Record Nr. UNINA9910254330403321

Autore Kim In-Ju

Titolo Pedestrian Fall Safety Assessments: Improved Understanding on Slip

Resistance Measurements and Investigations / / by In-Ju Kim

Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,,

2017

ISBN 3-319-56242-8

Edizione [1st ed. 2017.]

Descrizione fisica 1 online resource (XXXVI, 249 p. 70 illus., 16 illus. in color.)

Disciplina 658.56

Soggetti Quality control

Reliability

Industrial safety

Tribology

Corrosion and anti-corrosives

Coatings
Architecture
Building
Engineering

Structural analysis (Engineering)

Surfaces (Technology)

Thin films Mechanics

Mechanics, Applied

Quality Control, Reliability, Safety and Risk

Tribology, Corrosion and Coatings Building Construction and Design Surfaces and Interfaces, Thin Films Theoretical and Applied Mechanics

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Nota di bibliografia Includes bibliographical references at the end of each chapters and

index.

Nota di contenuto Chapter 1. Introduction -- Chapter 2. Pedestrian Falls and Slip

Resistance Measurements -- Chapter 3. Pedestrian Slip Resistance Measurements: Verities and Challenges -- Chapter 4. Tribological Approaches for Fall Safety Measurements and Assessments -- Chapter 5. Friction and Wear Behaviours of the Shoe-Floor Sliding Friction System -- Chapter 6. Surface Measurement and Analysis for Shoes and Floors -- Chapter 7. Practical Design Search for Optimal Floor Surface Finishes -- Chapter 8. Future Works -- Index.

Sommario/riassunto

This book examines pedestrian shoe-floor slip resistance from an engineering standpoint in order to better understand friction and wear behavior. This analysis includes an extensive investigation into the surface properties of shoes and flow, and the measurement of dynamic friction and other mechanical and physical aspects of shoe-floor tribology. Lastly, the book proposes a measurement concept for the identification and classification of operational floor surfaces under a range of different conditions. Novel techniques and methods are proposed that can improve the reliability of slip resistance assessments. The current state of knowledge is critically examined and discussed from a tribological perspective, including aspects like friction, wear, lubrication and the mechanical behavior of shoes, floors and their wider environment. Further, the book reports on extensive experimental investigations into the topographical characteristics of shoe and floor surfaces and how they affect slip resistance. Slips resulting in pedestrian falls are a major cause of injuries and deaths for all age groups. This important book provides essential insights for researchers, practicing engineers and public safety officials wishing to learn about how the risk of pedestrian slips can be assessed and understood.