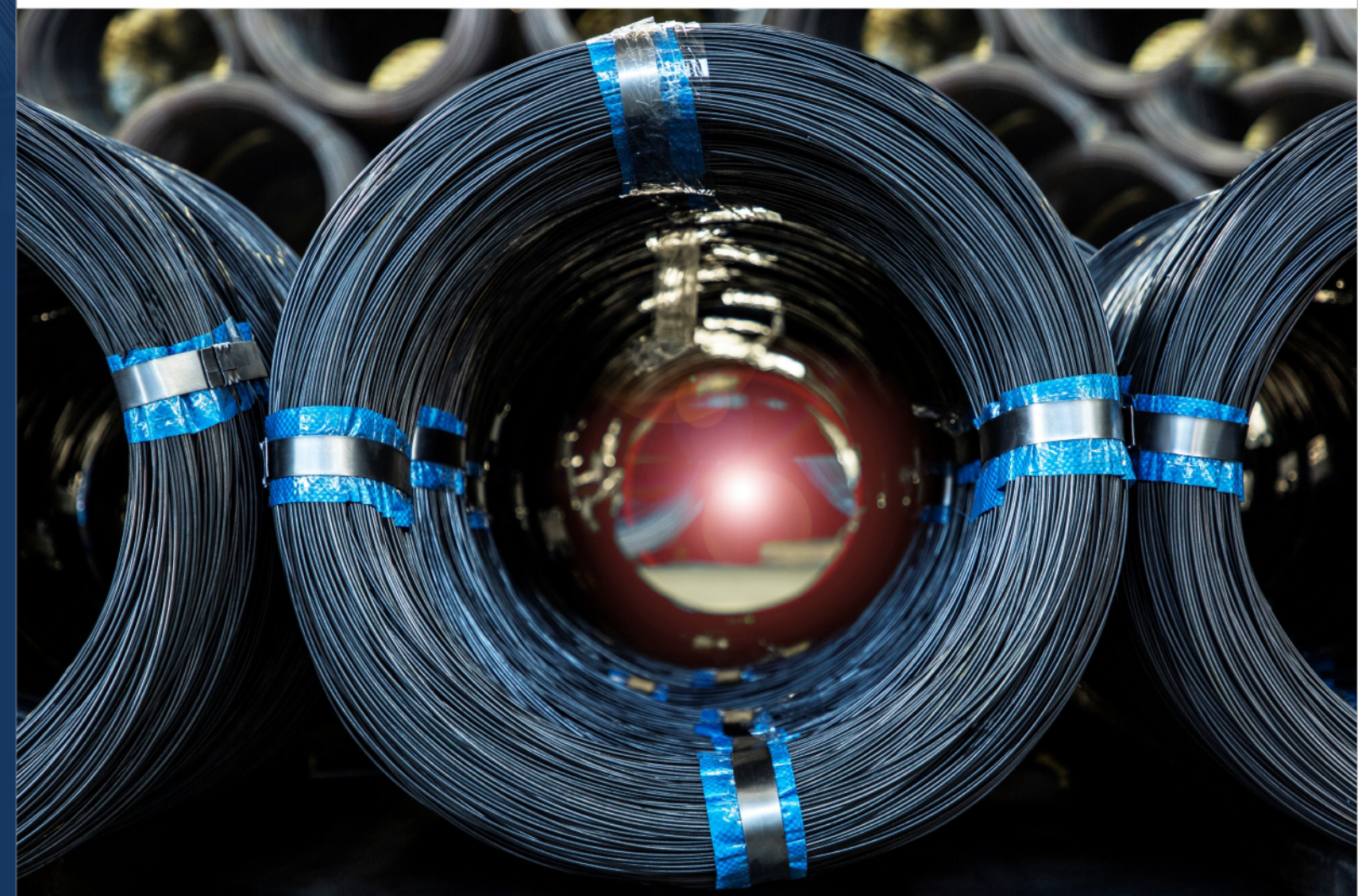


## ALIAJ FANAR OMID

Alloy spring wires  
High Carbon spring wires

Induction Heat Treated Wire



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## Aliaj Fanar Omid Industrial Co.

Established in 2008, the only manufacturer of Alloy Spring Wires (according to DIN EN 10270-2 FD SiCr) and High-Carbon Spring Wires (according to DIN EN 10270-1) in the Middle East for the purpose of supplying high quality material to spring manufacturers and OEM. Applying leading-edge technology and machinery has gained a lot of experiences and industrial courage to approach to overseas market too.

Annual production of Alloy Spring Wire through IT (Induction Treated) method is 20,000 MT. This method is absorbed by spring manufacturers for their production of suspension springs with a quality which is approved by OEM as their premier supplier.

Alloyed Spring Wire products are widely used in vehicles, Motorcycles, Agricultural Machineries, Oil & Gas, Home Appliances Industries and etc. A team of highly skilled, dedicated and innovate personnel have enabled us to deliver solutions to the most demanding operational and technical challenges requested by the most discriminating clients.

## Summary and Honors

- Manufacturing of Alloy Spring Wire with a diameter of 7.00 to 16.00 mm through induction tempering (IT) method
- Manufacturing of High-Carbon Spring Wire with a diameter of 0.60 to 6.00 mm
- The only manufacturer of alloy spring wire for vehicle suspension system in the Middle East in which using the induction tempering (IT) method.
- The only Iranian spring reference laboratory with ISO 17025 standard approved by two biggest car manufacturers in Iran by the name of SAPCO and SAZEH GOSTAR SAIPA companies as an authorized Alloy Spring Wire and High-Carbon Spring Wire supplier for vehicle suspension systems
- Recipient of the IATF 16496 standard certificate from DQS of Germany Alloy Steel with grade 54SiCr6 and tensile strength from 1700 to 2050.

## Key Values

- Business ethics and conformity with the regulations
- Social accountability
- honesty
- Understanding beneficiaries and sustainable interaction with them





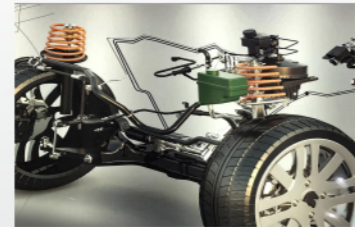
## Products

1

Alloy Spring Wires  
In accordance with DIN EN 10270-2 FD SiCr, using IT (Induction Heat Treatment) method



Type	Grade	Diameter (mm)	T/S(N/m2)	R/A(%)
Cr-Si Alloy	AFO - 180	7.00 - 16.00	1700 - 1900	Min. 40
	AFO - 200	7.00 - 16.00	1900 - 2050	Min. 35



2

High-Carbon Spring Wires  
In accordance with (DIN EN 10270-1)



Type	Grade	Diameter (mm)	Tensile Strength (MPa)
High - Carbon	SH	0.6 - 1.6	1770-1870
	SL	2.7 - 6.0	1570-1670
	SM	2.7 - 5.0	1370 - 1470



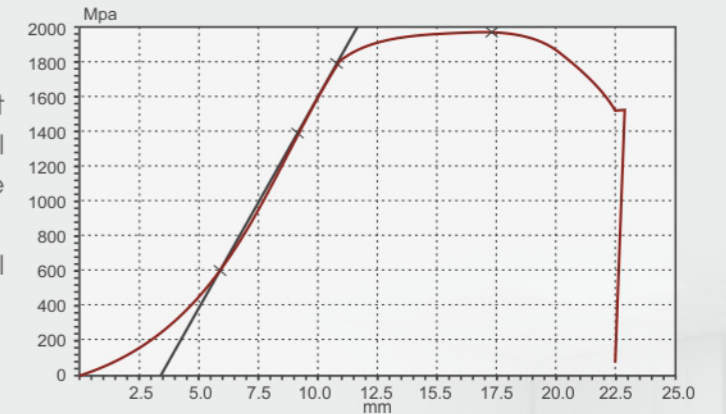
## Quality Control & Laboratory

Aliaj Fanar Omid Industrial Company, with rely on its professional and efficient personnel and applying leading-edge technology in the production of Alloy Spring Wire and using accurate laboratory equipment to control mechanical and chemical properties of the products according to global standards has achieved a lofty position in the field of production and in addition to meeting the domestic needs of the automotive industry, we have also planned to export to the neighbor counties.



- Equipment for the assessment of tensile strength and decrease of cross section and length increment percentage.
- HRC and HV hardness assessment equipment
- Metallography equipment
- Online Eddy Current equipment throughout all production lines (online fracture finding)
- Accurate dimensional measurement equipment
- Torsion test equipment
- Bending test equipment

UTS Mpa	Yield point MPa	Yield strength MPa	Max. Load N	Area mm <sup>2</sup>
1958.308	1759.343	1788.865	225558.486	115.180



### Eddy Current:

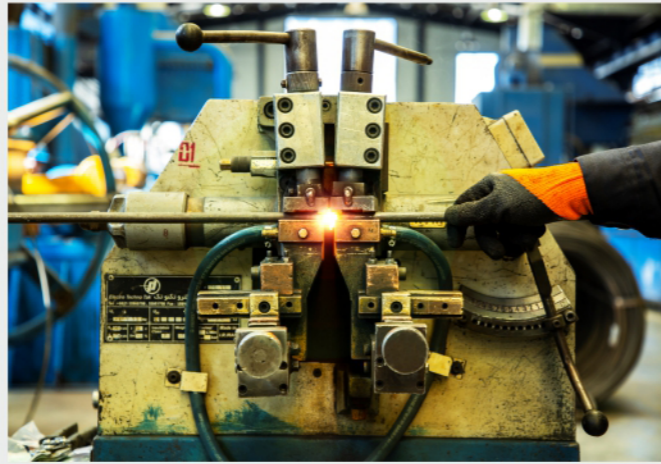
A device that can simultaneously identify and mark the smallest surface defects in the production line, hence at the time of delivery to the customer, the surface defects are mentioned in the quality certificate in order to prevent the production of low-quality products.





## A General Review of Alloy Spring Wire Production Line

This product line is in fact a semiconductor frequency converter device that controls electronic equipment through switching by a rectifier controlled by silicon semiconductors (thyristor) This method can convert high-frequency, three-phase electric energy to middle-frequency, single-phase electric energy which is generally used in the metal melting, surface quenching, etc. electrical tempering industries.



The most important benefits of this equipment:

1. The efficiency of this equipment achieves higher than 90%
2. The frequency of this equipment can easily change under load automatically
3. Digital control increases the flexibility and accuracy of furnace control process

## Product process / production technology



IHTW (Induction Heated Quenched and Tempering Spring Wire) is a spring wire with outstanding high tensile strength and high fatigue resistance used for suspension spring for automobiles produced by the cold forming process.

This is the 21<sup>st</sup> century product which enables cost reduction through light-weight spring wire, Ride comfort improvement through quality enhancement and design diversity.

## The group

Omid group consist of three companies  
 ALIAJ FANAR OMID Co.  
 OMID FANAR Co.  
 OMID FOOLAD HIRAD Co.

- ALIAJ FANAR OMID Co. specialized in the production of spring wires, stainless steel wires, and various spring production and its derivatives, the company that shares a common vision of quality for the best customer consents.
- OMID FANAR Co. is the biggest manufacturer of springs in Iran and region. Our springs widely used in automobile (suspension spring, valve spring, clutch spring), oil and gas, home appliances, research activities, aerospace, Medical and Railway industries.
- OMID FOOLAD HIRAD Co. is our trading company to provide raw material for its sister companies

Years of invaluable experiences, a team of highly skilled, dedicated and innovate personnel have enabled us to deliver solutions to the most demanding operational and technical challenges requested by the most discriminating clients.

