

## ■ CERTIFICATIONS

Alborz Forging Industries (AFI) has been certifying by ISO 9001 and QS9000 certifications many years ago and ISO/TS 16949:2009 recently, whereas the Quality Management System of AFI has assessed too based on Iranian and foreign automotive customers' specific requirements and quality systems.



Image: Shahid Rajaei Power Plant



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# AFI

## Alborz Forging Ind.

We Must Make Innovation, Creativity and Quality  
As National Identity So That Everyone Feels.





**AFI**

Alborz Forging Ind.



## ■ INTRODUCTION

**Alborz Forging Industries (AFI)** is one of the pioneers among Iran industry.

It was established in 1988 by private sector on a land area of 37,000 square meters area.

The principal activity of this company is a diverse range of steel parts producing by hot forging method and closed-die forging up to 30kg and 10'000 tons capacity per year in large groups of components, light and heavy vehicles, mine, agriculture, road vehicles, petrochemical, oil, gas, electricity transmission lines and railroad industries parts.

The policy of this company wishes high quality along high quantity production and ultimate customer satisfactions level. It should be considered that **Alborz Forging Industries (AFI)** has ability to produce both forging and machining parts, because of pioneer machining companies' joint venture, and based on dear customers' preferences.

On increasing mutual comprehensive cooperation's in the future, **AFI** is so interested to more potentials and business capabilities as OEM.



## ■ PRODUCTS:

Currently the main parts are supplied in the following groups by both forging and machining:

- Peugeot, Kia, Renault, Nissan and Mazda complete gearbox components
- Heavy vehicles complete gearbox
- Various agricultural machinery complete gearboxes such as tractor
- Set of light and heavy vehicle stub axle such as pinion , tuber and triangle
- Various suspension system parts , brake system components , steering wheel , hubs and flanges
- Agricultural , mine and road machinery such as flanges , husband tractors , crown-wheel pinion
- Petrochemical , oil and gas transmission lines parts
- Various gears and flanges





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## ■ PRODUCTION TECHNOLOGY

**Alborz Forging Industries (AFI)** Production process follow hot forging method. In accordance with pressing and closed-die forging production method at **AFI**, raw materials and alloy steel bars requested compatibility upon control.

All designing, engineering and producing mold's processes in order to high quality production is performed by **AFI** specialists and benefiting modern software, equipment and tools.

**AFI** equipped with heat treating and stress realizing of different cycles that is performed upon requirements.

### Closed-die Forging

- Cutting Steel bars into pieces to the production process
- The Steel bars pieces must be heated by induction furnaces automatic to plasticity
- The Steel bars pieces are deformed between two die halves under high pressure in a closed cavity by using specific forge press which carry the impression of the desired final shape
- The process provide precision forging with close dimensional tolerance.
- Heat treatment if necessary in order to uniform metallurgical structure and hardness
- Shot blast and qualitative tests are completely performed

The final products of this process are applied in various industries, automotive industries, cars, trucks, agriculture, mining, transportation, oil, gas, petrochemical, rail such as gears, axle and suspension components.

Processes for completing work including: shot blast and qualitative tests are completely performed by this company.



**Shafts Group**



**Hubs Group**



**Hubs Group**



**Pinions Group**



**Axles Group**



**Gears Group**



**Flanges Group**



**Connecting Rods Group**



**Suspensions Group**



**Suspensions Group**



**Gears Group**



**Shafts Group**



**Gears Group**



**Gears Group**



**Gears Group**



**Gears Group**





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## ■ PRODUCTION LINES AND CAPACITY

**Alborz Forging Industries (AFI)** production lines are designed and Fixed by German technology up to 5,000 tons pressing power, and high quality induction furnaces with 10,000 tons capacity per year.

The heat treatment system at **AFI** is available to annealing, normalizing, cycle annealing, quench tempering, mold's heat treating and hardness process under digital controlling.

## ■ DESIGN AND ENGINEERING

According with valid and international standards, design and engineering requirements are down by Cad and Cam software supporting system.

The three-dimensional drawings In order to implement and enforce on mold raw blocs send to CNC in die shop.  
As mentioned above this is considerable that all process's sectors are controlled with high precision







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## ■ DIE SHOP

Knowledge required, personal experience, modern NC and CNC machine Along with defined quality control are leading **Alborz Forging Industries (AFI)** to be the best equipped in the area.

## ■ LABS AND TEST

Specific laboratory, measurement and control equipment included eddy current, crack and hardness tester, metallurgical and mechanical test in order to validate and conformity of the production process are available in order to fulfill customers need and satisfaction.

## ■ RESEARCH AND DEVELOPMENT

**Alborz Forging Industries (AFI)** research and development department has aimed to identify strengths and consolidate them into improvable points, as well as strengths. According recent improvement actions, **AFI** has been succeeding to certify research and design certificate by Iran industry organization.

