

机械设计制造及其自动化专业英语_Unit 06 Manufacturing Process (1)



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- Casting Process
- Machining Process
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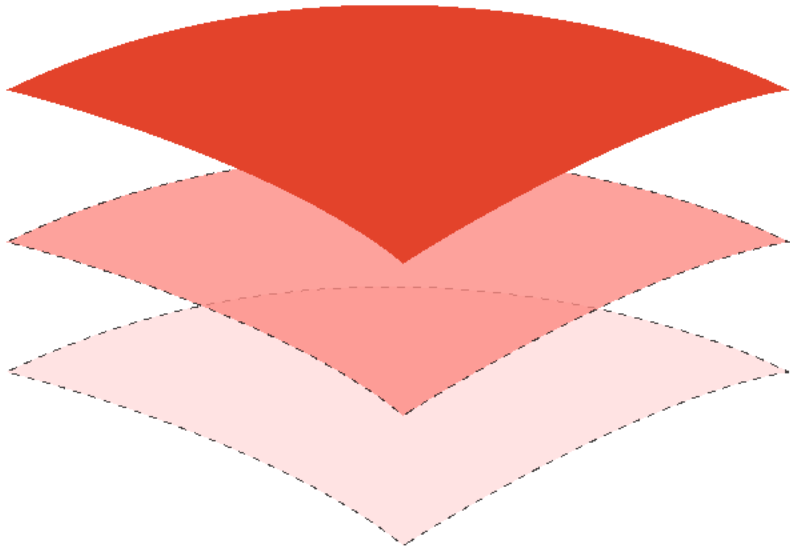


01

Introduction



Introduction



—● Overview:

Introduction to Manufacturing Process.

—● Table Content:

Types of Manufacturing Processes.

—● Materials and Tools:

Essential elements used in manufacturing processes.

Definition:

Manufacturing process is the process of converting raw materials into finished products.

Types of Manufacturing Processes:

Various methods such as casting, machining, and welding are used in the manufacturing process.

Role of Manufacturing Process:

Discussing the significance of manufacturing processes in the production of goods.

Table Content

Process Type	Description
Casting	Using molds to shape liquid metal into solid objects.
Machining	Shaping raw materials through various cutting tools.
Welding	Joining materials using high heat or pressure.

Materials and Tools



Raw Materials:

Exploring the different types of materials like metals, plastics, and composites used in manufacturing.

Tools and Equipment:

Discussing the various tools and machinery required for different manufacturing processes.

02

Casting Process

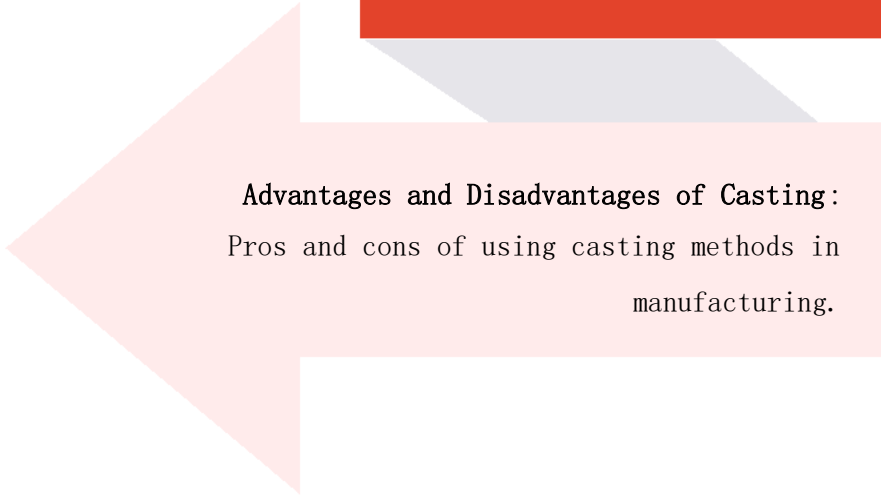


Casting Process



Overview:

Understanding the casting process in manufacturing.



Advantages and Disadvantages of Casting:

Pros and cons of using casting methods in manufacturing.

Overview

Sand Casting:

Detailed explanation of the sand casting method for creating metal components.

Investment Casting:

Description of the investment casting process for intricate and complex shapes.

Die Casting:

Exploring the die casting technique for high volume production with excellent surface finish.

Advantages and Disadvantages of Casting

Advantages:

Discussing the benefits of casting such as design flexibility and cost-effectiveness.

Disadvantages:

Addressing the limitations of casting processes like porosity and surface finishing issues.

03

Machining Process



Machining Process

Overview:

Introduction to the machining process in manufacturing.

Types of Machining Tools:

Different tools utilized in the machining process.





Overview



Turning:

Explanation of the turning process for creating cylindrical components.

Milling:

Detailed description of the milling process used for complex and precise shapes.

Drilling:

Discussing the drilling method for creating holes in materials.

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