



# ASIA PEARLITE CASTING INDUSTRIES CO.





# INTRODUCTION

Asia Pearlite Casting Industries (API), located in a land of 100,000 m<sup>2</sup> in the industrial zone of Saveh (biggest industrial zone in Iran), is now producing annually over 45,000 tons of grey and ductile automotive castings. API is a member of Shayan Industrial group. The group will be introduced more in the next slide.

What highlights API in the Iranian foundry business is the use of state-of-the-art green sand foundry machinery beside the invaluable technical knowledge and experience of hired foundrymen.

API has started mass production since October 2010.

# SHAYAN INDUSTRIAL GROUP

The industrial group is consisted of bellow member companies:

- 1- **Shayan Sanat** : Manufacturer of clutch assemblies (having about 50% share of Iranian automotive OEM market share)
- 2- **Shayan Koosha**: Manufacturer of automotive pressed and body Parts
- 3- **Shayan Die Manufacturing**: Manufacturer of automotive production Tooling as well as a small machine shop for clutch pressure plate
- 4- **API**: Iron casting foundry

## WHERE ARE WE?

Shayan Koosha  
(Phase 2) + Shayan  
mfg. co.:  
Eshtehard ~ 120 km  
west of Tehran

Shayan Koosha  
(Phase 1):  
~ 25 km west of  
Tehran

Shayan Sanat: ~17  
km west of Tehran

API Casting:  
Saveh ~ 125 km  
south west of Tehran



## FACTS AND FIGURES

(m <sup>2</sup> ) Area	Employees	2015 (forecast)	2014	2013	2012	Turnover/Company
32.000	248	18	16	19.5	14.3	<b>Shayan Koosha</b>
8.200	78	1.9	1.8	1.3	1.2	<b>Shayan Manufacturing</b>
4.200	218	16.2	14.8	12.6	10.1	<b>Shayan Sanat</b>
100.000	242	18.5	15.5	12.5	8.1	<b>API</b>
<b>144.400</b>	<b>786</b>	<b>54.6</b>	<b>48.1</b>	<b>45.9</b>	<b>33.7</b>	<b>Total</b>

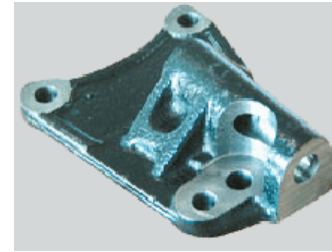
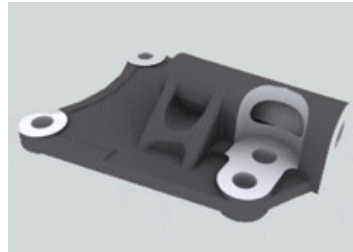
\*Million Euro.

Technicians, Engineers and higher	Skilled worker	Semi-Skilled worker	Employees
133	340	313	Totally

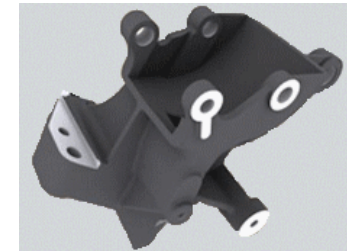
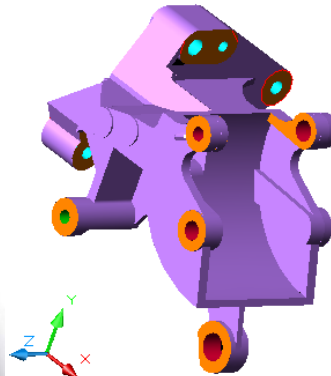


# SHAYAN MFG. CO.

- Machining different parts and assemblies
- Supply hydraulic tappet for OE Market with INA Schaeffler TA
- Design and manufacturing different jigs, fixtures and stamping parts in different type and size from full progressive to casting full mould G5 to G2



Burner hot plates



# SHAYAN MFG. CO.



# SHAYAN KOOSHA MFG. CO.

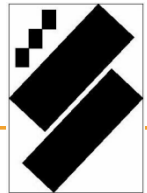


- Design and production of stamping parts and assemblies





# SHAYAN SANAT MFG. CO.



- Design and production clutch disc and cover for passenger cars (~1.000.000 sets/yr)
- Technically Assisted by LuK Germany





# PROJECT START

In 2006, According to the considerable need of local automotive market to new capacities for raw parts and also increasing export opportunities, Shayan industrial group decided to establish a large scale foundry in 4 phases to cover part of this need.

In June 2006, a European consultant (Gemco-Netherlands) was hired to prepare the concept engineering and feasibility of the project phase 1.

In November 2006, when all calculations showed that the project is feasible, Iranian ministry of Industries confirmed the project and introduced API to the banks for financial facilitation. At the same time technical and commercial negotiations with the most reputable suppliers of the related machinery was started.

## CONSULTANT: GEMCO ENGINEERS (NL)

### Introduction :

- Based in Eindhoven, the Netherlands
- Accomplished more than 100 foundry projects around the world
- Recent projects :
  - 1- Brembo in Mexico ,1998, Turnkey \$ 22,500,000, Two Disa vertical ML, Brembo in Poland 2004
  - 2- Weslin in Hungary ,2001, Engineering and project management, Horizontal ML , 1,200,000 moulds per year
  - 3- Buderus in Germany, 2002, Engineering and project management, 4,000,000 Brake discs per year, Vertical ML

### This Project:

- 1- Concept Engineering and Feasibility Study
- 2- Engineering and Project Management

Project success : Synchronization test





## PROJECT LOCATION: KAVEH INDUSTRIAL ZONE, SAVEH - IRAN

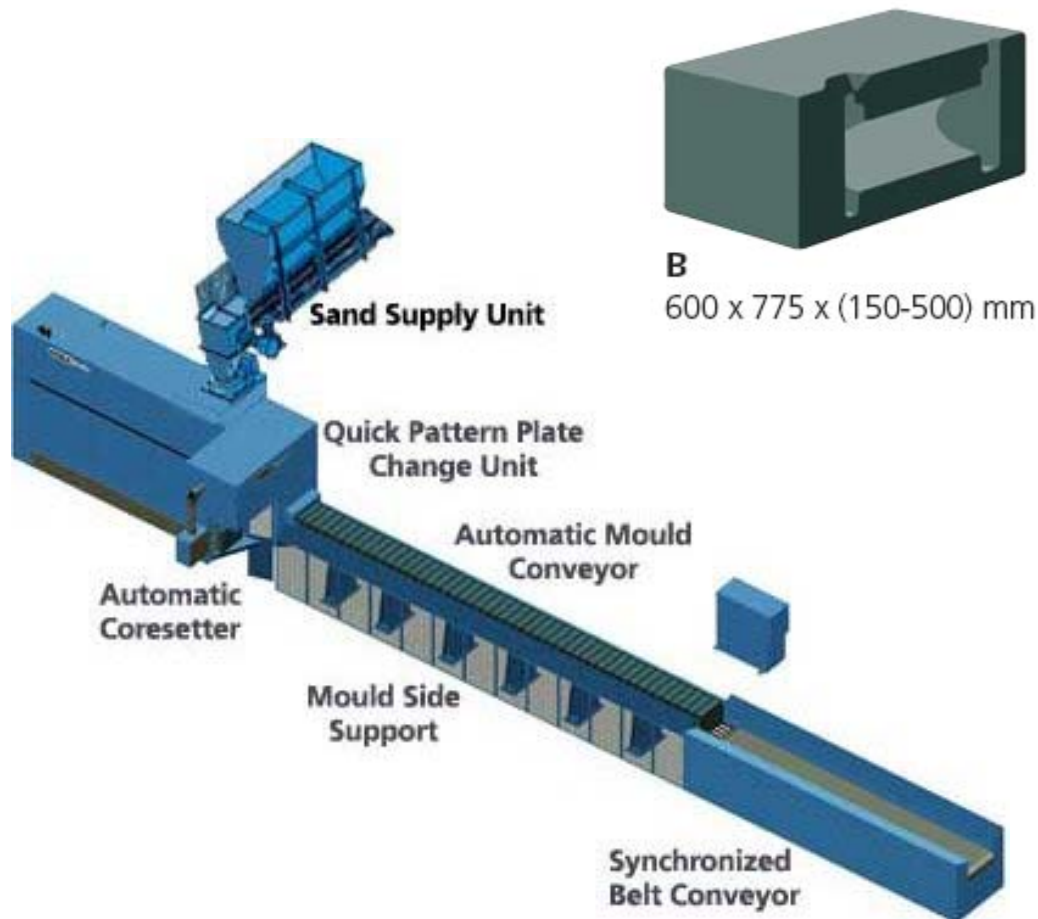




## MAIN PRODUCTION EQUIPMENTS

No	Equipment	Spec.	Supplier
1	Molding Line	DISA 240B - Mould dimensions : <b>775 mm * 600 mm</b> - 450/400 moulds per hour, cooling line 100 m	<b>DISA</b>
2	Shake-out and casting cooling	3 Vibratory conveyors - DISACOOOL 3400	
3	Sand Plant	Green sand plant - 100 t/h high quality mixed sand - with on-line prepared sand quality testing system	<b>DISA</b>
4	Melting Plant	2 * 12 tons medium freq. induction furnaces with automatic power sharing system - 9.5 MW Back tilt/Extraction hood/Emergency tilt/Charging cars	<b>OTTO JUNKER</b>
5	Pouring furnace	Automatic induction heated pouring device with learn-in system, inoculation nozzle, 8000 Kg cap.	<b>OTTO JUNKER</b>
6	Core shop	Complete cold-box core shop with one 25-liter core shooting machine and sand plant and scrubber for two machines. Core box: 1000*800*400 mm, Capacity : 1300 Kg per hour / Painting and heating line	<b>DISA</b>
7	Shot blasters	2 * Batch type shot blasters with a single 1*hanger type shot blaster discharge belt conveyor - System cap. : 8.8 tons/h, suitable for production mix	<b>DISA</b>

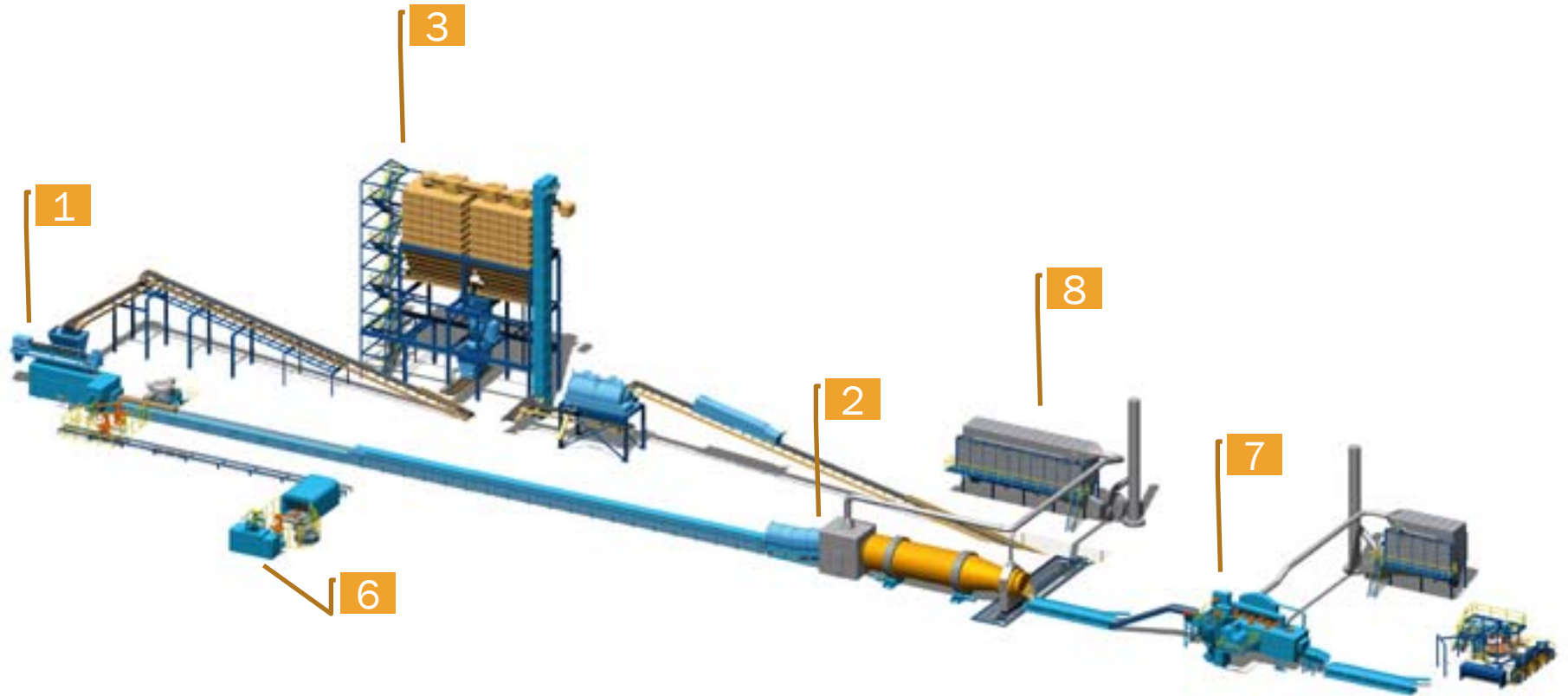
## MOULDING LINE SPEC. (DISA 240-B)



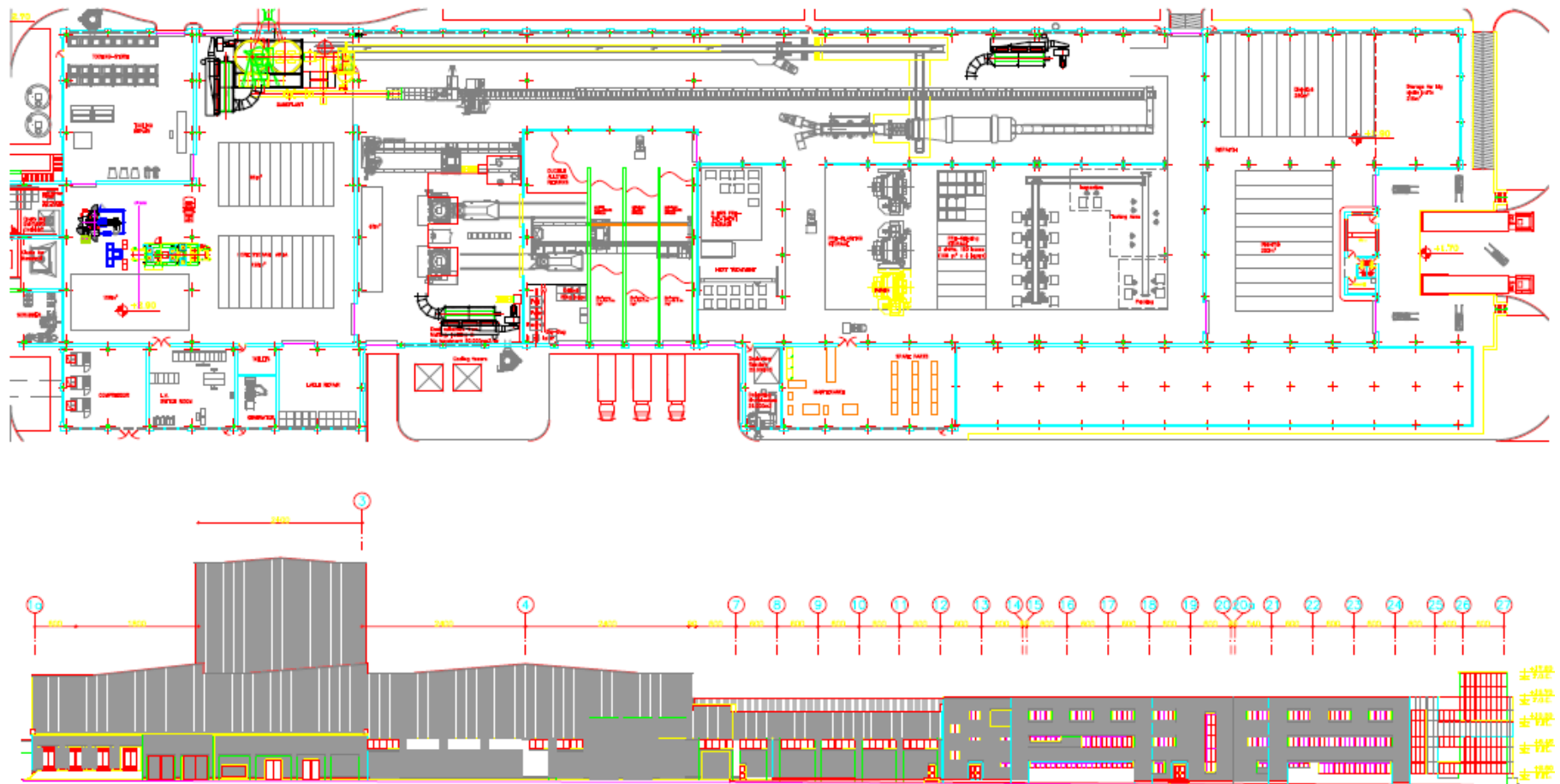
Type	DISA 240		
	A	B	C
<b>Mould dimensions</b>			
Height (mm)	600	600	600
Width (mm)	750	775	850
Thickness (mm)	150-500	150-500	150-500
<b>Moulding capacity</b>			
Uncored (moulds/hour)***	450	450	450
Cored (moulds/hour)***	400	400	400
<b>Conveyor length</b>			
AMC+SBC = Max (m)	100	100	100
<b>Cooling time</b>			
Max. (min.)***	63	63	63

Guaranteed mismatch : maximum 0.15 mm

## GENERAL VIEW OF THE PRODUCTION LINE

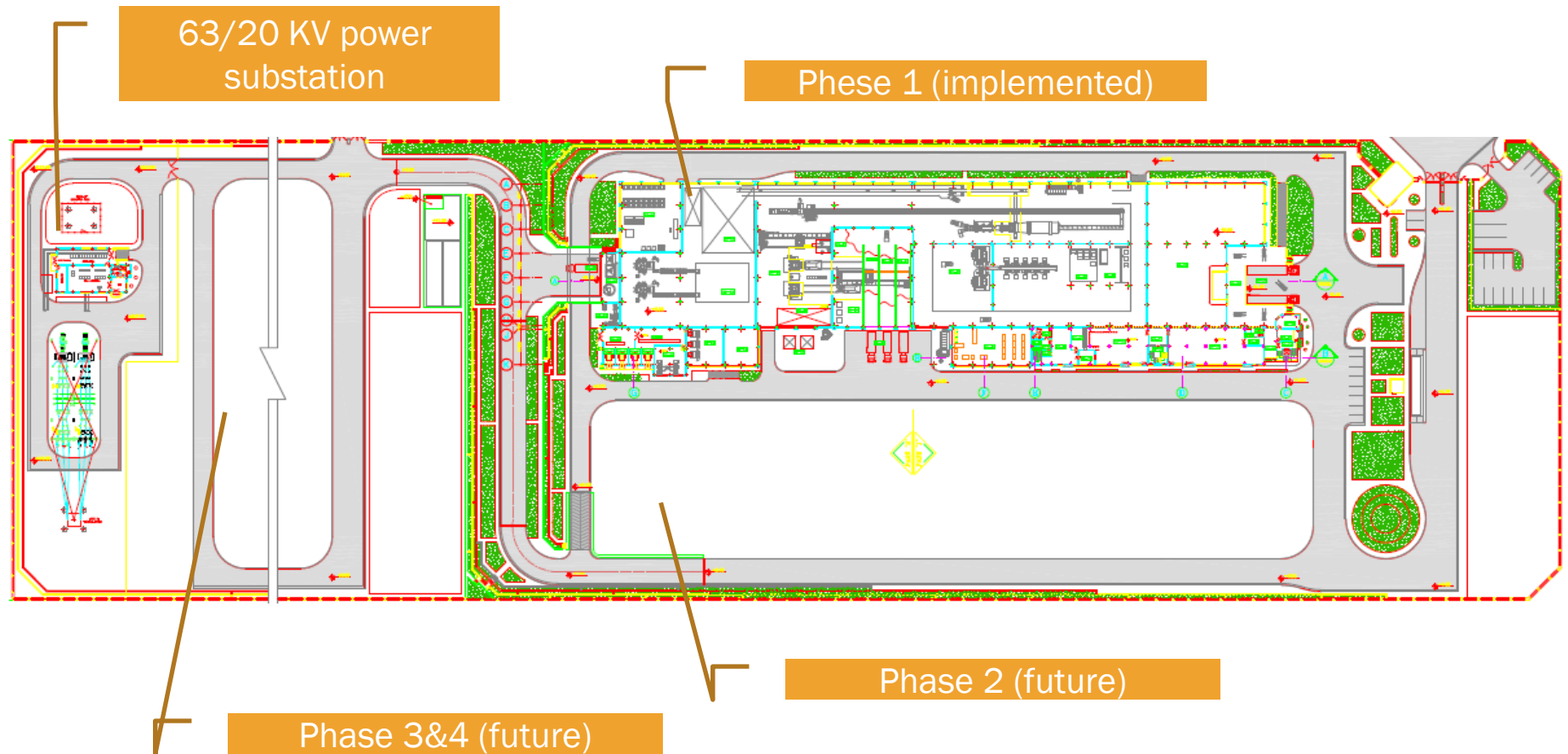


# FOUNDRY PHASE 1 LAY-OUT





# SITE LAY-OUT

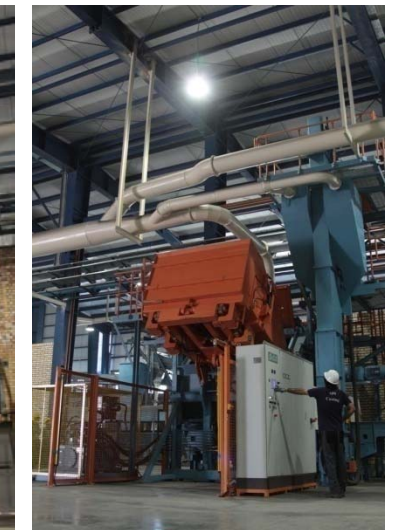
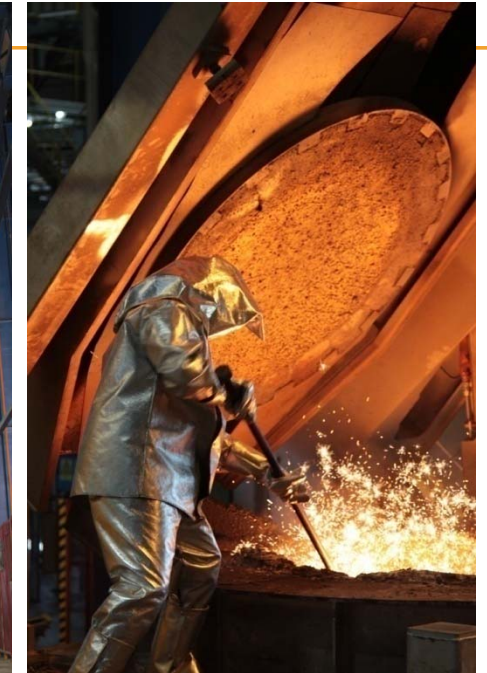


## PROJECT AREA

- Total land: 100,000 m<sup>2</sup>
- Total land occupied for phase 1: 26.600 m<sup>2</sup>

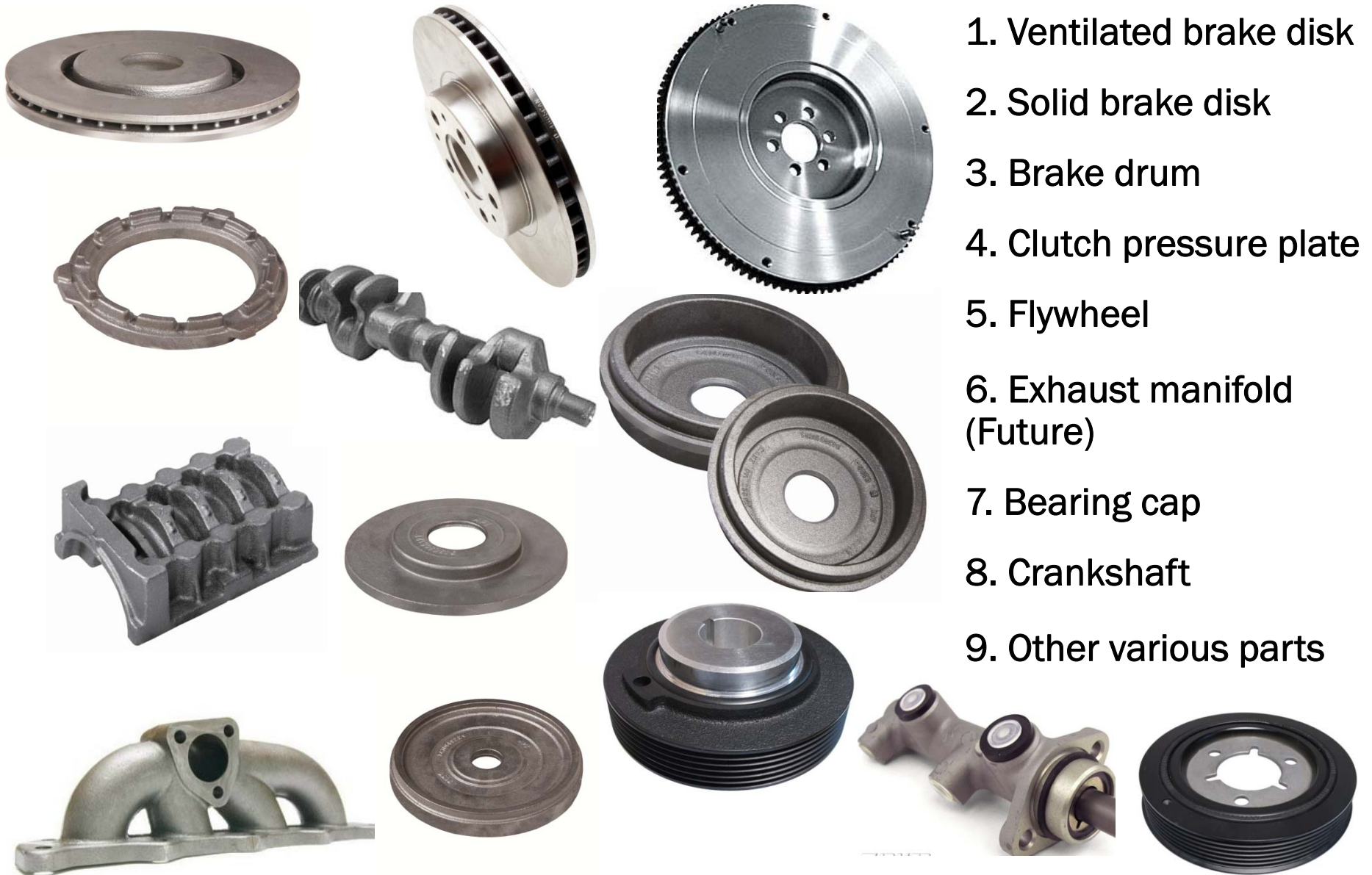
**Including:**

•Production Hall	11.500
•Utility Buildings	2.900
•Offices	3.200
•Prepherals	520
•Water Treatment Buiding	560
•63/20 KV Substation	5.400
•Warehouses	1.800
•Others	700





## PRODUCTS



1. Ventilated brake disk
2. Solid brake disk
3. Brake drum
4. Clutch pressure plate
5. Flywheel
6. Exhaust manifold (Future)
7. Bearing cap
8. Crankshaft
9. Other various parts



# API Customers

**OMC**



SAIPA



Iran Khodro



Officine  
Vica



Shayan Sanat

Home appliances:



And many  
Others ....

# CERTIFICATES

AFAQ ( Safety standard)

ISO 9001:2008

ISO/TS 16949:2009

EFQM

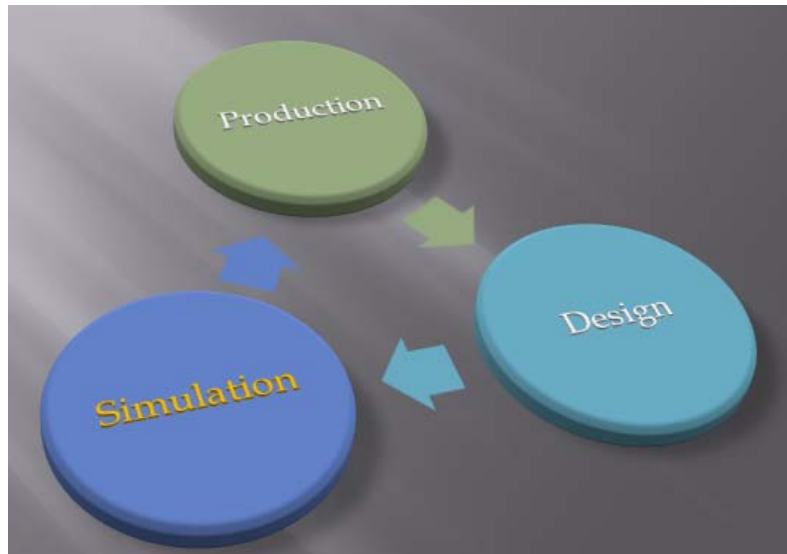
SAPCO Grade A

Valeo 1000

PSA S zero

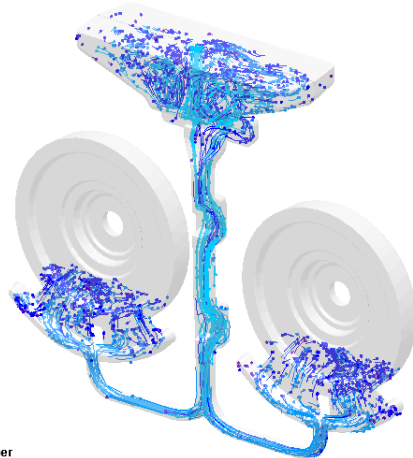


# SIMULATION SOFTWARE

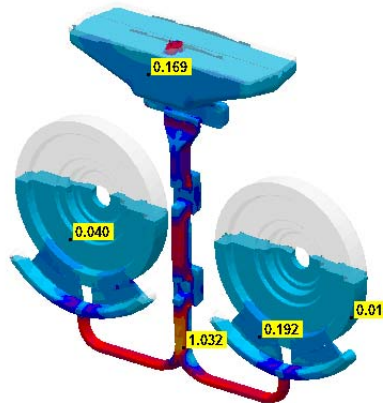


# MAGMA

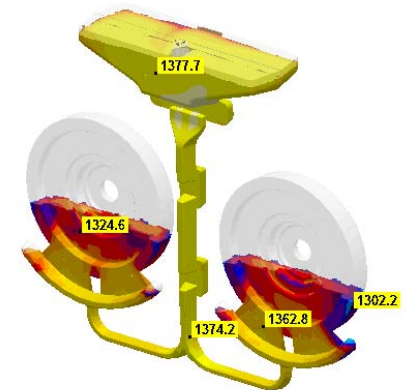
Version: 5.2 - 2012



Fill Tracer



Velocity  
9.000s 68.18 %



Temperature  
6.700s 56.77 %

## LABORATORY

Well equipped and complete laboratory

**DISA**





# AWARDS

---

Iran's Top Performing Foundry 2012

Valeo: Best performing supplier 2012

Iran Environmental Friendly Green Award

EFQM

# API EXPORT DESTINATIONS

