Sheet Metal Forming: Fundamentals
Edited by Taylan Altan and Erman Tekkaya • 2012 Approx. 350 pages

Sheet forming fundamentals are thoroughly addressed in this comprehensive reference for the practical and efficient use of sheet forming technologies. The principle variables of sheet forming—including the interactions between variables—are clearly explained, as a basic foundation for the most effective use of computer aided modeling in process and die design. Topics include stress analysis, formability criteria, tooling, and materials for sheet forming and the latest developments in sheet metal forming technology.

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Sheet Metal Forming: Processes and Applications
Edited by Taylan Altan and Erman Tekkaya • 2012 Approx. 400 pages

This practical and comprehensive reference gives the latest developments on the design of sheet forming operations, equipment, tooling, and process modeling. Individual chapters cover all major sheet forming processes such as blanking, bending, deep drawing, and more. Process modeling using finite element analysis is described in one chapter and discussed in all appropriate chapters. Topics include warm forming of magnesium and aluminum alloys, forming of advanced high-strength steels (AHSS), hot stamping, sensors and die materials.


The two volume book on “Sheet Metal Forming – Fundamentals and Applications”, published by ASM International, aims to provide practicing engineers, who design products and/or processes, with a working knowledge of the science and engineering of sheet metal forming technology.
Volume one, “SHEET METAL FORMING – FUNDAMENTALS” covers the principle variables of sheet forming – including the interactions between variables - as a basic foundation for the most effective use of computer aided modeling and simulation of sheet metal forming processes. Topics include definitions and analysis of strain and stress, formability, tool design, and materials. This volume also covers the forming equipment related issues, including hydraulic and mechanical presses, servo drive presses and advanced cushion systems. Volume two “SHEET METAL FORMING PROCESSES AND APPLICATIONS” gives the latest developments on the design of sheet forming operations, equipment, tooling and process modeling. Individual Chapters cover all major sheet forming processes such as blanking, bending, deep drawing, roll forming, hydroforming, spinning and more. The basics of process modeling using finite element analysis are described in one chapter and the applications are discussed in all other appropriate chapters. This volume also covers sensors, die materials and advanced technologies such as forming Advanced High Strength Steels (AHSS), hot stamping, and warm forming of Aluminum and Magnesium alloys.

The topics reviewed in this book are the results of world-wide R&D and applied technology conducted in the research laboratories of the editors and their associates.

CONTENTS

Preface

Chapter 1 - Metal Forming Processes in Manufacturing
Prof. Taylan Altan, CPF, The Ohio State University
Prof. Erman Tekkaya, IUL, Technical University, Dortmund, Germany

1.1 Classification of Manufacturing Processes
1.2 Characteristics of Manufacturing Processes
1.3 Metal Forming Processes in Manufacturing
1.4 Classification of Metal Forming Processes

Chapter 2 – Classification and Description of Sheet Metal Forming Operations
Prof. Taylan Altan, CPF, The Ohio State University
Prof. Erman Tekkaya, IUL, Technical University, Dortmund, Germany

2.1 Process Variables
2.2 Sheet Metal Forming as a System
2.3 Classification of Geometries
2.4 Brief Description of Sheet Metal Forming Operations

Chapter 3 – Plastic Deformation – Strain and Strain Rate
Eren Billur, CPF, The Ohio State University
Prof. Erman Tekkaya, IUL, Technical University, Dortmund, Germany

3.1 Homogeneous or Uniform Deformation
3.2 Volume Constancy during Plastic Deformation
3.3 Infinitesimal True Strains and Strain Rates
3.4 Principal Strains and Strain Paths
3.5 Equivalent Strain Rate and Equivalent Strain
Chapter 4 - Plastic Deformation: Flow Stress, Anisotropy and Formability
Hari Palaniswmy, PhD, Altair Engineering, Inc.
Eren Billur, CPF, The Ohio State University

4.1 Tensile Test
4.2 Flow Stress Curves
4.3 Formability

Chapter 5 – Plastic Deformation: State of Stress, Yield Criteria, Flow rule and Hardening Rules
Hari Palaniswmy, PhD, Altair Engineering, Inc.

5.1 General State of Stress
5.2 Principal stresses
5.3 Volumetric stress or Hydrostatic pressure
5.4 Deviatoric Stress
5.5 Yield Criteria (Flow Criteria)
5.6 Tresca Yield Criterion
5.7 Von Mises Yield criterion
5.8 Comparison of Tresca and Von Mises criteria
5.9 Anisotropic Yield Criteria
5.10 Flow Rules
5.11 Power and Energy of Deformation
5.12 Effective Strain and Effective Strain Rate.
5.13 Hardening Laws

Chapter 6 – Materials for Sheet Forming
Soumya Subramonian, CPF, The Ohio State University
Nimet Kardes, CPF, The Ohio State University

6.1 Introduction
6.2 Steels
6.3 Aluminum Alloys
6.4 Magnesium Alloys

Chapter 7 - Friction and Lubrication
Hyunok Kim, PhD, Edison Welding Institute
Nimet Kardes, CPF, The Ohio State University

7.1 Introduction
7.2 Lubrication Mechanisms and Friction Laws
7.3 Lubricants for Sheet Metal Forming
7.4 Tribotests for Evaluation of Lubricants in Sheet Metal Forming
7.5 Tribotests for Warm and Hot Stamping
7.6 Tribotests for Punching and Blanking

Chapter 8 - Deep Drawing of Round and Rectangular Cups
8.1 Introduction
8.2 Deep Drawing of Round Cups
8.3 Deep Drawing of Rectangular Cups
8.4 Prediction of Punch Force and BHF/Case Study

Chapter 9 Principles of Sheet Forming Presses
Eren Billur, CPF, The Ohio State University

9.1 Terminology
9.2 Interaction between Process Parameters and Sheet Forming Presses
9.3 Classification of Presses
9.4 Characteristics of Presses
9.5 Characteristic Data for Accuracy
9.6 Quick Die Change Systems

Chapter 10 Mechanical Presses
Thomas Yelich, Honda, Marysville, OH
Eren Billur, CPF, The Ohio State University

10.1 Terminology and Basics
10.2 Mechanical Press Designs
10.3 Characteristic of Mechanical Presses
10.4 Other Features of Mechanical Presses

Chapter 11 Electro Mechanical Servo Drive Presses for Sheet Forming
Ajay Yadav, PhD, Caterpillar Technical Center
Serhat Kaya, PhD, CPF, The Ohio State University
Adam Groseclose, CPF, The Ohio State University

11.1 Introduction
11.2 Servo versus Conventional Press Drives
11.3 Servo Press Drives
11.4 Applications
11.5 Die Cushions with Servo Drive
11.6 New Process Development using Servo Press Characteristics
11.7 Summary/Conclusions

Chapter 12 Hydraulic Presses
Eren Billur, CPF, The Ohio State University

12.1 Terminology and Basics
12.2 Components of Hydraulic Presses
12.3 Drive Systems
12.4 Characteristics of Hydraulic Presses
12.5 Hydraulic Press Designs
Chapter 13 Cushion Systems for Sheet Metal Forming
Hari Palaniswamy, PhD, Altair Engineering, Inc.
Lars Penter, Univ. Dresden, Germany

13.1 Introduction
13.2 Blank Holder Systems in Double Action Presses
13.3 Single Action Presses with Cushion System
13.4 Multi-point Cushion (MPC) Systems

Chapter 14 Blanking
Soumya Subramonian, CPF, The Ohio State University

14.1 Introduction
14.2 Blanking Process
14.3 Forces and Stresses
14.4 Part Edge Characteristics
14.5 Effects of Tooling and Presses
14.6 Tool Materials
14.7 Ultra High Speed Blanking
14.8 Fine Blanking
14.9 Shearing
14.10 FE Simulations

Chapter 15 Bending, Flanging and Hemming
Hyunok Kim, PhD, Edison Welding Institute
Nimet Kardes, CPF, The Ohio State University
Sam Chatti, Dr. Ing. habil., IUL, Technical University, Dortmund, Germany

15.1 Introduction
15.2 Mechanics of Bending
15.3 Air Bending
15.4 Stretch Bending
15.5 Other Industrial Bending Processes
15.6 Contour and Hole Flanging
15.7 Hemming
15.8 Bending Machines
15.9 Other Bending Machines

Chapter 16 Process Simulation
Manan Shah, CPF, The Ohio State University
Partchapol Sartkulvanich, PhD, RTI International Metals Inc.

16.1 Advantages of Process Simulation
16.2 Commercial Codes for Forming Simulations
16.3 Steps involved in FEM Simulations
16.4 Case Studies in Sheet Metal Forming
16.5 Factors Affecting the Accuracy of FEM Simulations
Chapter 17 Progressive and Transfer Die Forming
Ajay Yadav, PhD, Caterpillar Technical Center
Parth Pathak, Cameron

17.1 Introduction
17.2 Process Design using Finite Element Analysis (FEM)
17.3 Application of FEA in Progressive Die Design

Chapter 18 Warm Forming of Mg and Al Alloys
Serhat Kaya, PhD, CPF, The Ohio State University

18.1 Introduction
18.2 Mechanical Behavior and Testing Methods
18.3 Warm Forming Process
18.4 Applications of Warm Forming
18.5 Deep Drawing

Chapter 19 Forming of Advanced High Strength Steels (AHSS)
Hari Palaniswamy, PhD, Altair Engineering, Inc.
Amin Al-Nasser, CPF, The Ohio State University

19.1 Introduction
19.2 Mechanical Behavior of AHSS
19.3 Forming of AHSS
19.4 Tribology in Forming AHSS
19.5 Presses and Tooling
19.6 Springback

Chapter 20 Hot Stamping
Ambi Naganathan, Cummins Engine Company
Lars Penter, University of Dresden, Germany

20.1 Introduction
20.2 Significant Process Variables
20.3 Material Flow and Process Simulation
20.4 Finite Element Simulation of Hot Stamping
20.5 Heating Methods
20.6 Tools (Dies) for Hot Stamping
20.7 Coatings for Oxidation Prevention
20.8 Other Areas of Importance

Chapter 21 Sheet Hydroforming
Ajay Yadav, PhD, Caterpillar Technical Center
Michael Trompeter, Dr. Ing., IUL, Technical University, Dortmund, Germany

21.1 The Room Temperature Sheet Hydroforming System
21.2 Process Description, Advantages and Disadvantages
21.3 Advantages and Disadvantages
Chapter 22 Tube Hydroforming
Prof. Gracious Ngaile, North Carolina State University

22.1 Introduction
22.2 Materials for THF
22.3 Tool Bending
22.4 Mechanics of Tube Hydroforming (THF)
22.5 Friction and Lubrication in Tube Hydroforming (THF)
22.6 Presses and Tooling
22.7 Tube Hydroforming (THF) Process Design and Design Guidelines

Chapter 23 Roll Forming
Okan Gortan, PtU, Technical University Darmstadt, Germany
Haydar Livatyali, PhD, Tubitak, Turkey
Prof. Peter Groche, PtU, Technical University Darmstadt, Germany

23.1 Introduction
23.2 Roll Forming Lines
23.3 Roll Design
23.4 Recent Developments and the Future of Roll Forming Technology
23.5 Future of Roll Forming

Chapter 24 High Velocity Forming
Verena Psyk, IUL, Technical University, Dortmund, Germany
Désiree Risch, IUL, Technical University, Dortmund, Germany

24.1 Introduction
24.2 High Velocity Hydroforming
24.3 High Velocity Mechanical Forming
24.4 Electromagnetic Forming

Chapter 25 Spinning, Shear Forming and Flow Forming
Lucas Kwiatkowski, IUL, Technical University, Dortmund, Germany

25.1 Spinning
25.2 Flow Forming
25.3 Shear Spinning

Chapter 26 Incremental Sheet Forming – ISF
Chapter 26 Introduction to ISF

26.1 Introduction
26.2 Process Variations of ISF
26.3 Equipment and Basic Process Parameters
26.4 Process Mechanics and Process Limits
26.5 Multistage Forming Strategies
26.6 Process Modeling
26.7 Hybrid Process Variations

Chapter 27 Introduction to Mechanical Joining

Deepak Rammohan, CPF, The Ohio State University
Jose L. Gonzalez-mendez, CPF, The Ohio State University

27.1 Introduction
27.2 Riveting
27.3 Clinching
27.4 Future Trends
27.5 Fatigue Behavior of Clinched Joints
27.6 Crimping

Chapter 28 Sensors for Sheet Metal Forming

Deepak Ravindran, CPF The Ohio State University
Yu-Chih Su, CPF, The Ohio State University

28.1 Introduction
28.2 Measurement of Forces
28.3 Displacement Sensors
28.4 Detection of Tool Breakage and Flaws in Parts
28.5 Measurement of Material Flow During Forming
28.6 Machine Vision Systems
28.7 Outline Material Property Evaluation
28.8 Sensors for Lubrication
28.9 Summary

Chapter 29 Tool Materials, Treatments and Coatings

Eren Billur, CPF, The Ohio State University

29.1 Background
29.2 Tool Materials
29.3 Treatments to Harden the Tools
29.4 Plating and Coating
29.5 Gallling/Wear Tests
29.6 Guidelines for Selecting Tool Materials/Treatments and Coatings