



BARS | WIRES | WELDING WIRES

# Stainless Steel **WELDING WIRES**





# Company Profile

## The Journey of Venus Group

Branched out from its domestic trading division, in 1990, Venus started production of stainless steel bars & wires primarily focusing export market. Venus' production facility & sales office are located in Khopoli, about 80 kms from Mumbai, the commercial capital of India.

Venus currently exports to more than 50 countries and have made a successful footprint globally with its impeccable quality and service. Our success is driven by our people and their commitment to get results the right way - by operating responsibly, executing with excellence, applying innovative technologies and capturing new opportunities for profitable growth.

Venus supplies materials for a large number of applications used in aerospace, agricultural, automotive, consumer, energy, food, industrial, medical, marine, oil & gas, paper, ship building etc. In addition to an effective Quality Management System (QMS) compliant to ISO and TS standards, Venus holds a number of customer and product approvals as a testimonial for its high quality products.

We ensure that the returns are effectively invested back for improving production facility and welfare of the people working with us. We strive for continual improvement in the quality of products, competitiveness and service level to customers.



World Class  
**WELDING WIRE**  
Manufacturing  
Facility

# Approvals



## Product Approvals & System Certifications

ISO 9001:2008

ISO 14001:2004

OHSAS 18001:2007

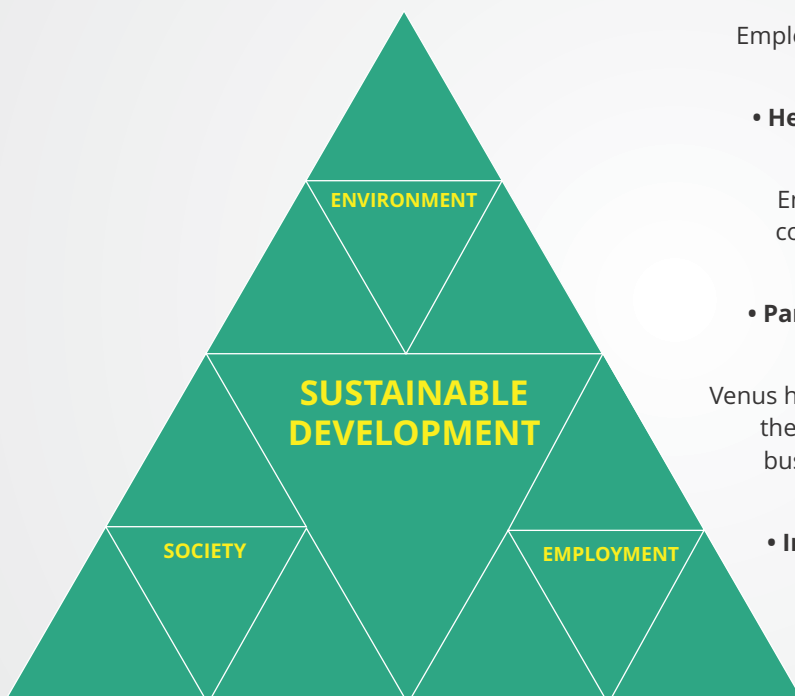
CE, DB, CWB

NPC, RDSO

NABL



## Corporate Social Responsibility



Employees are our greatest asset. We make them feel that they are an integral part of company's mission

- **Healthy & Safe Working Environment • Training • Positive Work Atmosphere • Opportunity to Learn & Grow**

Environmental protection is one of the key factors in Venus' company policy. We exhibit it by our participation in various programs to reduce pollution and industrial waste.

- **Participation in Green Energy Programs • Effective Waste Management • Energy Management Programs**

Venus has always demonstrated its endless commitment towards the society in which it operates. Whether it is in the matter of business transparency or creating sustainable employments, Venus has always put its best efforts.

- **Improving Regulatory Compliance • Engagement in Fair & Responsible Trade.**

## For GMAW (MIG) Process

### Diameter

mm	0.60	0.80	0.90	1.00	1.20	1.60
inch	0.025	0.030	0.035	0.040	0.045	0.062

### Finish

Bright, Matt & Semi Bright

### Packaging



12.5 kg. / 25lb., 15kg. 30 lb./ 33 lb.  
Layer wound Plastic spools/  
Basket spool



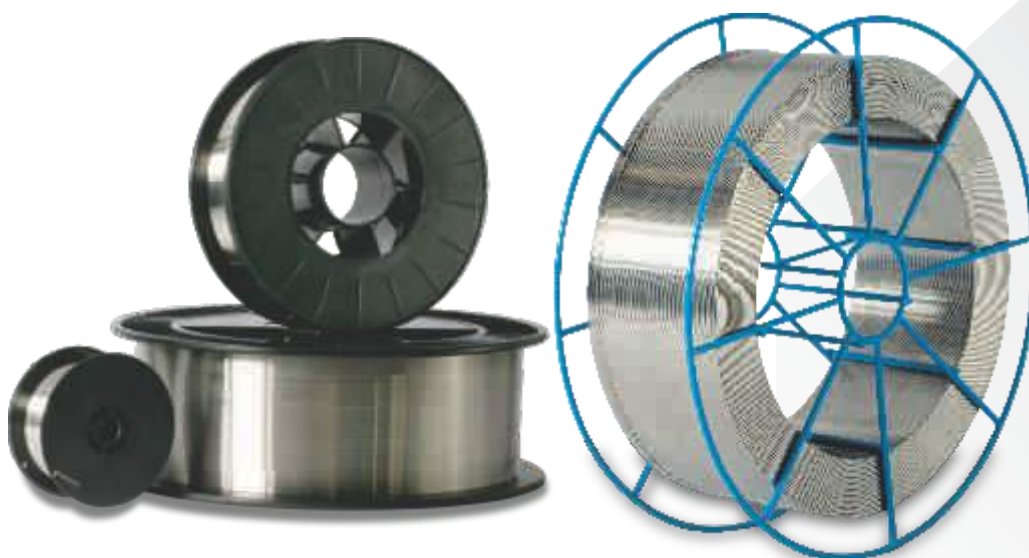
5 kg. / 10 lb. Layer wound  
plastic spools / Basket spool



1 kg. / 2 lb. Layer wound  
plastic spools

SIZE		STANDARD SPOOLS			
MM	INCH	Metallic Basket K 300	SD 300/BS300	SD 200/BS200	SD 100
0.60	0.025	10 kg./20 lb.	10 kg./20 lb.		
0.80	0.030				
0.90	0.035				
1.00	0.040	12.5 kg. / 25 lb.	12.5 kg./25 lb.	5 kg.	1 kg.
1.20	0.045	15 kg. / 30 lb./33 lb.	15 kg./30 lb./33 lb.	(10 lb.)	(2 lb.)
1.60	0.062				

We also offer "Customized Packaging & Labelling Solutions" as per requirements.





# MIG Wire



## Pail Packing System for Automatic Welding

MIG Wires in Fiber Drums of 100-125 Kgs (200-250 lbs) / 200-225 Kgs (450 - 500 lbs) available for high productivity GMAW process and robotic applications.

### Increase in productivity

With less down time compared to standard spools

### Less wear on welding machine parts

No twist pay - off system

### Clean conditions

No contamination from the shop environment

### Low space requirement

The drum diameter is only 510 mm

### Short set up time

Adapt quick and easily to any conventional feeder

### Grades

307, 307Si, 308, 308H, 308L, 308LSi, 309, 309L, 309LSi, 309LMo, 310, 312, 316, 316H, 316L, 316LSi, 317, 317Si, 318Si, 321, 347, 347Si, 409, 409Cb, 409Ti, 410, 410NiMo, 420, 430, 430LNb, 904L, 2209

\*also offered in equivalent DIN Standard



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# Submerged Arc Wire

## For SAW Process

### Diameter

mm	1.60	2.00	2.40	3.20	4.00
inch	0.062	0.080	0.093	0.125	0.156

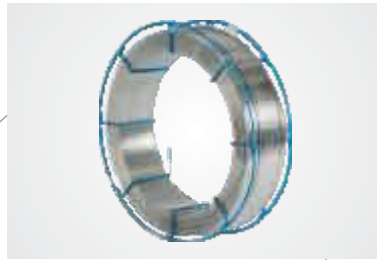
### Grades

307, 307Si, 308, 308H, 308L, 308LSi, 309, 309L, 309LSi, 309LMo, 310, 312, 316, 316H, 316L, 316LSi, 317, 317Si, 318Si, 321, 347, 347Si, 409, 409Cb, 409Ti, 410, 410NiMo, 420, 430, 430LNb, 904L, 2209

### Packaging



Layer Wound Coils of  
(Paper core)  
25 kg/50 lb/60 lb



Basket Spools K 415



Plastic Spools - H400

We also offer "Customized Packaging & Labelling Solutions" as per requirements.



## For GTAW (TIG) Process

### Diameter

mm	0.80	0.90	1.00	1.20	1.60	2.00	2.40	3.20	4.00	5.00	6.00
Inch	0.030	0.035	0.040	0.045	0.062	0.080	0.093	0.125	0.156	0.1875	0.250

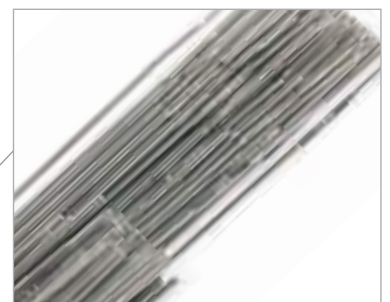
### Length Available

36 Inches & 1000 mm

### Identification



Grade & size embossed on both ends of the rods for diameter 1.60 mm (0.062") & above.



Customized markings like heat number, brand name, batch number etc possible on request

### Packaging in cut Length



Packed in card board tube 1 kg. to 10 kg., 2 lb to 22 lb



Fiber tubes further packed in cardboard boxes. 25 kg / 50 lb

### Grades

307, 307Si, 308, 308H, 308L, 308LSi, 309, 309L, 309LSi, 309LMo, 310, 312, 316, 316H, 316L, 316LSi, 317, 317Si, 318Si, 321, 347, 347Si, 409, 409Cb, 409Ti, 410, 410NiMo, 420, 430, 430LNb, 904L, 2209

\*also offered in equivalent DIN Standard



Wire on tubular carrier

We also offer "Customized Packaging & Labelling Solutions" as per requirements.

## In CUT LENGTHS & COILS

### For Manufacturing of MANUAL METAL ARC WELDING (MMAW) Electrodes

#### Diameter

mm	1.60	2.00	2.40	3.20	4.00	5.00	6.00
Inch	0.062 (1/16)	0.080 (5/64)	0.093 (3/32)	0.125 (1/8)	0.157 (5/32)	0.1875(3/16)	0.25 (1/4)

#### Grades

307, 307Si, 308, 308H, 308L, 308LSi, 309, 309L, 309LSi, 309LMo, 310, 312, 316, 316H, 316L, 316LSi, 317, 317Si, 318Si, 321, 347, 347Si, 409, 409Cb, 409Ti, 410, 410NiMo, 420, 430, 430LNb, 904L, 2209

#### Packaging



**CUT LENGTHS**  
In wooden boxes of  
500 - 1000 kg  
1000 - 2000 lb

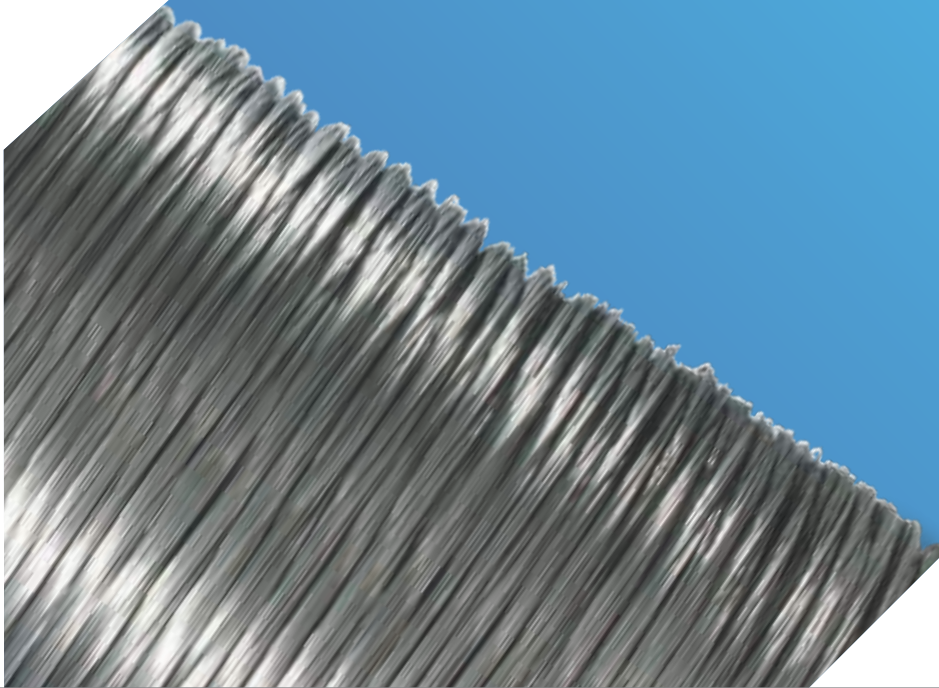


**COILS**  
300 - 1000 kg  
650 - 2200 lb wound  
on tabular carrier



**COILS**  
100 - 200 kg /  
200 - 500 lb  
HDPE wrapped

We also offer "Customized Packaging & Labelling Solutions" as per requirements.





# Industry Segments



## Thousands of Applications

Our Wires are an important ingredient for hundreds of applications. from Automobile to Aerospace, they form an integral part in increasing the product's quality and longevity.



Chemical



Paper



Oil & Gas



Food



Railways



Engineering Fabrication



Pressure Vessels



Automotive

**INNOVATIVE &  
HIGH-VALUE**  
products



In addition to the stringent process control techniques followed during production, Venus carry out comprehensive Chemical, Mechanical & Metallurgical testing on the final products to ensure compliance to customer's product specification and expectation.

Venus also offers third party inspection according to EN 10204 3.2 on demand.



### Wire Feeding Test

This test has been carried out as per Venus internal standard to ensure consistency in wire feeding during MIG welding process



### Chemical Analysis

The Chemical analysis of the weld metal is carried out as per test method ASTM E 1086, requirement in AWS 5.9, sample preparation as per AWS SFA 5.4



### UTS (Ultimate Tensile Strength) & % Elongation

UTS Testing as per ASTM A 370 / EN 10002-1.

Weldpad preparation as per AWS SFA 5.4.



### Impact Testing Machine

Sample preparation according to AWS SFA 5.4 and Testing method ASTM A370.

Tested at room temperature and sub-zero temperature upto  $-196^{\circ}\text{C}$



### **Positive Material Identification (PMI)**

Equipment using X-Ray fluorescence method for material identification in process & during final packing.



### **Metallurgical analysis**

This test is for all kinds of metallurgical analysis like Inclusion rating, Grain Size, Ferrite %, Micro / Macro Analysis.

## **IGC (Inter Granular Corrosion) Test**

This test is for detecting susceptibility to intergranular attack in Austenitic Stainless Steel as per test method ASTM A 262 / DIN 3651-2.



Apparatus for ferric sulfate  
– sulfuric acid test



Electrolytic Etching

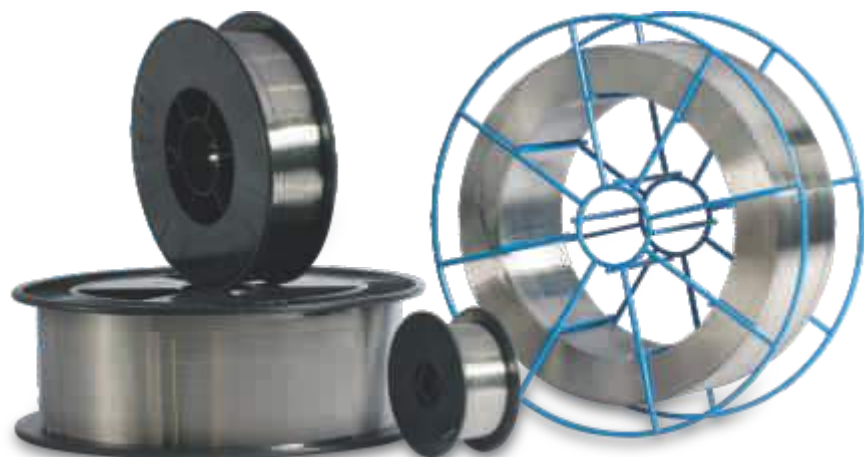
## Stainless Steel for Welding Application

Grades	AWS Classification	EN ISO 14343	Chemical Composition (%)						
			C	Si	Mn	P	S	Ni	
Martensitic	ER410	13	≤ 0.12	≤ 0.50	≤ 0.60	≤ 0.03	≤ 0.02	≤ 0.50	
	ER420	--	0.25/0.40	≤ 0.50	≤ 0.60	≤ 0.03	≤ 0.03	≤ 0.60	
	410NiMo	13 4	≤ 0.05	≤ 0.50	≤ 0.60	≤ 0.03	≤ 0.02	4.00/5.00	
Ferritic	ER430	17	≤ 0.10	≤ 0.50	≤ 0.60	≤ 0.03	≤ 0.03	≤ 0.50	
	--	430LNb (18LNb)	≤ 0.03	≤ 0.50	≤ 0.60	≤ 0.03	≤ 0.03	≤ 0.60	
Austenitic	ER308L	19 9 L	≤ 0.03	0.30/0.65	1.00/2.50	≤ 0.03	≤ 0.02	9.00/11.00	
	ER308LSi	19 9 Lsi	≤ 0.03	0.65/1.00	1.00/2.50	≤ 0.03	≤ 0.02	9.00/11.00	
	ER309L	23 12 L	≤ 0.03	0.30/0.65	1.00/2.50	≤ 0.03	≤ 0.02	12.00/14.00	
	ER309LSi	23 12 L Si	≤ 0.03	0.65/1.00	1.00/2.50	≤ 0.03	≤ 0.02	12.00/14.00	
	--	(309LMo) 23 12 2 L	≤ 0.03	≤ 1.00	1.00/2.50	≤ 0.03	≤ 0.02	21.00/25.00	
	ER316L	19 12 3 L	≤ 0.03	0.30/0.65	1.00/2.50	≤ 0.03	≤ 0.02	11.00/14.00	
	ER316LSi	19 12 3 L Si	≤ 0.03	0.65/1.00	1.00/2.50	≤ 0.03	≤ 0.02	11.00/14.00	
	ER310	25 20	0.08/0.15	0.30/0.65	1.00/2.50	≤ 0.03	≤ 0.03	20.00/25.50	
	ER312	29 9	≤ 0.15	0.30/0.65	1.00/2.50	≤ 0.03	≤ 0.02	8.00/10.50	
	ER317	--	≤ 0.08	0.30/0.65	1.00/2.50	≤ 0.03	≤ 0.03	13.00/15.00	
	ER317L	18 15 3 L	≤ 0.03	0.30/0.65	1.00/2.50	≤ 0.03	≤ 0.03	13.00/15.00	
	ER347Si	19 9 Nb Si	≤ 0.08	0.65/1.00	1.00/2.50	≤ 0.03	≤ 0.02	9.00/11.00	
	ER347	19 9 Nb	≤ 0.08	0.30/0.65	1.00/2.50	≤ 0.03	≤ 0.02	9.00/11.00	
	--	(307Si) 18 8 Mn	≤ 0.20	1.20	5.50/8.00	≤ 0.03	≤ 0.03	7.00/10.00	
	--	(318Si) 19 12 3 Nb Si	≤ 0.08	0.65/1.20	1.00/2.50	≤ 0.03	≤ 0.02	11.0/14.00	
	ER385	20 25 5 Cu L	≤ 0.025	≤ 0.50	1.00/2.50	≤ 0.02	≤ 0.02	24.00/26.00	
Duplex /	ER2209	22 9 3 NL	≤ 0.03	≤ 0.900	0.50/2.00	≤ 0.03	≤ 0.02	7.50/9.50	
Super duplex	ER2594	25 9 4 NL	≤ 0.03	≤ 1.00	≤ 2.50	≤ 0.03	≤ 0.02	8.00/10.50	
Nickel Alloys	ERNiCrMo-3	--	≤ 1.0	≤ 0.50	≤ 0.50	≤ 0.02	≤ 0.015	≥ 58.00	
	ERNiCr-3	--	≤ 0.10	≤ 0.50	2.50/3.50	≤ 0.03	≤ 0.015	≥ 67.00	
	VENUS		C	Si	Mn	P	S	Ni	
	For Electrodes	308L	≤ 0.02	≤ 0.20	≤ 2.00	≤ 0.02	≤ 0.015	9.50/10.50	
Special Alloy	For Automotive Exhaust	430LNbW	≤ 0.03	0.30/0.60	0.30/0.60	≤ 0.03	≤ 0.03	0.20/0.60	

We are **COMMITTED** to  
**THINKING AHEAD & STAYING AHEAD**  
in ways that matter most to **OUR CLIENTS.**



Stainless Steel for Welding Application								
Chemical Composition (%)						Approval		
	Cr	Mo	Cu	N	Others	TUV	DB	CWB
	12.00/15.00	≤ 0.50	≤ 0.50	---	---	---	---	---
	12.00/14.00	≤ 0.75	≤ 0.75	---	---	---	---	---
	11.00/12.50	0.40/0.70	≤ 0.50	---	---	---	---	---
	15.50/17.00	≤ 0.5	≤ 0.50	---	---	---	---	---
	15.50/17.00	≤ 0.75	≤ 0.75	--	Nb 8xC/1.20	--	--	--
	19.50/22.00	≤ 0.50	≤ 0.50	--	--	--	--	Mig & Tig
	19.50/22.00	≤ 0.50	≤ 0.50	--	--	Mig & Tig	Mig & Tig	Mig
	23.00/25.00	≤ 0.50	≤ 0.50	--	--	--	--	Mig & Tig
	23.00/25.00	≤ 0.50	≤ 0.50	--	--	Mig & Tig	--	Mig
	11.00/15.50	2.00/3.50	≤ 0.50	--	--	--	--	--
	18.00/20.00	2.00/3.00	≤ 0.50	--	--	--	--	Mig & Tig
	18.00/20.00	2.00/3.00	≤ 0.50	--	--	Mig & Tig	Mig & Tig	Mig
	25.00/28.00	≤ 0.75	≤ 0.75	--	--	--	--	--
	28.00/32.00	≤ 0.50	≤ 0.50	--	--	--	--	--
	18.50/20.50	3.00/4.00	≤ 0.75	--	--	--	--	--
	18.50/20.50	3.00/4.00	≤ 0.75	--	--	--	--	--
	19.00/21.00	≤ 0.50	≤ 0.50	--	Nb 10XC/1.00	Mig	--	--
	19.00/21.00	≤ 0.50	≤ 0.50	--	Nb 10XC/1.00	Tig	--	--
	17.00/20.00	≤ 0.50	≤ 0.50	--	--	Mig & Tig	Mig	--
	18.00/20.00	2.50/3.00	≤ 0.50	--	Nb 10XC/1.00	Mig & Tig	Mig & Tig	--
	19.50/21.50	4.20/5.20	1.20/2.00	--	--	--	--	--
	21.50/23.50	2.50/3.50	≤ 0.50	0.10/0.20	--	Mig & Tig	--	--
	24.00/27.00	2.50/4.50	≤ 1.50	0.20/0.30	W ≤ 1.00	--	--	--
	20.00/23.00	8.00/10.00	≤ 0.50	--	Fe 5.0max, Al 0.40max, Ti 0.40max, Nb+Ta 3.15/4.15, Others 0.50max	--	--	--
	18.00/22.00	--	≤ 0.50	--	Fe 3.0max, Ti 0.75max, Nb+Ta 2.0/3.0, Others 0.50max	--	--	--
	Cr	Mo	Cu	N	Others	--	--	--
	19.50/20.50	≤ 0.20	≤ 0.20	≤ 0.08	--	--	--	--
	16.50/19.50	0.20/0.50	0.30/0.70	--	Nb 0.30/0.70	--	--	--



# Exports Worldwide



## **Corporate Office**

### **Venus Wires Industries Pvt. Ltd.**

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Fax : +91 22 3045 1045

Email : [venuswires@venuswires.com](mailto:venuswires@venuswires.com)

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**[www.venuswires.com](http://www.venuswires.com)**