

ISO/IEC TS 22237-2:2018-05 (E)

Information technology - Data centre facilities and infrastructures - Part 2: Building construction

Contents

Page

Foreword	vi
Introduction	vii
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviated terms	2
3.1 Terms and definitions	2
3.2 Abbreviated terms	3
4 Conformance	3
5 Location	3
5.1 Assessment of location	3
5.1.1 Requirements	3
5.1.2 Recommendations	4
5.2 Geographical location	4
5.2.1 Requirements	4
5.2.2 Recommendations	4
5.3 Natural environment	4
5.3.1 Requirements	4
5.3.2 Recommendations	4
5.4 Adjacencies	4
5.4.1 Requirements	4
5.4.2 Recommendations	5
5.5 Infrastructural factors	5
5.5.1 Requirements	5
5.5.2 Recommendations	5
6 Site configuration	5
6.1 General	5
6.2 Site selection	6
6.2.1 Requirements	6
6.2.2 Recommendations	7
6.3 Assessment of existing premises	7
6.3.1 Requirements	7
6.3.2 Recommendations	7
6.4 Utilities	7
6.4.1 Requirements	7
6.4.2 Recommendations	7
6.5 Access routes	7
6.5.1 Requirements	7
6.5.2 Recommendations	7
6.6 Deliveries	8
6.6.1 Requirements	8
6.6.2 Recommendations	8
6.7 Parking	8
6.7.1 Requirements	8
6.7.2 Recommendations	8

6.8	Exterior installations	8
6.8.1	Underground facilities	8
6.8.2	Telecommunications cabling	8
6.9	Perimeter	9
6.9.1	Requirements	9
6.9.2	Recommendations	9
7	Building construction	9
7.1	Building structure	9
7.1.1	General	9
7.1.2	Load-bearing structure	9
7.1.3	Building materials and finishes	9
7.2	Foundations	10
7.2.1	Requirements	10
7.2.2	Recommendations	10
7.3	Exterior walls	10
7.3.1	Requirements	10
7.3.2	Recommendations	11
7.4	Interior walls providing boundaries of Protection Class	11
7.4.1	Requirements	11
7.4.2	Recommendations	11
7.5	Roofs	11
7.5.1	General	11
7.6	Rain water drainage	12
7.6.1	Requirements	12
7.6.2	Recommendations	12
7.7	Floors and ceilings	12
7.7.1	General	12
7.7.2	Access floors	12
7.8	Corridors and doors	13
7.8.1	Requirements	13
7.8.2	Recommendations	13
8	Data centre spaces and access routes	13
8.1	Accommodation	13
8.1.1	General	13
8.1.2	Requirements	13
8.1.3	Recommendations	13
8.1.4	Data centre spaces	14
8.2	Protection	15
8.2.1	Requirements	15
8.2.2	Recommendations	15
8.3	Floors	15
8.3.1	General	15
8.3.2	Access floors	16
8.4	Ceilings	16
8.4.1	Requirements	16
8.4.2	Recommendations	16
8.5	Access to data centre spaces	17
8.5.1	Requirements	17
8.5.2	Recommendations	17
8.6	Vapour density	17
8.6.1	General	17
8.6.2	Requirements	17
8.6.3	Recommendations	17
9	Fire compartments, fire barriers and fire suppression systems	17
9.1	General	17
9.1.1	Requirements	17
9.1.2	Recommendations	18
9.2	Fire barriers	18

9.2.1	Requirements	18
9.2.2	Recommendations	18
9.3	Fire compartments for gaseous extinguishing systems	18
9.3.1	Inert gaseous extinguishing systems	18
9.3.2	Oxygen reduction systems	19
9.4	Fire suppression	19
9.4.1	Requirements	19
9.4.2	Recommendations	19
10	Building configurations	19
10.1	Design phase	19
10.1.1	Requirements	19
10.1.2	Recommendations	19
10.1.3	Areas, compartments	19
10.1.4	Modularity and flexibility	20
10.2	Inter-relationship of functional spaces	20
10.2.1	General	20
10.2.2	Space usage	20
10.2.3	Computer room space	20
10.2.4	Telecommunications space	21
Annex A (normative) Additional requirements and recommendations		22
Annex B (informative) Physical protection against external hazards		23
Bibliography		25