

Steel Rolling Technology Handbook (2nd Revised Edition)

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The steel industry has had a long history of development, yet, despite all the time that has passed, it still demonstrates all the signs of longevity. The steel industry is expanding worldwide. The economic modernization processes in these countries are driving the sharp rise in demand for steel. Rolling is a metal forming process in which metal stock is passed through a pair of rolls. Rolling is classified according to the temperature of the metal rolled.

Being a core sector, steel industry reflects the overall economic growth of an economy in the long term. Also, steel demand, being derived from other sectors like automobiles, consumer durables and infrastructure, its fortune is dependent on the growth of these user industries. Steel consumption is forecast to grow annually by about 5%–6%.

This handbook describes different classes of steel making processes, welding processes and plant & machinery suppliers with their photographs. Techniques of steelmaking have undergone vast changes in scale and new processes have been developed to meet the demands of speed, quantity and quality. There are various hot mills involved in the production of steel plate mill, hot strip mill, bar and rod mills etc. This handbook deliberated on the fundamental of mechanical working and its theory in a very simpler way. In addition it describes statistical methods of quality control, total quality management, quality assurance & raw material which are used in making of steel.

The major contents of the handbook are fusion welding processes, grinding and abrasive processes, width change by rolling and pressing, metallurgical defects in cast slabs and hot rolled products, primary steel-making processes, optimization and control of width change process, fundamentals of metal casting, steel making technology, basic principles of width change, plate mills, hot strip mills, quality assurance, testing and inspection, bar and rod mills.

It will be a standard reference book for professionals, entrepreneurs, those studying and researching in this important area and others interested in the field of steel rolling.

Contents

CHAPTER 1

FUSION WELDING PROCESSES

Introduction

Oxyfuel Gas Welding

Types of flames
Filler metals
Welding practice and equipment
Process capabilities
Arc-Welding Processes: Consumable Electrode
Shielded metal-arc welding
Process capabilities
Submerged arc welding
Process capabilities
Gas metal-arc welding
Process capabilities
Flux-cored arc welding
Process capabilities
Electrogas Welding
Process Capabilities
Electroslag Welding
Process capabilities
Electrodes
Electrode coatings
Arc-Welding Processes
Nonconsumable Electrode
Gas tungsten-arc welding
Process capabilities
Atomic hydrogen welding
Plasma-arc welding
Process capabilities
Thermit Welding
Process capabilities
Electron-Beam Welding
Process capabilities
Laser-Beam Welding
Process capabilities
Cutting
Oxyfuel gas cutting
Process capabilities
Arc cutting
Welding Safety

CHAPTER 2

GRINDING AND ABRASIVE PROCESSES

Grinding and Abrasive
Practices
Processes
Cylindrical Grinder
Internal Grinders
Surface Grinding
Tool and Cutter Grinders
Honing
Lapping
Superfinishing
Abrasive-Belt Grinding
Mass Media Finishing
Abrasive-Media Flow Deburring Machine

Miscellaneous Finishing Operations
Wire Brushing
Polishing
Buffing
Abrasives, Grinding Wheels, and Stones
Materials
A. Natural
B. Manufactured
Grinding Wheels
Bonding Processes
Vitrified process
Silicate process
Shellac process
Rubber process
Bakelite or resinoid process
Wheel Selection
Size and shape of wheel
Type of abrasive
Grain size of abrasive particles
Grade or strength of bond
Structure of grain spacing
Type of bond material
Coated Abrasives
Mass Media Abrasives

CHAPTER 3

WIDTH CHANGE BY ROLLING AND PRESSING

Methods of Width Change by Rolling
Vertical Edgers
Examples of edging practice
Slab Sizing Mills
Effect of Edging Practice on Workpiece End shape
Effect of Edging Practice on Workpiece Metallographic Properties
Edging in Finishing Mills
Methods of Width Enlargement by Rolling
Width Enlargement with Tapered Rolls
Classification of Sizing Presses
Design of Short-Tool Start-Stop Sizing Presses
Performance of Short-Tool Start-Stop Sizing Presses
Flying Type Sizing Presses
Rocking Type Sizing Presses
Design Optimization of Sizing Presses

CHAPTER 4

METALLURGICAL DEFECTS IN CAST SLABS AND HOT ROLLED PRODUCTS

Classification of Defects in Cast Slabs
Internal Defects in Slabs
Segregation
Non-metallic inclusions
External Cracks in Slabs
Surface Defects in Slabs

Slab Shape Defects
Scaling of Steel During Reheating
Scaling Rate
Effect of the Atmosphere on Scaling
Effect of Residual and Alloying Elements on Scaling
Scaling and Decarburization
Scaling of Steel During Roughing Passes
Scaling of Steel During Finishing Passes
Scaling of Steel During Coiling
Classification of Scale
Primary and Heavy Primary Scales
Furnace Scale
Refractory Scale
Secondary Scale
Red Oxide Scale
Scale Related to Descaling Process
Scale Related to Roll Wear
Contraction Gouges
Scratches and Gouges
Slivers

CHAPTER 5

PRIMARY STEEL-MAKING PROCESSES

Raw Materials
Open-Hearth Steel-making
Oxygen Steel-making
Top-blown (BOP) process
Bottom-blown (Q-BOP) process.
Combination-blown process
Electric-Furnace Steel-making
Chemical Formulas of Steel-making
Chemistry of Refining
Affinity for Oxygen
Basic And Acid Steel-making
Deoxidation of Steel
Optimization of Primary Steel-making Process
Secondary Steel-making Processes
Purpose of Secondary Steel-making
Vacuum Stream Degassing
Recirculation Degassing
Vacuum Ladle Degassing
Argon-Oxygen Decarburization
Non-vacuum Argon Bubbling
Electro-Slag Remelting
Ladle Injection
Vacuum Degassing with Heating
Comparison of Secondary steel-making Processes
Casting of Steel for Flat Products
Type of Cast Products
Casting of Ingot
Types of Ingots
Methods of Continuous Casting of Thick Slabs
Continuous Casting of Thick Slabs

Slab Width Control
Continuous Casting of Thin Slabs and Strip
Requirements for Continuously Cast Steels
Oxide Inclusions in Concast Steel
Formation of Oxide Phases
Influence of Caster Type on Steel Quality
Defects in Ingots and Slabs
Internal Defects of Ingots and Slabs
External Cracks in Ingots and Slabs
Surface Defects Typical for Ingots
Slab ingot-narrow side
Surface Defects for Concast Slabs
Surface Defects Common for Ingots and Concast Slabs
Slab Shape Defects

CHAPTER 6

OPTIMIZATION AND CONTROL OF WIDTH

CHANGE PROCESS

Methods of Reducing Crop Losses
Pre-forming Slab Ends by Pressing
Methods of Preventing Out-of-Square Slab Cross-Section
Selection of Optimum Width Change Technology
Width Measuring Systems
Camber Measuring Systems
Width Control Actuators
Purpose of Width Control During Edging
Automatic Width Control Systems for Vertical Edgers
Feedforward Control Mode
Combined Feedforward and Feedback Control Mode
Integrated Width Control Systems for Hot Strip Mills
Principle of Plan View Control
MAS Rolling Process
Automatic Plan View Control Systems
Automatic Camber Control Systems

CHAPTER 7

FUNDAMENTALS OF METAL CASTING

Introduction
Solidification of Metals
1 Pure metals
2 Alloys
Structure-property Relationships
Fluid Flow and Heat Transfer
Fluid Flow
Fluidity of molten metal
Heat transfer
Solidification time
Shrinkage
Defects

CHAPTER 8

STEEL MAKING TECHNOLOGY

Principle of Gauge Control

Causes of Gauge Variation
Actuators for Roll Gap Control
Methods of Measurement of Roll Gap
Position Sensors
Closed Loop Control of A Hydraulic Actuator
Dynamic characteristics of Roll Gap Control
Gaugemeter control
Differential Gauge Control
Spacer Gauge Control
Gauge Deviation Control
Strip Tension Control System
Three Stage AGE for Tandem Cold Mill
Feed-forward AGC for Tandem Cold Mill
Flow-Stress Feed-Forward AGC
Non-Interactive AGC
Automatic Tension and Gauge Control System
Interstand Tension Control in Hot Strip Mills
Three-Stage AGC for Tandem Hot Strip Mill
Feed-Forward AGC for the Hot Tandem Mill
Compensation for Imperfection of Mill Equipment
Modeling of Dynamic Characteristics of HAGC
Block Diagram of a Single Stand HAGC
Position Error Amplifier
Lead-Lag Network
Current Controller
Servovalve
Hydraulic Actuator
Mill spring
Mill Stiffness and Mill Structure Weight
Servovalve Droop
Transducers
Actuator Pressure and Force
Mill Stiffness Multiplier
Transfer Functions of Synthesized Blocks
Amplitude Ratios and Phase Shifts of Individual Blocks
Frequency Response Characteristics of Control System
Position Errors and Control Margins
Time Domain Response Characteristics
Compensation of Control System
Compensation for Material Stiffness
Compensation for Oil Height in Actuator
Compensation for Roll Force
Performance of the System Without Strip
Principles of Width and Plan View Control
Lateral Spread
Wusatowski's Formula for Spread
Hill's Formula for Spread
El-Kalay and Sparling's Formula for Spread
Helmi and Alexander's Formula for Spread
Beese's Formula for Spread
Ekelund's Formula for Spread
Principle of Edging
Edging with Flat Cylindrical Rolls

Edging Followed by Reduction in Thickness
Effective Width Reduction
Edging With Grooved Rolls
Fish Tail
Buckling
Width Change and Control in Rolling Mills
Main Objectives and Methods of Width Change
Width Reduction by Rolling
Slab Sizing Mills
Width Reduction by Pressing
Long-tool Sizing Presses
Short-tool Sizing Presses
Start-Stop Type Sizing Press
Flying Type Sizing Press
Improving The Edging Efficiency
Decreasing The Slab Distortion
Methods of Preventing a Fish Tail
Width Enlargement
Automatic Width Control During Edging
Automatic Width Control In Hot Strip Mill
Plan View Control

CHAPTER 9

BASIC PRINCIPLES OF WIDTH CHANGE

Lateral Spread of Initially Flat Workpiece
Main Factors Affecting Lateral Spread
Effect of Slab Initial Thickness on Lateral Spread
Effect of Friction on Lateral Spread
Edging with Flat Rolls
Main Parameters of Dog Bone Shape
Edging Followed by Reduction in Thickness
Effective Width Reduction and Edging Efficiency
Edging with Grooved Rolls
Distortion of Workpiece Plan View
Shape of Workpiece Ends
Buckling
Edge Cross- Sectional Shape

CHAPTER 10

PLATE MILLS

Introduction
Types Of Mills Used for The Rolling of Plates
Plate-Mill Design
The Levelling of Plates
The Cooling, Marking and Cutting of Plates
The Ultrasonic Inspection and Gaging Of Plates
Modern Plate-Mill Installations

CHAPTER 11

HOT STRIP MILLS

Introduction
Steckel Hot Mills
Planetary Mills

Sendzimir Planetary Mills
Single Planetary Mills
The Krupp-Platzer Planetary Mill
Semi-Continuous Hot-Strip Mills
Semi-Continuous “Three-Quarter” Hot-Strip Mills
Continuous Hot-Strip Mills
Roughing Trains
Coilboxes In Hot-Strip Mills
Crop Shear And Descaling Unit
Finishing Trains
Runout Tables and Strip-Cooling Systems
Coilers

CHAPTER 12

QUALITY ASSURANCE, TESTING, AND INSPECTION

Introduction
Product Quality
Quality Assurance
Total Quality Management
Quality engineering as a philosophy
Deming methods
Taguchi methods
Juran methods
The ISO 9000 standard
Statistical Methods of Quality Control
Statistical quality control
Statistical Process Control
Control charts
Process capability
Acceptance Sampling and Control
Reliability
Nondestructive Testing
Liquid penetrants
Magnetic-particle inspection
Ultrasonic inspection
Acoustic methods
Radiography
Eddy-current inspection
Thermal inspection
Holography
Destructive Testing
Automated inspection
Sensors for automated inspection

Chapter 13

BAR AND ROD MILLS

Introduction
The Evolution Of Merchant And Bar Mills
The Development Of Rod Mills
“Jumping” Three-High Stands
“Housingless” Stands for Bar And Rod Mills
The Contilooop Arrangement Of Roll Stands

“No-Twist” Mills
The Three-Roll Planetary Mill
Kocks’ Three-Roll Rod And Bar Mills
Guides
Flying Shears
Cooling Beds
Coiling Facilities
The Stelmor Process
The “Easy-Draw” (E.D.) Process
The Design Of Modern Merchant Mills
Modern Rod Mills

Chapter 14

PHOTOGRAPHS OF PLANT & MACHINERY WITH SUPPLIER’S CONTACT DETAILS

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