

1. Record Nr.	UNINA9910963613103321
Titolo	Single- and multi-phase flows in an electromagnetic field : energy, metallurgical, and solar applications / / edited by Herman Branover, Paul S. Lykoudis, Michael Mond
Pubbl/distr/stampa	New York, : American Institute of Aeronautics and Astronautics, c1985
ISBN	1-60086-568-2 1-60086-349-3
Edizione	[1st ed.]
Descrizione fisica	1 online resource (769 p.)
Collana	Progress in astronautics and aeronautics ; ; v. 100
Altri autori (Persone)	BranoverHerman <1931-> LykoudisP. S <1926-> (Paul S.) MondMichael
Disciplina	629.1 s 538/.6
Soggetti	Magnetohydrodynamics Turbulence Two-phase flow Liquid metals
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Technical papers from the Proceedings of the Fourth Beer-Sheva International Seminar on Magnetohydrodynamic Flows and Turbulence, Ben-Gurion University of the Negev, Beer-Sheva, Israel, February 27-March 2, 1984, and subsequently revised for this volume."
Nota di bibliografia	Includes bibliographies and index.
Nota di contenuto	""Cover""; ""Title""; ""Copyright""; ""Table of Contents""; ""Preface""; ""Chapter I. Laminar MHD Flows""; ""Laminar Duct Flows in Strong Magnetic Fields""; ""Approximate Side Layer Solutions for a Liquid Metal Flow in a Rectangular Duct with a Strong Nonuniform Magnetic Field""; ""Applications of MHD Flows Between Rotating Disks""; ""Unsteady Magnetoaerodynamic Supersonic Flows Past Oscillating Thin Bodies and Lifting Surfaces""; ""Chapter II. MHD and HD Turbulence""; ""Two-Dimensional Behavior of Electrically Driven Flows at High Hartmann Numbers"" ""Transition from Three-Dimensional to Quasi-Two-Dimensional MHD Grid Turbulence"""""Direct Numerical Simulation of Two-Dimensional Turbulence""; ""Experiments in Duct Flows with Reversed Turbulent

Energy Cascades"; ""Direct Numerical Simulation of Three-Dimensional Convection in Liquid Metals"; ""Magneto-Fluid-Mechanic Turbulent Vortex Streets"; ""Numerical Simulation of Homogeneous Turbulence Submitted to Two Successive Plane Strains and to Solid Body Rotation"; ""Sensitivity of Turbulent Channel Flow to the Interactions at the Perimeter""

""Electrogasdynamic and Kinetic Phenomena in Diffuse Electrical Discharges in Turbulent Gas Flows""""Homotopic Structural Invariants in HD and MHD Turbulence"; ""Chapter III. Two-Phase Flows""; ""Liquid Metal Magneto-Fluid-Mechanic Turbulence""; ""Bubble Growth in a Superheated Liquid Metal in a Uniform Magnetic Field""; ""Analysis of Two-Phase MHD Flow in Converging-Diverging Ducts""; ""Stability of Two-Phase Liquid Metal MHD Channel Flow""; ""An Analytical Model for Bubbly Flow""; ""Computer Modeling for Single-Phase Reacting Flow Patterns""

""Two-Phase Flow Measurement Using a Modified Laser Doppler Anemometry System""""Chapter IV. MHD Power Generation and Application to Fission and Fusion Reactors""; ""Liquid Metal MHD Power Generation—Its Evolution and Status""; ""Tin-Water Faraday Generator""; ""The ETGAR Liquid Metal MHD Project""; ""Investigation of a Lithium-Caesium Faraday Converter""; ""The Feasibility of Remote Power Generation Based on LMMHD and Biomass Energy""; ""Interaction of Hall Currents and Turbulent Boundary Layers in Closed-Cycle MHD Experiments""; ""Streamer Dynamics in MHD Generators""

""Magneto-Fluid-Dynamic Issues for Fusion First-Wall and Blanket Systems""""Experiments on a Large Thin-Wall Duct""; ""Demonstration of Flow Couplers for the LMFBR""; ""Disk Generator Performance Prospects""; ""High-Temperature Liquid Metal MHD Solar Thermal Systems""; ""Chapter V. Metallurgical Applications""; ""Metallurgical Applications of MHD""; ""Current Paths and MHD in Vacuum Arc Remelting""; ""Electromagnetic Modelization of Cold Crucibles""; ""Shaping of Liquid Metal Cylinders""; ""Shield Effects in Continuous Electromagnetic Casting""

""Investigation of the Turbulent Flow in an Induction Furnace Supplied with Various Frequencies""
