Record Nr. UNINA9910789447403321 **Titolo** Mechanics of composite materials: proceedingsof the fifth symposium on Naval structural mechanics, held at the Marriot Motor Hotel, Philadelphia, Pennsylvania, May 8-10, 1967 / / edited by F. W. Wendt, H. Liebowitz, N. Perrone Pubbl/distr/stampa Oxford, England:,: Pergamon Press Ltd,, 1970 ©1970 **ISBN** 1-4831-4779-7 Descrizione fisica 1 online resource (903 p.) Collana Office of Naval Research. Structural Mechanics Series Disciplina 620/.11 Soggetti Composite materials Fibrous composites Reinforced plastics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and indexes. Nota di contenuto Front Cover; Mechanics of Composite Materials; Copyright Page; Preface: Table of Contents; WELCOMING ADDRESS; SESSION I: REQUIREMENTS: CHAPTER 1. MISSILE AND AIRCRAFT SYSTEMS CONSTRAINTS AND OPERATIONAL REQUIREMENTS; SHIP SYSTEMS CONSTRAINTS AND OPERATIONAL REQUIREMENTS; I. NAVY SHIP; II. NAVY MISSION: III. ENVIRONMENT: IV. MATERIALS REQUIREMENTS: CHAPTER 2. MATERIALS, AND ENGINEERING PROBLEMS; ABSTRACT; I. INTRODUCTION; II. TENSILE STRENGTH; III. COMPRESSIVE STRENGTH; IV. SHEAR; V. EVALUATIONS, AND THEIR IMPLICATIONS; VI. CONCLUDING DISCUSSION; ACKNOWLEDGEMENTS; REFERENCES SESSION II: APPLICATIONSCHAPTER 3. STRUCTURAL USES OF COMPOSITES: I. INTRODUCTION: II. EXAMPLES: I I I . STRESS ANALYSIS: IV. CONCLUSIONS; ACKNOWLEDGEMENTS; REFERENCES; CHAPTER 4. THE USE OF COMPOSITE MATERIALS IN NAVAL SHIPS; I. INTRODUCTION; II. USE IN SURFACE SHIPS; III. USE IN SUBMARINES; IV. POSSIBLE FUTURE USES; V. OBSTACLES TO EXPANDED USE; ACKNOWLEDGEMENTS; REFERENCES; CHAPTER 5. APPLICATIONS OF REINFORCED PLASTICS IN AIRCRAFT; I. INTRODUCTION; II. RADOMES; III. FUSELAGE AND WINGS;

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Sommario/riassunto

Mechanics of Composite Materials contains the proceedings of the Fifth Symposium on Naval Structural Mechanics held in Philadelphia, Pennsylvania, on May 8-10, 1967. The papers explore the mechanics of composite materials for naval applications. The structural requirements of a system and the fundamental mechanical properties of composite materials, as well as the behavior of such materials under various environmental conditions, are discussed. This book is comprised of 40 chapters and begins with an analysis of missile and aircraft systems constraints and operational requirements, along with