arc welding in China, whose product brands are famous as "PEONY" and "HUAWANG".

There are five productions lines of submerged arc welding flux, which have a capacity of 40,000 tons of welding consumables.

PEONY WELDING under "PEONY","HUAWANG" brand provides welding product for the following industrial field:steel constructions; wind tower; pipelines; pressure vessel; gas cylinder; hardfacing; platforms; ship building; nuclear electric power plants and etc..

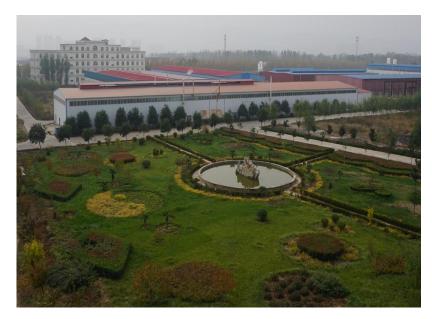
We have strong research and development ability with 18 senior welding technology engineers offer after sales service for our customers. About quality control, we have complete experimental and testing equipments including chemical analysis, mechanical properties, impact value. We keep a close relation and cooperation with Henan University of Science and Technology.

LUOYANG PEONY WELDING operates under a comprehensive quality management system certified to ISO9001:2008 and the approval of China Classification Society.

We are dedicated to offering more better welding service and saving costs for our customers.

Our mission is to supply the exceptional quality and exceptional service FOR YOU.







## Production&Inspection





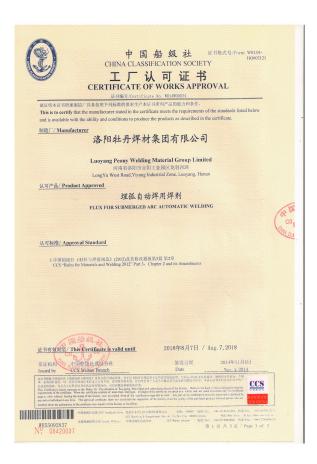






## Certificate Approval







ISO9001: 2008 CCS ABS

## Wide Range Application

Peonyweld continues to provide excellent products and service to our customers.

Steel Construction Pressure Vessel Pipe Lines Ship construction

Wind Energy Gas cylinder Boiler Bridge construction

Aircraft Industry Hardfacing Nuclear Power Box Girder













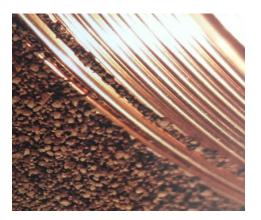
## Submerged Arc Fluxes

## **Agglomerated Flux**

- Can be made to any alloy or basicity requirement
- More versatile
- better at low currents < 600A
- better in high basicity compositions BI >2.5
- Better deep groove slag removal
- easier to feed in air feed systems
- lower weight consumption than fused
- usually less expensive

## **Fused Flux**

- have better moisture resistance
- can be crushed to various mesh sizes
- better at very high currents
- can be recrushed and reused in overlay applications





## Agglomerated Flux

- Alloy Steel
- SJ101
- SJ101G
- SJ101T
- SJ105
- SJ206
- SJ604
- Carbon Steel
- > SJ301
- > SJ501
- ➤ NB501
- Stainless Steel
- SJ303
- SJ601





### **Specifications**

GB/12470-2003 F48A2-H10Mn2A AWS A5.17/A5.23 F7A2-EM12K

#### **Product information**

Basicity Index		Grain size	Slag type	Polarity	
	1.0	10-40mesh	Fluoride Basic	DC/AC	

Feature Application and advantage:

Stable arc capable of welding low alloy steel

Easy slag removal the most versatile flux

single pass circumferential welding used in Steel structure Boiler Pressure vessel gas cylinder

### **Typical Mechanical Properties**

	Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)	
					-18°C	-29°C
F	EH14	495	415	28	/	68

% Si02+%TiO2	% CaO+%MgO	% Al <sub>2</sub> O <sub>3</sub> +%MnO	% CaF	% S	% P
35-45	20-30	20-30	5-15	0.018%	0.052%

## Peonyweld SJ101G

### **Specifications**

GB/12470-2003 F48A4-H10Mn2 F48A2-H08MnA AWS A5.17/A5.23 F7A4-EH14 F7A4-EM12K

#### **Product information**

Basicity Index		Grain size	Slag type	Polarity	
	1.8	10-40mesh	Fluoride Basic	DC/AC	

Feature Application and advantage:

Stable arc capable of welding low alloy steel
Easy slag removal Boiler Pressure vessel Pipeline
Excellent weld deposit appearance Used in multi-layer/pass also single

Higher impact value Especially used in dual-wire and single pass of large container

### **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)	
				-29°C	-40°C
EM12K	540	465	31	110	70
EH14	590	495	28	/	98

% Si02+%TiO2	% CaO+%MgO	% Al <sub>2</sub> O <sub>3+</sub> %MnO	% CaF	% S	% P
20-30	25-35	15-30	15-25	0.013%	0.038%

## Peonyweld SJ101T

### **Specifications**

GB/12470-2003 F48A4-EM12K AWS A5.17/A5.23 F7A4-EM12K

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity
2.1	10-40mesh	Fluoride Basic	DC/AC

Feature Application and advantage:

Stable arc capable of welding low alloy steel

Easy slag removal Boiler Pressure vessel Pipeline steel structure

Excellent weld deposit appearance Used in multi-layer/pass also single

Higher impact value Especially used in dual-wire and single pass of large container

**Typical Mechanical Properties** 

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)	
				-40°C	
EM12K	545	440	28	98	

% Si02+%TiO2	% CaO+%MgO	% Al <sub>2</sub> O <sub>3</sub> +%MnO	% CaF	% S	% P
15-20	25-35	20-30	20-25	0.011%	0.043%

### **Specifications**

GB/T5293-1999 F4A2-H08A F7A2-H08MnA AWS A5.17/A5.23 F7A0-EL8 F7A0-EM12K

#### **Product information**

Basicity Index		Grain size	Slag type	Polarity	
	1.0	10-60mesh	Calcium-Silicate	DC/AC	

Feature Application and advantage:

Stable arc With short slag, excellent used in small diameter circular welding

Easy slag removal general steel structure boiler pipeline

Excellent weld denosit appearance better Used in multi-layer/pass also sing

Excellent weld deposit appearance better Used in multi-layer/pass also single

While the wire connected with positive in DC, the most current is

**Typical Mechanical Properties** 1200A.

Used in large diameter pipe, getting smooth weld bead

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)	
				0°C	-18°C
EL8	435	340	27	/	64
EM12K	545	425	24	80	85

% Si02+%TiO2	% CaO+%MgO	% Al <sub>2</sub> O <sub>3+%</sub> MnO	% CaF	% S	% P
35-45	20-30	20-30	5-15	0.014%	0.051%

## **Specifications**

GB/T17854-1999、 NB/T47018-2011

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity
1.1	20-80mesh	Calcium-Silicate	DC

#### **Feature**

Stable arc

Easy slag removal

Excellent weld deposit appearance

## Application and advantage:

Combine With H00Cr21Ni10/H00Cr19Ni12Mo2 welding

strips, excellent used in the corrosion resistant stainless steel surface

welding

better Used in strip surfacing such as Chemical Reactor

While the strip connected with positive in DC, Used in hard facing

welding, high efficiency and getting smooth weld bead

% Si02+%TiO2	% CaO+%MgO	% Al2O3+%MnO	% CaF	% S	% P
<b>≈</b> 40	<b>≈</b> 30	<b>≈</b> 20	5-15	0.013%	0.025%

**Specifications** 

GB/T5293-1999 F4A0-H08MnA AWS A5.17/A5.23 F7AZ-EM12K

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity
0.7	10-40mesh	Aluminum-Rutile	DC/AC

Feature Application and advantage:

Stable arc Active alloying acid flux, excellent used in tanks, pressure vessel, LPG

Easy slag removal cylinder, general steel structure boiler pipeline welding

Excellent weld deposit appearance better Used in multi wire high speed welding

Insensitive to rust/scale/dirt While the wire connected with positive in DC, the most current is

**Typical Mechanical Properties** 1000A.

It features a smooth arc, good moisture tolerance.

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value	(J)
				0°C	-18°C
EL8	435	330	24	50	/
EM12K	450	345	24	62	/

% Si02+%TiO2	% Al <sub>2</sub> O <sub>3+</sub> %MnO	% CaF	% S	% P
25-35	50-60	3-10	0.012%	0.025%

## Peonyweld NB501

**Specifications** 

GB/T5293-1999 F4A0-H08MnA AWS A5.17/A5.23 F7AZ-EM12K

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity
0.7	10-40mesh	Aluminum-Rutile	DC/AC

**Feature** Application and advantage:

Stable arc Active alloying acid flux, excellent used in tanks, pressure vessel, LPG

Easy slag removal cylinder, general steel structure boiler pipeline welding

Excellent weld deposit appearance better Used in multi wire high speed welding Insensitive to rust/scale/dirt

It features a smooth arc, good moisture tolerance.

Perfect for boiler welding. **Typical Mechanical Properties** 

Wii	re Tensile stren	gth(Mpa) Yield stren	gth(Mpa) Elongtion	n(%)	pact Value(J)
				0°C	-18°C
EL12	435	330	24	50	/
EM12K	500	370	24	65	/

% Si02+%TiO2	% Al2O3+%MnO	% CaF	% S	% P
25-35	50-65	3-10	0.011%	0.025%

**Specifications** 

GB/T12470-2003、 NB/T47018-2011 F48A4

AWS.5.17/5.23 F7A4-EH14

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity
2.2	10-60mesh	Fluoride-Basic	DC

Feature Application and advantage:

Stable arc Specially hardfacing flux, excellent used in roll surfacing

Easy slag removal better Used for DC power, especially rebuilding and surfacing of steel

Excellent weld deposit appearance mill ro

Execution werd deposit appearance

High resistance to cracking

**Typical Mechanical Properties** 

mill rolls

It features a smooth arc, and self-detaching slag even when the welding

deposits is still hot.

	Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value	<b>e</b> (J)
					-29°C	-40°C
F	EH14	520	425	28	/	67

% Si02+%TiO2	% CaO+%MgO	% CaF	% Al2O3	% S	% P
18-22	33-37	25-30	10-20	0.011%	0.019%

**Specifications** 

GB/T12470-2003 F55A3-H09MnNiE AWS A5.23 F8A2-ENi1K-Ni

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity
1.1	10-40mesh	Aluminte-Basic	DC

Feature Application and advantage:

Stable arc Single pass high speed welding, slow freezing slag, welding bead

Easy slag removal shape uniformity

Excellent weld deposit appearance suitable for various structural steel, high strength low alloy steel, and

weathering steels making it widely used for pipe manufacturing.

### **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	ength(Mpa) Yield strength(Mpa) Elongtion(	Elongtion(%)	Impact Value(J)	
				0°C	-29°C
ENi1K-Ni	580	495	20		55

% Si02+%TiO2	% CaO+%MgO	% Al <sub>2</sub> O <sub>3+%</sub> MnO	% CaF	% S	% P
15-25	25-35	35-45	5-15	0.012%	0.036%

### **Specifications**

GB/T 17854-1999 NB/T47018-2011 F308-H08Cr21Ni10 AWS A5.9

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity	
1.8	10-40mesh	Fluoride-Basic	DC	

#### **Feature**

pure weld deposit low content of harmness

## Application and advantage:

Single pass high speed welding, slow freezing slag, welding bead shape uniformity suitable for various structural steel, high strength low alloy steel, and weathering steels making it widely used for pipe manufacturing.

### **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)
				-196°C
H08Cr21Ni10	560	/	38	56

% Si02+%Ti02	% CaO+%MgO	% Al2O3+%MnO	% CaF	% S	% P
5-10	6-10	30-40	40-50	0.013%	0.035%

### **Specifications**

GB/T F48A6-ENi1 F48A5-EM12K AWS F7A8-ENi1 F7A5-EM12K

#### **Product information**

Basicity Index		Grain size	Slag type	Polarity	
2.8	3	10-40mesh	Fluoride-Basic	DC/AC	

#### **Feature**

high Fluoride high basicity excellent art properties high purity of weld deposit

### Application and advantage:

with different wire can be used in low-temperature steel and high strength steel like low-temperature pressure vessel,ocean platform,bridge construction low diffusible hydrogen in weld deposit

## **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)		
				-46°C	-60°C	
ENi1	600	500	27		115	
EM12K	565	475	29	96		

% Si02+%TiO2	% CaO+%MgO	% Al <sub>2</sub> O <sub>3+%</sub> MnO	% CaF	% S	% P
15.52	33.04	22.02	22.94	0.015%	0.047%

## Fused Flux

- ➤ HJ107
- ➤ HJ250
- ➤ HJ260
- **≻** HJ330
- ➤ HJ420
- ➤ HJ431
- > DZH F600





## **Specifications**

GB/T GB/T 17854-1999 F308-H08Cr21Ni10

#### **Product information**

Basicity Index		Grain size	Slag type	Polarity	
	1.5	8-40mesh	Fluoride-Basic	DC	

#### **Feature**

Medium Fluoride and Silicon Free Manganese shallow penetration stable arc easy slag removal

### **Application and advantage:**

Welding Austenitic stainless steel,less carbon-pick-up and reducing burning of chromium

With stainless wire and strip, it is recommended for the overlaying and normal welding of the layer of corrosion resistant of petrochemical equipments, and also for High Manganese steel.

### **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	Elongtion(%)
H08Cr21Ni10	556	37

### Deposited metal chemical component

GB F308- H08Cr21Ni10	С	Si	Mn	Р	S	Cr	Ni
Actual(%)	0. 068	0. 85	1.36	0. 025	0. 013	18.92	9.93

## **Specifications**

GB/T 12470-2003 F48A2-H10Mn2 **AWS** A5.23 F7A0-EH14

#### **Product information**

Basicity Index		Grain size	Slag type	Polarity	
	1.6	10-40mesh	Fluoride-Basic	DC	

### **Feature**

low Manganese, medium silicon and

Fluoride

## Application and advantage:

With suitable welding wire, EA4, EA3, it can be used for low alloy high

strength steel.

With DC, stable arc easy slag removal Its impact value is good when welding cryogenic steel with H08Mn2MoVA.

## **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value	e(J)
				0°C	-18°C
EH14	535	430	28		70

% Si02	% CaO+%MgO	% Al2O3+%MnO	% CaF	% FeO	% R2O	% S	% P
18-22	21-29	26-32	20-24	<b>≦</b> 1.5	<b>≦</b> 3	≦0.06	<b>≦</b> 0.08

## **Specifications**

GB/T 17854-1999 F308-H08Cr21Ni10

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity
1.1	10-60mesh	Fluoride-Aluminum- Magnesiun	DC

#### **Feature**

low Manganese high silicon and Medium Fluoride gray glassy grains

# With DC, stable arc easy slag removal **Typical Mechanical Properties**

## Application and advantage:

With suitable stainless welding wire,H0Cr21Ni10,H0Cr21Ni10Ti,it is recommended for acis-resistant stainless steel structure and surfacing of steel roller

Wire	Tensile strength(Mpa)	Elongtion(%)
H08Cr21Ni10	540	36

% Si02	% CaO+%MgO	% Al <sub>2</sub> O <sub>3+</sub> %MnO	% CaF	% FeO	% S	% P
29-34	19-25	21-28	20-25	<b>≦</b> 1.0	≦0.06	<b>≦</b> 0.08

## **Specifications**

GB/T 12470 F48A2-H10Mn2 AWS A5.23 F7A0-EH-14

### **Product information**

Basicity Index	Grain size	Slag type	Polarity
1.0	8-40 mesh	Silicon-manganese	DC/AC

Feature Application and advantage:

Easy salg removal Medium manganese high Silicon low Fluorite flux.

Excellent weld deposit appearance Used for low carbon steel and alloy steel structure/boiler/pressure vessel.

## **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)
				-18°C
EH-14	530	425	27	73

% Si02+%TiO2	% CaO+%MgO	% Al2O3+%MnO	% CaF	% S	% P
44-48	18-23	26-30	3-6	0.06	0.08

## **Specifications**

GB/T 5293 F5A2-H10Mn2 AWS A5.17 F7A0-EH14

#### **Product information**

Basicity Index	Grain size	Slag type	Polarity
0.9	8-40 mesh 18-150mesh	Silicon-manganese	DC/AC

#### **Feature**

Easy salg removal

Excellent weld deposit appearance

## Application and advantage:

High manganese and Silicon low Fluorite flux, good ability of anti rust and porosity. Used for low alloy high strength steel structure/boiler/pressure vessel/ship building; Fine mesh size can be used for thin plate single pass high speed welding.

## **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)
				-18°C
EH-14	540	430	27	61

% Si02	% TiO <sub>2</sub>	%MnO	% S	% P
26-32	18-25	44-49	0.013	0.036

**Specifications** 

GB/T 5293 F4A2-H08A AWS A5.17 F7A0-EL8

### **Product information**

Basicity Index	Grain size	Slag type	Polarity
0.8	8-40 mesh	Silicon-manganese	DC/AC

Feature Application and advantage:

Easy slag removal High manganese and Silicon low Fluorite flux.

Excellent weld deposit appearance Used for low carbon steel and low alloy steel structure/boiler/pressure vessel/ship

building; also can be used for electroslag welding and Copper welding.

### **Typical Mechanical Properties**

	Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)	
					-18°C	
]	EL8	450	350	28	76	

% Si02+%TiO2	% CaO+%MgO	% Al <sub>2</sub> O <sub>3+%</sub> MnO	% CaF	% S	% P
40-44	13-16	38-42	3-7	0.06	0.08

## Peonyweld DZH F600

**Specifications** 

GB/T5293-1999 F48A0-H10Mn2 AWS A5.17M-2007 F7AZ-EH14

### **Product information**

Basicity Index	Grain size	Slag type	Polarity		
1.0	30-150mesh	Silicon-manganese	DC/AC		

**Feature** Application and advantage:

Easy slag removal Excellent weld deposit appearance

Fused flux specially used for electrosalg welding, combines low carbon steel

and low alloy wires, especially for box girder structure application.

## **Typical Mechanical Properties**

Wire	Tensile strength(Mpa)	Yield strength(Mpa)	Elongtion(%)	Impact Value(J)	
				0°C	
EH-14	520	415	27	62	

% Si02+%TiO2	% CaO+%MgO	% Al <sub>2</sub> O <sub>3</sub> +%MnO	% CaF	% S	% P
40-45	15-20	25-30	5-10	0.016	0.052