

ISO 16126:2024-12 (E)

Space systems - Survivability of unmanned spacecraft against space debris and meteoroid impacts for the purpose of space debris mitigation

Contents

Page

- Foreword..... iv
- Introduction..... v
- 1 Scope..... 1
- 2 Normative references..... 1
- 3 Terms and definitions..... 1
- 4 Symbols and abbreviated terms..... 2
 - 4.1 Symbols..... 2
 - 4.2 Abbreviated terms..... 5
- 5 Requirements for impact risk analysis..... 5
 - 5.1 General..... 5
 - 5.2 Failure probability thresholds..... 6
 - 5.3 Failure probability analysis..... 6
- 6 Impact risk analysis procedure for case 1..... 6
- 7 Impact risk analysis procedures for case 2..... 10
 - 7.1 General..... 10
 - 7.2 Case 2a..... 10
 - 7.3 Case 2b..... 14
- Annex A (informative) Procedure for an impact risk analysis during phase A..... 17
- Annex B (informative) Methods and models for analysing the impact risk from small SD/M..... 18
- Annex C (informative) Ballistic limit equations..... 29
- Annex D (informative) Guidance for implementing impact protection on a spacecraft..... 43
- Annex E (informative) Examples of advanced shielding for unmanned spacecraft..... 50
- Annex F (informative) Typical environmental constraints for shield materials..... 56
- Bibliography..... 57