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The Complete Book on Ferrous, Non-Ferrous Metals with Casting and Forging Technology

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About the Book

The Casting and Forging product is playing a greater role in our everyday lives and is essential than it has ever been. The Casting and Forging industry fortunes is largely dependent on the level of activity within the construction (building and non-building) and automotive sectors. Ferrous and non ferrous metals and its alloys accounts for a large portion of all metal production. Metal ingots and billets are formed by a casting process. The Casting process has traversed a long path and impacted human civilization for nearly five millennia. For any metal casting process, selection of right alloy, size, shape, thickness, tolerance, texture, and weight is very vital. Casting process involves melting the metal to be used, pouring it into a mould, letting it cool and then knocking out the casting. On the other hand, forging is one of the oldest known metal working processes. Forging technology occupies a very important place among all the manufacturing processes as it produces parts with excellent properties and with minimal wastage. Forging involves the use of machinery with a hammering or pressing action to convert basic shapes into a pre-determined form. Forging has the capacity to refine the grain structure and improve the physical properties of the metal. Forging products are consistent, without the defects of porosity, inclusion or voids, and finishing operations like machining, coining, sizing, straightening or surface treatments can also be easily done. This handbook gives a concise description of the fascinating on the state-of-the-art technology of the casting and forging process of metals and metal alloys. This book contains precise details on production of ferrous and non ferrous metals, its casting and forging process along with their alloys. It is hoped that this book will find very helpful to all its readers who are just beginners in this field and will also find useful for existing industries, technocrats, technical institutions, etc.

Contents

CHAPTER 1
Production of Ferrous Metals
Production of Pig Iron
Blast Furnace
Direct Reduction
Furnaces for Steel making and Iron making
Basic Oxygen Furnace
Electric Furnace

Open-Hearth Furnace
Cupola
Steel Ingots and Strand Casting
Refining Furnaces and Vessels
Crucible
Induction
Melting in a Vacuum and Special Atmospheres
AOD Process
Energy Referred for Melting
Ferrous Metals
Wrought Iron
Steel
Carbon Steel
Alloy Steel
Stainless Steels
Cast Iron
Effects of chemical elements on cast iron
Carbon
Silicon
Manganese
Sulfur
Phosphorus

CHAPTER 2
Casting Design, Materials and Economics
Introduction
Design Considerations
Designing for expendable-mold casting
Corners, angles, and section thickness
Flat areas
Shrinkage
Parting line
Draft
Tolerances
Machining allowance
Residual stress
Designing for permanent-mold casting
Casting Alloys
Nonferrous casting alloys
Ferrous casting alloys
Economics of casting

CHAPTER 3
Production of Non-Ferrous Metals
Properties
Non-Ferrous Metals
Smelting
Furnaces for Non-Ferrous Smelting
Production of Aluminium
Production of Magnesium
Production of Copper

Production of Lead
Casting Non-Ferrous Materials
Wrought Alloys
Aluminium Alloys
Copper Alloys
Magnesium Alloys
Die-Casting Alloys
Zinc Base Alloys
Aluminium Base Alloys
Copper Base Alloys
Lead Base Alloys
Tin Base Alloys
Continuous Casting of Aluminium

CHAPTER 4
Welding and Joining Processes
Fundamentals of a Welding System
Design fundamental of welded joints
ARC Welding Processes
Carbon Electrode Welding
Metal Electrode Welding
Electrode coating
Atomic Hydrogen Arc Welding
Inert-Gas Shielded-Arc Welding
Arc spot Welding
Submerged Arc Welding
Stud Arc Welding
Electroslag Welding
Resistance Welding Processes
Spot Welding
Projection Welding
Seam Welding
Butt Welding
Flash Welding
Percussion Welding
    High-Frequency Resistance Welding
Oxyfuel Gas Welding Processes
Oxyacetylene Welding
Oxyhydrogen Welding
Air Acetylene Welding
Pressure Gas Welding
Solid-State Welding processes
Cold Welding
Ultrasonic Welding
Explosive Welding
Diffusion Welding
Forge Welding
Friction Welding
Special Welding Process
Induction Welding
Electron Beam Welding

Laser Welding
Flow Welding
Welding Quality and Safety
Other Joining Processes
Soldering
Brazing
Adhesive Bonding
Allied Processes
Oxyacetylene Torch Cutting
Transferred-Arc Cuttings

CHAPTER 5
Finish Processes
Mechanical Surface Preparation
Blast Finishing
Process control
Chemical Surface Preparation
Water Rinsing
Dragin
Dragout
Concentration in the Tank
Concentration in the Rinse.
Flow
Equilibrium and Effectivity
Multiple Rinsing
Plating Procedure
Automatic Control
Brush Plasting
Metalizing Nonconductors
Metalizing Processes
Catalytic Deposition
Metal Deposition Design Considerations
Time and Tank Capacity Determination
Thickness Testing
Other Metallic Coatings
Electroplating
Chrome Plating
Galvanizing
Tin Coating
Other Plating Metals
Parkerizing
Anodizing
Calorizing
Hard Surfacing

CHAPTER 6
The Crystalline Structure of Metals
Space Lattices
Lattice Constant
Metallic Bond
Allotropic Changes

Atomic Planes
Crystallographic Anisotoropy
Cooling Curve
Metallic Dendrite
Dendrite Growth
Crystal Boundary
Grain Shape and Size
Astm Grain Size
Phases in Metals
Intermetallic compounds
Solid Solutions
Physical Properties of Metals
Three Kinds of Stress
Engineering Stress and true Stress
Engineering Strain and True Strain
Engineering Stress strain Diagrams
True Stress-strain Diagram
Idealized Stress-Strain Diagrams
Derivative Types of Stress
Ductility
Strain Rate
Compression Test
Tersion Test
Combined Deformation Tests
Hardness Tests
Hardness Versus Strength
Hardenability Test
Dynamic Impact Test
Toughness
Heat Resistance
Thermal Conductivity
Specific Heat
Density
Thermal Diffusivity
Thermal Expansion
Thermal Emissivity
Corrosion Resistance
Electrical Resistivity
Magnetic Properties
Malleability and Machinability
Wear Resistance
Classification of Steels and Alloys
Major Classifications and Specifications
Unified Numbering System
AISI-SAE Designation System
Carbon Steels
Alloy Steels
Tools Steels
Stainless Steels
Electrical Sheet Steels
Heat Resisting Alloys

CHAPTER 7
Conditioning Semi-Finished Products
Introduction
Ingot Defects
Surface Defects Originating in Soaking Pits
Defects Resulting From Hot-Rolling
Practices
The Classification of Surface Defects for Conditioning
Method of Surface-Defect Detection
The Mechanical Removal of Surface Defects
Conditioning by Scarfing

CHAPTER 8
Structural Mills
Introduction
The Evaluation of Structural Mills
Universal Beam Mills
Modern Structural Mills for Rolling Large Beams
Modern Mills for Medium Sections

CHAPTER 9
The Reheating of Ingots
Introduction
The General Layout and Design of Soaking-Pit Facilities
Gaseous Fuels and Burners used in Soaking Pits
The Use of Oil for Heating Soaking Pits
Heat Recovery in Soaking -Pit Operations
Two-Way Fired Soaking Pits
One Way Fired Soaking Pits
Bottom Center-Fiord of Vertically Fired Pits
Circular Pits
Electric Soaking Pits
Pit Covers and Seals
Automatic Controls for Soaking Pits
Handling the Ingots by Crane Tongs

CHAPTER 10
Forging
Introduction
Open-Die Forging
Cogging
Precision Forging
Forging Force
Coining
Related Forging Operations
Heading
Piercing
Other Operations
Rotary Swaging
Forging-Die Design

Die Material and Lubrication Forgeability
Forging Machines
Presses
Mechanical Presses
Screw Presses
Hammers
Counterblow Hammers
High-Energy-Rate Machines
Selection of Forging Machines
Forging Practice and Process Capabilities
Automation in Forging
Economics of Forging

CHAPTER 11
Metal Casting processes
Introduction
Sand Casting
Types of Sand Molds
Patterns
Cores
Sand Molding Machines
Sand Costing operation
Shell Mold Casting
Composite molds
Sodium silicate process
Rammed graphite molding
Expandable pattern casting (lost Foam)
Plaster Mold casting
Ceramic Mold Casting
Investment Casting
Vacuum Casting
Permanent Mold Casting
Slush Casting
Pressure Casting
Die Casting
Hot Chamber process
Cold chamber process
Process capabilities and machines selection
Centrifugal Casting
Squeeze Casting and Semisolid Metal Forming
Squeeze casting
Semisolid metal forming
Casting Technique for Single Crystal component
Rapid solidification (Amorphous alloys)
Inspection of castings
Melting practice and furnaces

CHAPTER 12
Foundry Processes
Sand casting and Molding procedures
Green Sand Mold

Loam Nold
Furfuryl Alcohol Binder Molds
CO2 Molds
Skin Dried Molds
Dry Sand Molds
Metals and Special Molds
Goting System and Solidification Characteristics
Patterns
Allowances
Removable patterns
Sand Technology
Mold and Core Hardness Test
Fineness
Test for moisture Content
Clay content Test
Permeability Test
Sand conditioning
Cores
Green Sand Cores
Dry sand Cores
Core Making
Binders and Core Mixtures
Molding Equipment
Jolt Machine
Squeezer Machine
Jolt Squeeze Machine
Sandslinger
Diaphragm Molding Machine
Pouring and cleaning castings

CHAPTER 13
Tube Mills
Introduction
Typical Skelp Mill
The production of continuous butt-welded pipe
The production of electric-resistance-welded tubing and electric-welded large-diameter pipe
The production of seamless shells or Bottles by Direct Punching
Rotary Piercing machines
Rotary Rolling Mills
The Plug Rolling Mill
Reeling
The Mandrel Mill
Sizing and Stretch Mills
The Pilger Mill
Other Type of Mills Used in The Production Of Tubes
The Diescher Mill
Modern Seamless Tube-Making Facilities

CHAPTER 14
The cooling of Mill Rolls
Introduction

Heat Conduction equations
Solution toTtransient Heat Conduction Problems
Mathematical Models Pertaining to Transient Heat Flow in Work Rolls
Measured One-Dimensional Temperature Patterns in Mill Rolls
Predicating the Roll Surface Temperature Rise in The Roll Gap
The Water Cooling of Rrolls and Measurement of Heat Transfer Coefficients
Sprays and Their Pplacement for Optimum Roll Cooling

CHAPTER 15
Extrusion and Drawing
Introduction
Extrusion Force
Metal Flow in Extrusion
Extrusion Practice
Hot Extrusion
Die Design and Materials
Lubrication
Cold Extrusion
Impact Extrusion
Extrusion Defects
Surface cracking
Pipe
Internal Cracking
Extrusion Equipment
The Drawing Process
Drawing Practice
Die design
Die Materials
Lubrication
Defects and Residual Stresses
Drawing Equipment

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