

Department of Information Science and Engineering



“Case study on IH castings”

We visited IH castings located in Udyambag, Belgaum. It is a partnership firm established in 2005. We spoke with the Managing Partner Mr. Anand Desai regarding his companies policies, strategies, mission and planning stages.

Overview of IH castings:

They are the leading manufacturer of machine tool accessory and service provider of CNC machining. They manufacture and supply Castings from SG Iron, Gear Box and many more which are power efficient, completely tested, having top-notch performance, supreme strength, hi-tech technology of finest quality and flawless finish. Iron Casting of robust design, high tensile strength and have a long functional life. Machine Tool Accessory is the spindle of the finest quality, reliability and have long functional life and are of industrial standards having an optimum output which are quality tested, compact, flexible, having high tensile strength and unique quality. They also provide Machining Services for which they have a highly skilled team and the quality services are at reasonable prices. All of their products have high durability, premium quality, non-abrasive natures, and long-lasting performances at affordable prices.

All the raw materials used are of high grade which ensures long service life with the least maintenance and enables satisfactory and optimum performance in order to meet the client's satisfaction. The technically qualified & experienced personnel have been inducted into the firm who are extremely dedicated and talented to ensure meeting the targeted production levels.

The prime focus of management remains to attain complete satisfaction of clients and therefore they remain dedicated and involved in all the business activities. The policy of ethical business with fair trade practices and following of their strict on-time delivery schedules has



enabled their clients to retain trust in their abilities.

Mission:

- Have the state-of-the-art infrastructure, facility, a dedicated workforce with the highest moral and well-established supply chain to grow fast year by year.
- Dedicated to serving their clientele with the best output.
- Zero casting rejection.
- Improve worker safety and ensure no casualties.

Vision:

- To be a Quality Batching SG Iron foundry in the region to give total solution to all needs of customers with the best systems, products with the ethical work culture.
- To be the leading ductile manufacturing industry in Belgaum and South India.

- To facilitate an end to end supply to the customers which involve processes such as assembly, machining, and inspection.

Quality Policies:

- To meet customers' expectations by manufacturing castings and deliver such castings, which satisfy their changing requirements. Their prime focus is to strive for continual improvements in all spheres of activities and maintain discipline and quality management systems.

IH Castings is committed to Total Customer Satisfaction through:

1. Supply of Quality Castings as per customer requirements.
2. Meeting customer delivery schedules.
3. Continual Improvement in the effectiveness of Quality Management System.
4. Total Involvement of all employees.

Quality Objectives:

- Reduction in rejection in both in house and at the customer's end by continuously monitoring the process.
- Meeting the delivery schedules as per their varying needs.
- Adopting new technologies as and when required in the manufacturing of castings to reduce cost and delivery periods.
- Training to all employees to increase their knowledge and efficiency, whenever required.
- Monitoring organisation improvement periodically.

Strengths of the company:

1. Foundry ERP for traceability
2. Capturing the voice of customers
3. Continuous improvement

4. On-time delivery
5. Supportive management
6. Resources
7. Team Work
8. Quick response and actions

Departments:

1. Board of Directors
2. General Manager
3. Purchase Department
4. Production department
5. Pattern Department
6. Moulding Department
7. Melting Department
8. Fettling Department
9. Inspection Department
10. Machining Department
11. Product development Department
12. Logistics Department

Directors	3
Managers	4
Engineers	8
Metallurgist	2
Supporting Staff	3

Highly Skilled operators	30
Semi Skilled Operators	10
Unskilled Operators	5
Machine shop – Man power	7
Total Manpower	72

Casting Development Stages:

- Initially, the order is received by the Purchase department. They ensure that the requirement by the customer is as per the company's policies.
- The Production department verifies the availability of raw materials using ERP software. Thus the timeline is determined for the development of the casting component. Raw materials are outsourced from industrial scrap. IH castings get their raw material from Bangalore, Mumbai, and Chennai. If there are any shortages in the raw materials, the production department coordinates with the GM to procure the resources.
- The Pattern department is responsible for the modifications of the pattern, labeling, and painting.
- The Moulding supervisor ensures that the ratio of hardener and resin in the sand is as per the requirement.
- The Inspection department carries out various tests on the sand mixture using UTM (universal testing machine), universal strength machine, clay washer device and sieve shaker.
- The required moulds are prepared with appropriate cores if required, by the Moulding department.
- Various Raw materials are mixed together to form SG iron using an electric arc furnace. This is overlooked by the Melting department.
- The iron sample is taken to the laboratory for further inspection. The chemical composition of the iron is determined using a spectrometer.

- Molten iron is now poured into the mould. The casting is let to cool down for a while.
- This casting shot blasted to further remove sand from intricate parts of the component.
- Now, the Fettling department ensures that the unwanted extruded parts of the component are removed. A layer of primer is applied to prevent the component from rusting.
- The Product development department facilitates further machining as stated by the customer. This machining is done using VMC, HMC, and HMT.
- The machine component undergoes inspection using a Coordinate Measuring Machine (CMM) to check the concentricity, parallelity, and various other dimensions. This is done by the Inspection department.
- The finished casting component is now packed and dispatched. This is done by the Logistics department.
- The GM looks over all the activities that take place and ensures that everything is done within a stipulated time period. The GM also has the authority to make decisions in the absence of the Managing partner.

Insights:

Planning is deciding in advance what to do, how to do when to do and who has to do it. Thus, it involves setting objectives and developing an appropriate course of action to achieve those objectives.

Features of Planning:

- Planning focuses on achieving objectives by deciding on the activities to be undertaken.
- Planning is a primary function as it precedes all functions of management i.e. organising, staffing, directing and controlling.
- Planning is pervasive as it is required at all levels of management but its scope may vary.
- Planning is continuous as plans need to be made on a continuous basis until an organisation exists.

- Planning is futuristic as it seeks to meet future events effectively to the best advantage of an organisation. Planning is, therefore, called a forward-looking function.
- Planning involves decision-making as it involves rational thinking to choose the best alternative among the various available alternatives in order to achieve the desired goals efficiently and effectively.
- Planning is a mental exercise as it is based on intellectual thinking involving foresight, visualisation, and judgment rather than guesswork.

Importance of Planning:

- Planning provides direction as it acts as a guide for deciding what course of action should be taken to attain the organisational goals.
- Planning reduces the risk of uncertainty arising due to the dynamic nature of the business environment as it enables a manager to anticipate and meet changes effectively.
- Planning reduces overlapping & wasteful activities as it serves as the basis for coordinating the activities and efforts of different divisions and individuals.
- Planning promotes innovation as it encourages new ideas that can take the shape of concrete plans.
- Planning facilitates decision making as it enables a manager to choose the best alternative course 'of action among the various available alternatives in light of present and future conditions.
- Planning establishes standards for controlling. Planning provides standards against which the actual performance is measured and timely corrective actions are taken.

On the basis of use and duration:

- Single-use plans are the ones that are formulated to deal with new or non-repetitive situations that may arise in an organisation from time-to-time. For example- programs, budgets, and projects.
- Standing plans refer to another type of plan which once formulated may be used for a long period of time in similar or repetitive situations that may prevail in an organisation. For example—objectives, strategies, policies, methods, procedures, and rules.

In our case study, we noticed standing plans.

- **Objectives** are the end results of the activities that an organisation seeks to achieve through its existence.

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- A **strategy** is a comprehensive plan for achieving the objectives of the organisation.

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- A **policy** is a set of general guidelines that help in managerial decision making and action.

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- **Method** refers to the prescribed ways or manner in which a task has to be performed considering the objective.
- **Procedure** refers to a series of specific steps to be performed in a chronological order to carry out the routine activities.

“As seen in the Casting development stages.”

- **Rule** is a specific statement relating to the general norms in terms of Do's and Don'ts that guide the behaviour of people. It commands strict obedience and a penalty is likely to be imposed on its violation.

