1. Record Nr. UNINA9910794668703321 Autore Schmidt Robert Kyle Titolo The design of aircraft landing gear / / by Robert Kyle Schmidt Warrendale, Pa. (400 Commonwealth Dr., Warrendale PA USA):,: Pubbl/distr/stampa Society of Automotive Engineers, , 2021 0-7680-8345-1 **ISBN** 1-5231-4041-0 0-7680-9943-9 Edizione [1st ed.] Descrizione fisica 1 online resource (1 PDF (1,090 pages)) : illustrations Society of Automotive Engineers. Electronic publications Collana Disciplina 629.134381 Airplanes - Landing gear - Design and construction Soggetti TECHNOLOGY & ENGINEERING / Aeronautics & Astronautics Aerospace and aviation technology **Astronautics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover -- Table of Contents -- Acknowledgements -- Preface -- A Note on Units -- CHAPTER 1 Introduction -- Brief History of Landing Gear --Design Process -- Nomenclature -- Book Outline -- References --CHAPTER 2 Airfield Compatibility -- Flotation/Ground Compatibility --Common Concepts in Ground Compatibility -- General Overview --California Bearing Ratio -- Modulus of Subgrade Reaction, k -- Ground Compatibility Nomenclature -- Ground Contact Pressure -- Landing Gear Arrangement Nomenclature -- Ground Compatibility (Flotation) Analysis -- Unpaved Surfaces -- Soil and Grass. -- Unpaved Analysis Method ASD-TR-68-34. -- Alternative Unpaved Analysis Methods. --Gravel/Aggregate Airfields. -- Paved Surfaces -- Pavement Design Analysis. -- Layered Elastic and Finite Element Analysis. -- Flexible Pavements-Historic Approach. -- Rigid Pavements-Historic Approach. -- Pavement Strength Reporting Methods. -- Load Classification Number/Load Classification Group Method. -- Modern Methods for

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Sommario/riassunto

The Design of Aircraft Landing Gear is designed to guide the reader through the key principles of landing system design and to provide additional references when available. Many problems which must be confronted have already been addressed by others in the past, but the information is not known or shared, leading to the observation that there are few new problems, but many new people. It is intended to share much of the existing information and provide avenues for further exploration. The design of an aircraft and its associated systems, including the landing system, involves iterative loops as the impact of each modification to a system or component is evaluated against the whole. It is rare to find that the lightest possible landing gear represents the best solution for the aircraft: the lightest landing gear may require attachment structures which don't exist and which would require significant weight and compromise on the part of the airframe structure design.