ISO 15389:2001-01 (E)

Space systems_- Flight-to-ground umbilicals

Contents

Page

Foreword ..... **iv**

Introduction ..... **v**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 General requirements **3**
4.1 Umbilical system principles **3**
4.2 Mating **4**
4.3 Mass **5**
4.4 Loads **5**
4.5 Contamination prevention **5**
4.6 Purges **5**
4.7 Leak detection **5**
4.8 Leakage disposal **5**
4.9 Fluid couplings **6**
4.10 Electrical connectors **6**
4.11 Grounding **6**
4.12 Electromagnetic compatibility (EMC) **6**
4.13 Lightning current paths **6**
4.14 Environmental conditions **6**
4.15 Component selection **6**
4.16 Corrosion control **7**
4.17 Maintainability **7**
4.18 Accessibility **7**
4.19 Component position feedback **7**
4.20 Connection inspection **7**

5 Design guidelines **7**
5.1 Preflight disconnect **7**
5.2 Inflight umbilical assembly **7**
5.3 Preflight umbilical assembly **9**

6 Test and evaluation **11**
6.1 General **11**
6.2 Static test **11**
6.3 Dynamic test **11**
6.4 Cryogenic test **11**