



**YOUR HUB TO EXPLORE
ENDLESS POSSIBILITIES.**



Snam Alloys Pvt Ltd., is one of the fastest growing and largest producer of Value Added Ferro Alloys in the world. With 25 years national and international presence in over 35 countries and 6 continents around the world, Snam today is the undisputed producer in India and Asia to collectively manufacture Ferro Silicon, Ferro Silicon Magnesium & Ferro Silicon based Inoculants.

Leading automotive and engineering foundries spanning across the globe go for the trusted and reliable Snam products to address their critical requirements.

WHO WE ARE?

We, at Snam Alloys Pvt Ltd., would not like to limit ourselves to meeting just your expectations but ensure your satisfaction and delight. It drives us to identify solutions to your problems, provide services to meet your needs and above all, ensure that you feel confident of tackling any problem, any time.

WHAT WE DO?

In addition to customised solutions that we can develop for your needs, we have also equipped ourselves with state-of-the-art tools like Solidworks, Novaflow & Solid, Mastercam, ATAS etc. and with rigorous research and experiments, developed top-notch expertise in these areas to aid you in your endeavour for that "right casting". Our Spectro LAB, CNC VMC facility, physical and metallographic testing labs are all geared to serve you better.

OUR OBJECTIVES

- To provide a complete understanding to customers of the process of inoculation and nodularisation by publishing reports of actual experiments in the R&D foundry
- Educating and training the small industries and the technical people in the foundry by having them participate in trials conducted at the R&D shop-floor on general foundry practices and for specific customer needs
- To provide a prototype development platform where new casting development can be carried out with the use of state-of-the-art 3D modelling, flow and solidification simulation and CNC pattern making and pilot production so the foundries can directly take the pattern into production
- To develop new value added Ferro Alloy products
- To develop new processes for the manufacturing of value added products



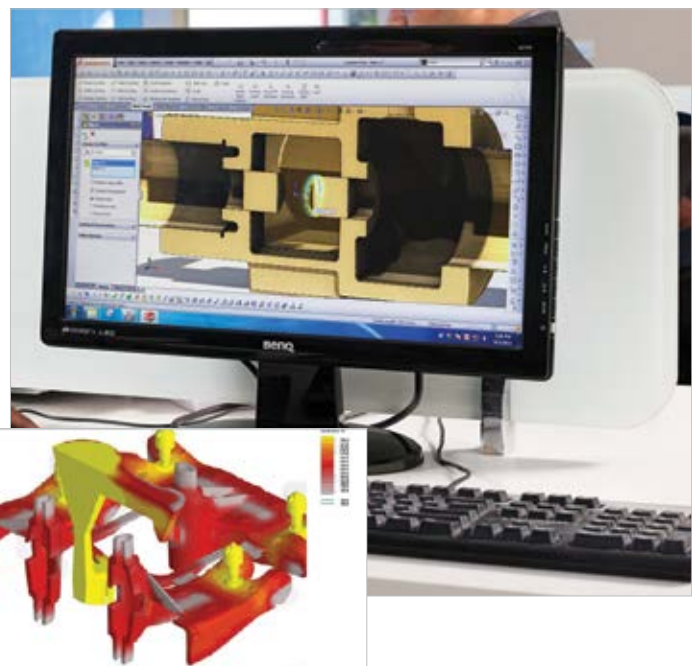
SOLIDWORKS 3D

Methoding is an important activity with regard to a foundry. Our engineers have developed expertise in casting techniques and 3D drafting to such extent that we can provide complete methoding solutions to your foundry. In addition, our engineers can work with you in the product design phase to incorporate the principles of "Design for Castability". Our objective is to help you achieve the highest casting quality with the best yield and lowest cycle time.

NOVAFLOW & SOLID

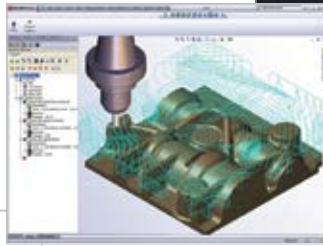
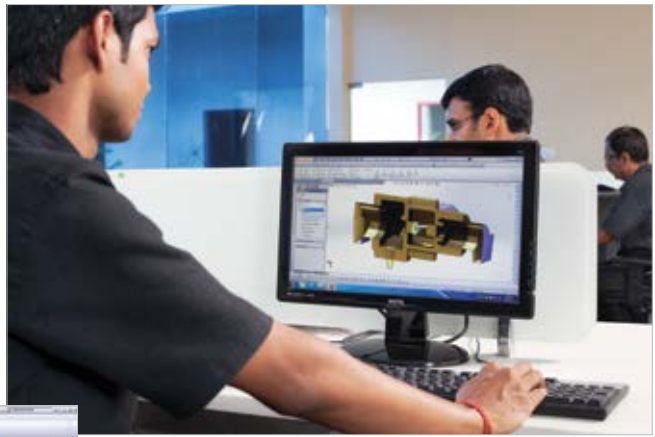
Casting is a complex process: Melting and pouring metal is not just a simple operation as made out to be without proper controls. Computer simulations have helped in making it stay simple by providing the right temperature of pour, suggesting additions to exactly the extent required to obtain that perfect chemistry. Casting simulation can help predict porosity and shrinkage, trace particles to track slag inclusions, calculate solidification time, heat transfer characteristics and much more.

We undertake simulation studies to reduce, if not eliminate, porosity and shrinkage, shorten cycle time and increase yield using this software. To provide realistic simulations, we have the added advantage of incorporating ATAS data in place of standard library of materials data which often differ from actual foundry conditions. The Novaflow simulation coupled with ATAS lets you control your chemistry much better than just theoretical CE values



MASTERCAM & CNC VMC

Matchplate patterns and coreboxes form one of the most significant tools in a casting operation lineup. With the added capabilities of a Mastercam X7 CAM program, we can generate optimised tool-paths, minimising thermal and machining stresses on the pattern and coreboxes. Our in-house 3-axis ACER DM CNC vertical machining centre empowers us to provide finest quality, precision machined matchplate patterns and coreboxes to you.



SPECTRO LAB

Equipped with world-class equipments, our Spectrometer laboratory can provide accurate spectroscopic analysis to you using our Bruker R8 Tiger XRF Spectrometer and further verified using our Thermo Scientific iCAP 6000 Duo ICP Spectrometer which can detect upto 72 elements at even PPB concentration. These tools help identify and control the composition of your raw materials which greatly affect casting quality. In addition, we have a Thermo Scientific ARL 3460 Metals Analyser OES Spectroscope for testing chilled foundry samples for chemistry verification and adjustment during the trials.

FOUNDRY

Our R&D Centre has the uniqueness of being complemented by an in-house foundry with a dual-track furnace system of induction furnaces (150 & 300 kg). This facilitates trial casting of your components for verification of simulation studies and also for identifying best casting practices to suit the component. A jolt-squeeze moulding machine, a cold-box core shooter and a shot blasting machine along with a sand testing facility are also available.



ADAPTIVE THERMAL ANALYSIS SYSTEM (ATAS)

The Adaptive Thermal Analysis System from NovaCast is an industry favourite when it comes to in-situ thermal analysis on various parameters and recommend optimum process variables, treatment and inoculation for preferred casting outcome. We, at the R&D Centre can conduct trials to replicate the customer's casting parameters along with Thermal Analysis using ATAS and provide recommendations.

We can also conduct on-site trials for data collection and Thermal Analysis at the customer's foundry and aid in optimising the casting process. The realtime curves from ATAS can be fed into the Casting simulation software thereby increasing the accuracy of the simulation.



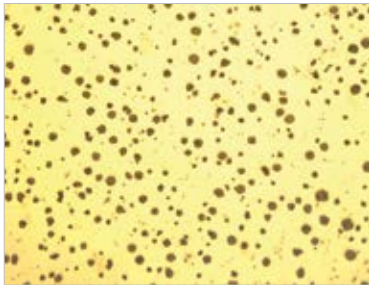
PHYSICAL TESTING

Our belief is that, till we know the inside-out of a casting, its material and properties, we know nothing. In the end, it is all about the strength of the material, its hardness and the ductility which affects its usability. Our mechanical testing facility is equipped with Blue Star's UTE-40 Universal Testing Machine, B-3000 (O) BHN Testing Machine, VM 50 PC Vicker's Hardness Testing Machine and IT-30 Impact Testing Machine. Select casting simulations are trial cast in our in-house foundry replicating actual industry conditions to confirm the observations from the analysis. Cast products are tested using a MODSONIC da Vinci Alpha ultrasonic flaw detector, Metalsoft Endoscope for any subsurface or internal flaws and results are thus verified.



METALLOGRAPHY LAB

The microstructure of a material defines its properties and behaviour under various conditions. Understanding this can correlate mechanical testing results and also resolve any ambiguity with regard to its behaviour. We have a fully equipped metallography lab with a Carl Zeiss Axio Vert. A1 metallurgical microscope coupled with a DHS Image Analyser System. A sample preparation facility with all modern equipments complement both the metallography lab and the spectro lab.



IDEATE & INNOVATE

Come to Snam Alloys R&D Centre. Your home to most innovate technologies under one roof. Bring an idea, we'll give you what it takes to succeed. Seek them at our R&D Centre, we'll help you in find the right solutions.



Snam Alloys Private Limited

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