

DIN EN 16603-32-10:2020-08 (E)

Space engineering - Structural factors of safety for spaceflight hardware; English version EN 16603-32-10:2020

Table of contents

- European Foreword.....4**
- 1 Scope.....5**
- 2 Normative references7**
- 3 Terms, definitions and abbreviated terms.....8**
 - 3.1 Terms and definitions8
 - 3.2 Terms specific to the present standard8
 - 3.3 Abbreviated terms.....9
 - 3.4 Nomenclature9
- 4 Requirements..... 11**
 - 4.1 Applicability of structural factors of safety 11
 - 4.1.1 Overview 11
 - 4.1.2 Applicability 11
 - 4.1.3 General 11
 - 4.1.4 Design factor for loads 11
 - 4.1.5 Additional factors for design 13
 - 4.2 Loads and factors relationship 14
 - 4.2.1 General 14
 - 4.2.2 Specific requirements for launch vehicles 16
 - 4.3 Factors values 16
 - 4.3.1 Test factors 16
 - 4.3.2 Factors of safety 18
- Annex A (informative) Qualification test factor for launch vehicles22**
- Bibliography.....24**

- Figures**
 - Figure 4-1: Logic for Factors of Safety application..... 15
 - Figure 4-2: Analysis tree..... 16

Tables

Table 4-1: Relationship among (structural) factors of safety, design factors and additional factors	15
Table 4-2: Test factor values	16
Table 4-3: Factors of safety for metallic, FRP, sandwich, glass and ceramic structural parts	19
Table 4-4: Factors of safety for joints, inserts and connections.....	20
Table 4-5: Factors of safety for buckling.....	21
Table 4-6: Factors of safety for pressurized hardware	21