

Metal Forming Plasticity

EVENTUALLY, YOU WILL CERTAINLY DISCOVER AN EXTRA EXPERIENCE AND FINISHING BY SPENDING MORE CASH. NEVERTHELESS WHEN? ACCOMPLISH YOU ENDURE THAT YOU REQUIRE TO GET THOSE ALL NEEDS GONE HAVING SIGNIFICANTLY CASH? WHY DONT YOU TRY TO GET SOMETHING BASIC IN THE BEGINNING? THATS SOMETHING THAT WILL GUIDE YOU TO UNDERSTAND EVEN MORE ALMOST THE GLOBE, EXPERIENCE, SOME PLACES, SUBSEQUENTLY HISTORY, AMUSEMENT, AND A LOT MORE?

IT IS YOUR TOTALLY OWN GROW OLD TO WORK REVIEWING HABIT. IN THE COURSE OF GUIDES YOU COULD ENJOY NOW IS **METAL FORMING PLASTICITY** BELOW.

FINITE-ELEMENT PLASTICITY AND METALFORMING ANALYSIS G. W. ROWE 1991-03-07 FINITE ELEMENT PLASTICITY AND METALFORMING ANALYSIS IS SPECIFICALLY DEVOTED TO THE FINITE ELEMENT METHOD AND ITS USE IN PLASTICITY PROBLEMS. IT DETAILS THE THEORETICAL BACKGROUND, ASSUMING LITTLE PREVIOUS KNOWLEDGE, AND HOW IT CAN BE USED TO EXAMINE REALISTIC METALFORMING PROCESSES. FORGING, ROLLING AND EXTRUSION ARE TYPICAL PROCESSES COVERED IN THE TEXT, IN ADDITION TO MORE SPECIFIC PROBLEMS. IT IS THE FIRST TEXT THAT DESCRIBES IN DETAIL ELASTIC-PLASTIC FINITE-ELEMENT THEORY AND HOW IT IS USED IN FORMING ANALYSES. FOR THE MOST REALISTIC PROBLEMS LARGE CAPACITY COMPUTING FACILITIES ARE REQUIRED, BUT THE TEXT DESCRIBES SIMPLIFIED VERSIONS OF THE PROGRAM THAT CAN BE RUN ON MICROCOMPUTERS AND INCLUDES A FULL LISTING OF A PROGRAM THAT CAN BE USED FOR DEMONSTRATION PURPOSES. A FULL BIBLIOGRAPHY OF BOOKS AND RESEARCH PAPERS, WITH 700 ENTRIES, IS PROVIDED TO AID THOSE INVESTIGATING THE SUBJECT.

ENGINEERING PLASTICITY HORST LIPPMANN 1977

COMPUTATIONAL PLASTICITY IN POWDER FORMING PROCESSES AMIR KHOEI 2010-07-07 THE POWDER FORMING PROCESS IS AN EXTREMELY EFFECTIVE METHOD OF MANUFACTURING STRUCTURAL METAL COMPONENTS WITH HIGH-DIMENSIONAL ACCURACY ON A MASS PRODUCTION BASIS. THE PROCESS IS APPLICABLE TO NEARLY ALL INDUSTRY SECTORS. IT OFFERS COMPETITIVE ENGINEERING SOLUTIONS IN TERMS OF TECHNICAL PERFORMANCE AND MANUFACTURING COSTS. FOR THESE REASONS, POWDER METALLURGY IS DEVELOPING FASTER THAN OTHER METAL FORMING TECHNOLOGY. COMPUTATIONAL PLASTICITY IN POWDER FORMING PROCESSES TAKES A SPECIFIC LOOK AT THE APPLICATION OF COMPUTER-AIDED ENGINEERING IN MODERN POWDER FORMING TECHNOLOGIES, WITH PARTICULAR ATTENTION GIVEN TO THE FINITE ELEMENT METHOD (FEM). FEM ANALYSIS PROVIDES DETAILED INFORMATION ON CONDITIONS WITHIN THE PROCESSED MATERIAL, WHICH IS OFTEN MORE COMPLETE THAN CAN BE OBTAINED EVEN FROM ELABORATE PHYSICAL EXPERIMENTS, AND THE NUMERICAL SIMULATION MAKES IT POSSIBLE TO EXAMINE A RANGE OF DESIGNS, OR OPERATING CONDITIONS ECONOMICALLY. * DESCRIBES THE MECHANICAL BEHAVIOR OF POWDER MATERIALS USING CLASSICAL AND MODERN CONSTITUTIVE THEORIES. * DEVOTED TO THE APPLICATION OF ADAPTIVE FEM STRATEGY IN THE ANALYSIS OF POWDER FORMING PROCESSES. * 2D AND 3D NUMERICAL MODELING OF POWDER FORMING PROCESSES ARE PRESENTED, USING ADVANCED PLASTICITY MODELS.

CYCLIC PLASTICITY OF METALS HAMD JAHED 2021-11-11 CYCLIC PLASTICITY OF METALS: MODELING FUNDAMENTALS AND APPLICATIONS PROVIDES AN EXHAUSTIVE OVERVIEW OF THE FUNDAMENTALS AND APPLICATIONS OF VARIOUS CYCLIC PLASTICITY MODELS INCLUDING FORMING AND SPRING BACK, NOTCH ANALYSIS, FATIGUE LIFE PREDICTION, AND MORE. COVERING METALS WITH AN ARRAY OF DIFFERENT STRUCTURES, SUCH AS HEXAGONAL CLOSE PACKED (HCP), FACE CENTERED CUBIC (FCC), AND BODY CENTERED CUBIC (BCC), THE BOOK STARTS WITH AN INTRODUCTION TO EXPERIMENTAL MACROSCOPIC AND MICROSCOPIC OBSERVATIONS OF CYCLIC PLASTICITY AND THEN SEGUES INTO A DISCUSSION OF THE FUNDAMENTALS OF THE DIFFERENT CYCLIC PLASTICITY MODELS, COVERING TOPICS SUCH AS KINEMATICS, STRESS AND STRAIN TENSORS, ELASTICITY, PLASTIC FLOW RULE, AND AN ARRAY OF OTHER CONCEPTS. A REVIEW OF THE AVAILABLE MODELS FOLLOWS, AND THE BOOK CONCLUDES WITH CHAPTERS COVERING FINITE ELEMENT IMPLEMENTATION AND INDUSTRIAL APPLICATIONS OF THE VARIOUS MODELS. REVIEWS CONSTITUTIVE CYCLIC PLASTICITY MODELS FOR VARIOUS METALS AND ALLOYS WITH DIFFERENT CELL STRUCTURES (CUBIC, HEXAGONAL, AND MORE), ALLOWING FOR MORE ACCURATE EVALUATION OF A COMPONENT'S PERFORMANCE UNDER LOADING PROVIDES REAL-WORLD INDUSTRIAL CONTEXT BY DEMONSTRATING APPLICATIONS OF CYCLIC PLASTICITY MODELS IN THE ANALYSIS OF ENGINEERING COMPONENTS OVERVIEW OF LATEST MODELS

ALLOWS RESEARCHERS TO EXTEND AVAILABLE MODELS OR DEVELOP NEW ONES FOR ANALYSIS OF AN ARRAY OF METALS UNDER MORE COMPLEX LOADING CONDITIONS

PLASTICITY OF METALLIC MATERIALS OANA CAZACU 2020-11-23 PLASTICITY OF METALLIC MATERIALS PRESENTS A RIGOROUS FRAMEWORK FOR DESCRIPTION OF PLASTICITY PHENOMENA, CLASSIC AND RECENT MODELS FOR ISOTROPIC AND ANISOTROPIC MATERIALS, NEW ORIGINAL ANALYTICAL SOLUTIONS TO VARIOUS ELASTIC/PLASTIC BOUNDARY VALUE PROBLEMS AND NEW INTERPRETATIONS OF MECHANICAL DATA BASED ON THESE RECENT MODELS. THE BOOK COVERS MODELS FOR METALS WITH BOTH CUBIC AND HEXAGONAL CRYSTAL STRUCTURES, PRESENTS THE MECHANICAL TESTS REQUIRED TO DETERMINE THE MODEL PARAMETERS, VARIOUS IDENTIFICATION PROCEDURES, VERIFICATION, AND VALIDATION TESTS, AND NUMEROUS APPLICATIONS TO METAL FORMING. OUTLINES LATEST RESEARCH ON PLASTIC ANISOTROPY AND ITS ROLE IN METAL FORMING PRESENTS CHARACTERIZATION AND VALIDATION TESTS FOR METALS WITH VARIOUS CRYSTAL STRUCTURES COMPARES THE PREDICTIVE CAPABILITIES OF VARIOUS MODELS FOR A VARIETY OF LOADINGS

METAL FORMING PLASTICITY H. LIPPMANN 1979

PLASTICITY THEORY AND ITS APPLICATION IN METAL FORMING V. GOPINATHAN 1982

PLASTICITY P.M. DIXIT 2014-10-23 EXPLORES THE PRINCIPLES OF PLASTICITY MOST UNDERGRADUATE PROGRAMS LACK AN UNDERGRADUATE PLASTICITY THEORY COURSE, AND MANY GRADUATE PROGRAMS IN DESIGN AND MANUFACTURING LACK A COURSE ON PLASTICITY—LEAVING A NUMBER OF ENGINEERING STUDENTS WITHOUT ADEQUATE INFORMATION ON THE SUBJECT. EMPHASIZING STRESSES GENERATED IN THE MATERIAL AND ITS EFFECT, PLASTICITY: FUNDAMENTALS AND APPLICATIONS EFFECTIVELY ADDRESSES THIS NEED. THIS BOOK FILLS A VOID BY INTRODUCING THE BASIC FUNDAMENTALS OF SOLID MECHANICS OF DEFORMABLE BODIES. IT PROVIDES A THOROUGH UNDERSTANDING OF PLASTICITY THEORY, INTRODUCES THE CONCEPTS OF PLASTICITY, AND DISCUSSES RELEVANT APPLICATIONS. STUDIES THE EFFECTS OF FORCES AND MOTIONS ON SOLIDS. THE AUTHORS MAKE A POINT OF HIGHLIGHTING THE IMPORTANCE OF PLASTIC DEFORMATION, AND ALSO DISCUSS THE CONCEPTS OF ELASTICITY (FOR A CLEAR UNDERSTANDING OF PLASTICITY, THE ELASTICITY THEORY MUST ALSO BE UNDERSTOOD). IN ADDITION, THEY PRESENT INFORMATION ON UPDATED LAGRANGIAN AND EULERIAN FORMULATIONS FOR THE MODELING OF METAL FORMING AND MACHINING. TOPICS COVERED INCLUDE: STRESS STRAIN CONSTITUTIVE RELATIONS FRACTURE ANISOTROPY CONTACT PROBLEMS PLASTICITY: FUNDAMENTALS AND APPLICATIONS ENABLES STUDENTS TO UNDERSTAND THE BASIC FUNDAMENTALS OF PLASTICITY THEORY, EFFECTIVELY USE COMMERCIAL FINITE-ELEMENT (FE) SOFTWARE, AND EVENTUALLY DEVELOP THEIR OWN CODE. IT ALSO PROVIDES SUITABLE REFERENCE MATERIAL FOR MECHANICAL/CIVIL/AEROSPACE ENGINEERS, MATERIAL PROCESSING ENGINEERS, APPLIED MECHANICS RESEARCHERS, MATHEMATICIANS, AND OTHER INDUSTRY PROFESSIONALS.

BASIC ENGINEERING PLASTICITY DAVID REES 2012-12-02 PLASTICITY IS CONCERNED WITH UNDERSTANDING THE BEHAVIOR OF METALS AND ALLOYS WHEN LOADED BEYOND THE ELASTIC LIMIT, WHETHER AS A RESULT OF BEING SHAPED OR AS THEY ARE EMPLOYED FOR LOAD BEARING STRUCTURES. BASIC ENGINEERING PLASTICITY DELIVERS A COMPREHENSIVE AND ACCESSIBLE INTRODUCTION TO THE THEORIES OF PLASTICITY. IT DRAWS UPON NUMERICAL TECHNIQUES AND THEORETICAL DEVELOPMENTS TO SUPPORT DETAILED EXAMPLES OF THE APPLICATION OF PLASTICITY THEORY. THIS BLEND OF TOPICS AND SUPPORTING TEXTBOOK FEATURES ENSURE THAT THIS INTRODUCTION TO THE SCIENCE OF PLASTICITY WILL BE VALUABLE FOR A WIDE RANGE OF MECHANICAL AND MANUFACTURING ENGINEERING STUDENTS AND PROFESSIONALS. BRINGS TOGETHER THE ELEMENTS OF THE MECHANICS OF PLASTICITY MOST PERTINENT TO ENGINEERS, AT BOTH THE MICRO- AND MACRO-LEVELS COVERS THE THEORY AND APPLICATION OF TOPICS SUCH AS LIMIT ANALYSIS, SLIP LINE FIELD THEORY, CRYSTAL PLASTICITY, SHEET AND BULK METAL FORMING, AS WELL AS THE USE OF FINITE ELEMENT ANALYSIS CLEAR AND WELL-ORGANIZED WITH EXTENSIVE WORKED ENGINEERING APPLICATION EXAMPLES, AND END OF CHAPTER EXERCISES

METAL FORMING AND THE FINITE-ELEMENT METHOD 1989

FORMING THE FUTURE GLENN DAHN 2021-07-10 IN THIS COLLECTION, SCIENTISTS AND ENGINEERS FROM ACROSS INDUSTRY, ACADEMIA, AND GOVERNMENT PRESENT THEIR LATEST IMPROVEMENTS AND INNOVATIONS IN ALL ASPECTS OF METAL FORMING SCIENCE AND TECHNOLOGY, WITH THE INTENT OF FACILITATING LINKAGES AND COLLABORATIONS AMONG THESE GROUPS. CHAPTERS COVER THE BREADTH OF METAL FORMING TOPICS, FROM FUNDAMENTAL SCIENCE TO INDUSTRIAL APPLICATION.

ELEMENTARY MECHANICS OF PLASTIC FLOW IN METAL FORMING SAMUEL H. TALBERT 1996-06-03 METAL FORMING PLASTICITY IS AN ADVANCED SUBJECT OF INTENSIVE CURRENT RESEARCH RELEVANT TO BOTH MATERIALS SCIENCE AND MECHANICAL ENGINEERING. IT IS USED FOR THE ANALYSIS AND MODELLING OF FABRICATION PROCESSES SUCH AS FORGING, EXTRUSION, ROLLING, WIRE, AND TUBE DRAWING. THE FUNDAMENTALS OF FLOW MECHANICS ARE EXPLAINED HERE BEFORE THEY ARE APPLIED IN A VARIETY OF MACHINE-TOOL DESIGN ENGINEERING SITUATIONS. THESE FUNDAMENTALS FORM THE BASIS OF ALL ENGINEERING ANALYSES OF THE PLASTIC FLOW IN METAL FORMING AND ARE ESSENTIAL TO ALL STUDENTS OF ENGINEERING. WORKED EXAMPLES SHOWING THE VARIETY OF METAL FORMING SITUATIONS AND APPROXIMATELY 200 END-OF-CHAPTER PROBLEMS ARE ALSO INCLUDED.

SHEET METAL FORMING R. PEARCE 1991-12-31 THE PRESSING OF SHEET METAL INTO USEFUL SHAPES IS A TECHNOLOGY WHICH REQUIRES AN UNDERSTANDING OF A WIDE RANGE OF SUBJECTS. THIS TEXT IS DIVIDED INTO THREE SECTIONS: PROCESSES, MATERIALS AND TESTS. IN PART 1, SHEET METAL FORMING IS EXAMINED MAINLY FROM A MECHANICAL ENGINEERING VIEWPOINT, FIRSTLY PLASTICITY AND ANISOTROPY, THEN PROCESS VARIABLES - FRICTION, LUBRICATION AND TEMPERATURE - AND FINALLY PRACTICAL ASPECTS OF FORMING IN THE PRESS-SHOP. PART 2 DEALS WITH THE MAIN SHEET ALLOYS AT VARYING LENGTHS, DEPENDING ON THEIR INDUSTRIAL POPULARITY. CERTAIN RESEARCH RESULTS, SHOWING THE FALLIBILITY OF THE PHENOMENOLOGICAL APPROACH, ARE ALSO HIGHLIGHTED. A SECTION OF TESTING PROCEDURES CONCLUDES THE VOLUME.

METAL FORMING PLASTICITY 1979

DISLOCATIONS, PLASTICITY AND METAL FORMING AKHTAR S. KHAN 2003

THEORY OF PLASTICITY AND METAL FORMING PROCESSES SADHU SINGH 1999

INTRODUCTION TO ENGINEERING PLASTICITY TONGXI YU 2022-06-20 THE THEORY OF PLASTICITY IS A BRANCH OF SOLID MECHANICS THAT INVESTIGATES THE RELATIONSHIP BETWEEN PERMANENT DEFORMATION AND LOAD, AND THE DISTRIBUTION OF STRESS AND STRAINS OF MATERIALS AND STRUCTURES BEYOND THEIR ELASTIC LIMIT. ENGINEERING PLASTICITY UNDERPINS THE SAFETY OF MANY MODERN SYSTEMS AND STRUCTURES. REALIZING THE FULL POTENTIAL OF MATERIALS AS WELL AS DESIGNING PRECISE METAL PROCESSING AND ENERGY ABSORPTION STRUCTURES REQUIRES MASTERY OF ENGINEERING PLASTICITY. INTRODUCTION TO ENGINEERING PLASTICITY: FUNDAMENTALS WITH APPLICATIONS IN METAL FORMING, LIMIT ANALYSIS AND ENERGY ABSORPTION PRESENTS BOTH

FUNDAMENTAL THEORY ON PLASTICITY AND EMPHASIZES THE LATEST ENGINEERING APPLICATIONS. THE TITLE COMBINES THEORY AND ENGINEERING APPLICATIONS OF PLASTICITY, ELABORATING ON PROBLEM SOLVING IN REAL-WORLD ENGINEERING TASKS SUCH AS IN METAL FORMING, LIMIT ANALYSIS OF STRUCTURES, AND UNDERSTANDING THE ENERGY ABSORPTION OF STRUCTURES AND MATERIALS.

THE FIVE MAIN PARTS OF THE BOOK COVER: PLASTIC PROPERTIES OF MATERIALS AND THEIR CHARACTERIZATION; FUNDAMENTAL THEORY IN PLASTICITY; ELASTIC-PLASTIC PROBLEMS AND TYPICAL SOLUTIONS; AND RIGID-PLASTIC PROBLEMS UNDER PLANE-STRESS CONDITIONS. THIS TITLE PROVIDES STUDENTS AND ENGINEERS ALIKE WITH THE FUNDAMENTALS AND ADVANCED TOOLS NEEDED IN ENGINEERING PLASTICITY. BRINGS TOGETHER PLASTICITY THEORY WITH ENGINEERING APPLICATIONS AND PROBLEM SOLVING ELABORATES PROBLEM SOLVING METHODS AND DEMONSTRATES PLASTICITY IN VARIOUS ENGINEERING FIELDS COVERS THE RECENT DECADES OF RESEARCH ON METAL FORMING AND LIMIT ANALYSIS INCLUDES ENERGY ABSORPTION OF NEW STRUCTURES AND MATERIALS WHERE PLASTICITY DOMINATES ANALYSIS AND DESIGN GIVES A SYSTEMATIC ACCOUNT OF THE THEORY OF PLASTICITY ALONGSIDE ITS ENGINEERING APPLICATIONS

THEORY OF ENGINEERING PLASTICITY DR. NARAYANASAMY 2000-05-01 IN THIS BOOK THE THEORY OF ENGINEERING PLASTICITY IS APPLIED TO THE ELEMENTS OF COMMON BULK & SHEET METAL FORMING PROCESSES. THIS IS FIRST TEXT BOOK MADE AVAILABLE IN INDIA TOGETHER THE MECHANICS OF METAL FORMING

ENGINEERING PLASTICITY Z. R. WANG 2018 AN ALL-IN-ONE GUIDE TO THE THEORY AND APPLICATIONS OF PLASTICITY IN METAL FORMING, FEATURING EXAMPLES FROM THE AUTOMOBILE AND AEROSPACE INDUSTRIES PROVIDES A SOLID GROUNDING IN PLASTICITY FUNDAMENTALS AND MATERIAL PROPERTIES FEATURES MODELS, THEOREMS AND ANALYSIS OF PROCESSES AND RELATIONSHIPS RELATED TO PLASTICITY, SUPPORTED BY EXTENSIVE EXPERIMENTAL DATA OFFERS A DETAILED DISCUSSION OF RECENT ADVANCES AND APPLICATIONS IN METAL FORMING

METAL FORMING 2000

A CONTINUUM MODEL FOR FRICTION WITH APPLICATIONS IN METAL FORMING PLASTICITY IBRAHIM MAHDI AL-KHATTAT 1981

ENGINEERING PLASTICITY C. R. CALLADINE 2016-10-13 ENGINEERING PLASTICITY FOCUSES ON CERTAIN FEATURES OF THE THEORY OF PLASTICITY THAT ARE PARTICULARLY APPROPRIATE TO ENGINEERING DESIGN. TOPICS COVERED RANGE FROM SPECIFICATION OF AN IDEAL PLASTIC MATERIAL TO THE BEHAVIOR OF STRUCTURES MADE OF IDEALIZED ELASTIC-PLASTIC MATERIAL, THEOREMS OF PLASTIC THEORY, AND ROTATING DISCS. TORSION, INDENTATION PROBLEMS, AND SLIP-LINE FIELDS ARE ALSO DISCUSSED. THIS BOOK CONSISTS OF 12 CHAPTERS AND BEGINS BY PROVIDING AN ENGINEERING BACKGROUND FOR THE THEORY OF PLASTICITY, WITH EMPHASIS ON THE USE OF METALS IN STRUCTURAL ENGINEERING AND THE NATURE OF PHYSICAL THEORIES. THE READER IS THEN INTRODUCED TO THE GENERAL PROBLEM OF HOW TO SET UP A MODEL OF THE PLASTIC BEHAVIOR OF METAL FOR USE IN ANALYSIS AND DESIGN OF STRUCTURES AND FORMING PROCESSES, PAYING PARTICULAR ATTENTION TO THE PLASTIC DEFORMATION THAT OCCURS WHEN A SPECIMEN OF METAL IS STRESSED. SUBSEQUENT CHAPTERS EXPLORE THE BEHAVIOR OF A SIMPLE STRUCTURE MADE OF ELASTIC-PLASTIC MATERIAL; THEOREMS OF PLASTIC THEORY; ROTATING DISCS; AND INDENTATION PROBLEMS. TORSION, SLIP-LINE FIELDS, AND CIRCULAR PLATES UNDER TRANSVERSE LOADING ARE ALSO CONSIDERED, ALONG WITH WIRE-DRAWING AND EXTRUSION AND THE EFFECTS OF CHANGES IN GEOMETRY ON STRUCTURE. THIS MONOGRAPH IS INTENDED FOR STUDENTS OF ENGINEERING.

THEORY OF METAL FORMING PLASTICITY ANDRZEJ SUZALEC 2013-04-17 THE INTENTION OF THIS BOOK IS TO REVEAL AND DISCUSS SOME ASPECTS OF THE METAL FORMING PLASTICITY THEORY. THE MODERN THEORY DESCRIBES DEFORMATION OF METALLIC BODIES IN COLD AND HOT REGIMES UNDER COMBINED THERMAL AND MECHANICAL LOADINGS. THERMAL AND DEFORMATION FIELDS APPEAR IN METAL FORMING IN VARIOUS FORMS. A THERMAL FIELD INFLUENCES THE MATERIAL PROPERTIES, MODIFIES THE EXTENT OF PLASTIC ZONES, ETC., AND THE DEFORMATION OF METALLIC BODY INDUCES CHANGES IN TEMPERATURE DISTRIBUTION. THE THERMAL EFFECTS IN METAL FORMING PLASTICITY CAN BE STUDIED AT TWO LEVELS, DEPENDING ON WHETHER UNCOUPLED OR COUPLED THEORIES OF THERMO-PLASTIC RESPONSE HAVE TO BE APPLIED. A MAJORITY OF METAL FORMING PROCESSES CAN BE SATISFACTORILY STUDIED WITHIN AN UNCOUPLED THEORY. IN SUCH AN APPROACH THE TEMPERATURE ENTERS THE STRESS-STRAIN RELATION THROUGH THE MATERIAL CONSTANTS AND THROUGH THE THERMAL DILATATION. THE DESCRIPTION OF THERMO-PLASTIC DEFORMATION IN METAL FORMING IS COVERED UPON THE GROUND OF THERMODYNAMICS.

MODELING OF METAL FORMING AND MACHINING PROCESSES PRAKASH MAHADEO DIXIT 2008-05-14 WRITTEN BY AUTHORITIES IN THE SUBJECT, THIS BOOK PROVIDES A COMPLETE TREATMENT OF METAL FORMING AND MACHINING BY USING THE COMPUTATIONAL TECHNIQUES FEM, FUZZY SET THEORY AND NEURAL NETWORKS AS MODELLING TOOLS. THE ALGORITHMS AND SOLVED EXAMPLES INCLUDED MAKE THIS BOOK OF VALUE TO POSTGRADUATES, SENIOR UNDERGRADUATES, AND LECTURERS AND RESEARCHERS IN THESE FIELDS. RESEARCH AND DEVELOPMENT ENGINEERS AND CONSULTANTS FOR THE MANUFACTURING INDUSTRY WILL ALSO FIND IT USEFUL.

ENGINEERING PLASTICITY R. A. C. SLATER 1977

PLASTICITY AND METAL FORMING WILLIAM JOHNSON 1978

CONTINUUM MODEL FOR FRICTION WITH APPLICATIONS IN METAL FORMING PLASTICITY STANFORD UNIVERSITY. DIVISION OF APPLIED MECHANICS. DIVISION OF APPLIED MECHANICS 1981

FORMABILITY OF METALLIC MATERIALS D. BANARIC 2013-04-17 AFTER A BRIEF INTRODUCTION INTO CRYSTAL PLASTICITY, THE FUNDAMENTALS OF CRYSTALLOGRAPHIC TEXTURES AND PLASTIC ANISOTROPY, A MAIN TOPIC OF THIS BOOK, ARE OUTLINED. A LARGE CHAPTER IS DEVOTED TO FORMABILITY TESTING BOTH FOR BULK METAL AND SHEET METAL FORMING. FOR THE FIRST TIME TESTING METHODS FOR PLASTIC ANISOTROPY OF ROUND BARS AND TUBES ARE INCLUDED. A PROFOUND SURVEY IS GIVEN OF LITERATURE ABOUT YIELD CRITERIA FOR ANISOTROPIC MATERIALS UP TO MOST RECENT DEVELOPMENTS AND THE CALCULATION OF FORMING LIMITS OF ANISOTROPIC SHEET METAL. OTHER CHAPTERS ARE CONCERNED WITH PROPERTIES OF WORKPIECES AFTER METAL FORMING AS WELL AS THE FUNDAMENTALS OF THE THEORY OF PLASTICITY AND FINITE ELEMENT SIMULATION OF METAL FORMING PROCESSES. THE BOOK IS COMPLETED BY A COLLECTION OF TABLES OF INTERNATIONAL STANDARDS FOR FORMABILITY TESTING AND OF FLOW CURVES OF METALS WHICH ARE MOST COMMONLY USED IN METAL FORMING. IT IS ADDRESSED BOTH TO UNIVERSITY AND INDUSTRIAL READERS.

METAL FORMING PLASTICITY 1979

THE EVALUATION OF PLASTICITY FLOW OF PURE ALUMINUM IN COLD METAL FORMING PROCESS WOON BIN SEAH 2009

1995

DISLOCATIONS, PLASTICITY AND METAL FORMING AKHTAR S. KHAN 2005

ASPECTS OF THE PLASTICITY MECHANICS OF SOME SHEET METAL FORMING PROCESSES WILLIAM JOHNSON 1978

FUNDAMENTALS OF ENGINEERING PLASTICITY WILLIAM F. HOSFORD 2013-07-22 IDEAL FOR THOSE INVOLVED IN DESIGNING SHEET METAL FORMING PROCESSES, WHERE THE UNDERSTANDING OF ADVANCES IN PLASTICITY THEORY IS ESSENTIAL.

PLASTIC AND VISCOPLASTIC RESPONSE OF MATERIALS AND METAL FORMING AKHTAR S. KHAN 2000

METAL FORMING PLASTICITY 1979

METAL FORMING PLASTICITY INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS 1979-06 THE INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS (IUTAM) WHICH IS THE HEAD ORGANISATION OF MOST OF THE EXISTING NATIONAL AND INTERNATIONAL SOCIETIES OF MECHANICS, DECIDED TO SPONSOR A SYMPOSIUM ON METAL FORMING PLASTICITY. IT WAS HELD NEAR MUNICH (FEDERAL REPUBLIC OF GERMANY) BETWEEN AUGUST 28 AND SEPTEMBER 3, 1978, IN THE "EVANGE LISCH ACADEMY" IN THE CASTLE OF TUTZING WHICH IS SITUATED IN A PARK AT LAKE STARNBERG OVERLOOKING THE ALPS. THE SUBJECTS OF THE SYMPOSIUM WERE BASIC ASPECTS OF THE THEORETICAL AND EXPERIMENTAL MECHANICS OF METAL FORMING PROCESSES RATHER THAN TECHNOLOGICAL DETAILS, OR PLASTICITY AS SUCH. THIS SPECTRUM OF THE CONFERENCE EXTENDED FROM NECESSARY PHYSICAL BACKGROUND, THROUGH EXPERIMENTAL, ANALYTICAL, OR NUMERICAL METHODS, TO APPLICATIONS TO SPECIFIC TECHNOLOGICAL DEFORMATION PROCESSES SUCH AS ROLLING, DEEP DRAWING, EXTRUSION, ETC. THE FOLLOWING PERSONS WERE BY THE IUTAM-BUREAU APPOINTED TO MEMBERSHIP OF THE "SCIENTIFIC COMMITTEE" WHICH WAS RESPONSIBLE FOR THE NOMINATION OF PARTICIPANTS AS WELL AS FOR THE FORM OF THE SCIENTIFIC PROGRAM: W. JOHNSON (U.K.), H. KUOJ (JAPAN), H. LIPPMANN (F.R.G. CHAIRMAN), G.S. PISARENKO (USSR), AND W. SZCZEPINSKI (POLAND). THE TECHNICAL ORGANISATION WAS IN THE HANDS OF A "LOCAL ORGANIZING COMMITTEE" FORMED BY V.I.F. FISCHER, K. HECKEL, G. KUHN, H. LIPPMANN (CHAIRMAN), K. MAGNUS, V. MANN, G. SONNITAG, ALL OF THEM FROM MUNICH AND K. LANGE (STUTTGART), O. PA'NELSKI (DUISSELDORF). THIS COMMITTEE WAS SUPPORTED BY TWO SECRETARIES, I.E.

PLASTICITY AND MODERN METAL-FORMING TECHNOLOGY T.Z. BLAZZYNSKI 1989-03-31

WILLIAM F. HOSFORD 2013-07-22 WILLIAM HOSFORD'S BOOK IS IDEAL FOR THOSE INVOLVED IN DESIGNING SHEET METAL FORMING PROCESSES. KNOWLEDGE OF PLASTICITY IS ESSENTIAL FOR THE COMPUTER SIMULATION OF METAL FORMING PROCESSES AND UNDERSTANDING THE ADVANCES IN PLASTICITY THEORY IS KEY TO FORMULATING SOUND ANALYSES. THE AUTHOR MAKES THE SUBJECT SIMPLE BY AVOIDING NOTATIONS USED BY SPECIALISTS IN MECHANICS. R. HILL'S AUTHORITATIVE BOOK, MATHEMATICAL THEORY OF PLASTICITY (1950), PRESENTED A COMPREHENSIVE TREATMENT OF CONTINUUM PLASTICITY THEORY UP TO THAT TIME; MUCH OF THE TREATMENT IN THIS BOOK COVERS THE SAME GROUND, BUT FOCUSES ON MORE PRACTICAL TOPICS. HOSFORD HAS INCLUDED RECENT DEVELOPMENTS IN CONTINUUM THEORY, INCLUDING A NEWER TREATMENT OF ANISOTROPY THAT HAS RESULTED FROM CALCULATIONS OF YIELDING BASED ON CRYSTALLOGRAPHY, ANALYSIS OF THE ROLE OF DEFECTS, AND FORMING LIMIT DIAGRAMS. A MUCH GREATER EMPHASIS IS PLACED ON DEFORMATION MECHANISMS AND THE BOOK ALSO INCLUDES CHAPTERS ON SLIP AND DISLOCATION THEORY AND TWINNING.

ASPECTS OF THE PLASTICITY MECHANICS OF SOME SHEET METAL FORMING PROCESSING WILLIAM JOHNSON 1978

SIMULATION OF SHEET METAL FORMING USING POLYCRYSTAL PLASTICITY

FUNDAMENTALS OF ENGINEERING PLASTICITY