Phone +91-11- 514 3474, 513 3021 | Fax: +91-11-514 6900, 540 5799
e-mail: contact@acmealloys.com | http://www.acmealloys.com

Ordering Castings
&
Fully Finished Custom-Made Parts/Components

As with any manufacturing process, in order to process a part, it is essential to know:

Design – What is the part?

Material – What should the part be made of?

Testing – How should the part be tested before delivery?

Design

To achieve the most efficient production, and the highest quality product, the part should be designed to take advantage of the flexibility of the casting process. We need to know the number of parts to be made, and the surfaces to be machined and where datum points are located. The acceptable dimensional tolerances must be indicated when a part/component drawing is provided. Tolerances are normally decided by agreement between the foundry and the customer. Close cooperation between the customer's design engineers is essential to optimize the casting design.

In the final analysis, the foundry engineer is responsible for giving the designer a cast part that is a capable of being transformed by machining and other subsequent processing to meet the specific requirements intended for the function of a part. To accomplish this goal a close relationship must be maintained between customer's engineering and purchasing team, with the metallurgical engineer at the foundry. Together, with a cooperative and collaborative approach, the following issues must be considered:

1. **The casting process, its advantages and its limitations**
2. **Machining stock allowance to assure clean up on all machined surfaces**
3. **Design in relation to clamping and fixturing devices to be used during machining**
4. **Selection of material specification and heat treatment**
5. **Quantity of parts to be produced**

It is imperative that every casting design, when first produced, be checked to determine whether all machining requirements called for on the engineering part drawing may be attained. This may be best accomplished by having a complete layout of a sample casting to make sure that adequate stock allowance for machining exists on all the surfaces requiring machining.

Material

The material to be used to produce the part must be identified in the order. Material for castings is generally ordered to ASTM requirements, which are most widely accepted in the industry, although other specifications may be used. We welcome to work with ISO, DIN, BIS and standards of a particular country. For more details refer Standards & Specifications on the products page of our website.

Testing

In addition to specifying test methods, acceptance criteria must be agreed upon. The more testing and tighter the acceptance criteria, the more expensive the product will be, without increasing its quality or serviceability. The mechanical properties obtained represent the quality of the steel/alloy, but do not necessarily represent the properties of the castings themselves, which are affected by solidification conditions and rate of cooling during heat treatment, which in turn are influenced by casting thickness, size and shape. In particular, the harden-ability of some grades may restrict the maximum size at which the required mechanical properties are obtainable.

Kindly fill in the Task Analysis Form to help us understand, and rightly assess your application needs. You can reach and download the Task Analysis Form in Portable Document Format (PDF) file directly by clicking the Form button on our main menu. In addition, you would need Adobe Acrobat Reader to open the file.

Fax us at +91-11-540 5799, +91-11-514 6900 24 hours.

Or

Alternatively, your can send filled in Task Analysis Form to us at Acme Alloys. Our team would be glad to answer your queries.