

ISO 19901-2:2026-07 (E)

Specific requirements for offshore structures - Part 2: Seismic design

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols and abbreviated terms	4
4.1 Symbols	4
4.2 Abbreviated terms	5
5 Seismic hazards	6
6 Performance objectives and limit states	6
6.1 General	6
6.2 Ultimate limit states	7
6.3 Performance objectives	8
6.4 Seismic risk category	9
6.5 ULSDL verification (using hazardous events with intensity = S_a,ELE)	10
6.6 ULSNC verification (using hazardous events with intensity = S_a,ALE)	10
6.7 Seismic design procedure	10
6.8 Methods for limit state verification	10
7 Analysis types for structural response	12
7.1 Response spectrum analysis	12
7.2 Time history analysis	13
7.3 Nonlinear pushover analysis	14
8 Simplified procedure for determining S_a,ELE and S_a,ALE	14
8.1 General	14
8.2 Spectral accelerations	14
8.3 Site class	15
8.4 Site correction factor coefficients	16
8.5 1 000-year horizontal acceleration spectrum	17
8.6 1 000-year vertical acceleration spectrum	18
8.7 Damping adjustment	19
8.8 Determining S_a,ELE and S_a,ALE	19
9 Detailed procedure for determining S_a,ELE and S_a,ALE	20
9.1 Probabilistic seismic hazard analysis	20
9.2 Deterministic seismic hazard analysis	22
9.3 Determining C_c	23
9.4 Determining S_a,ELE and S_a,ALE	26
9.5 Dynamic site response analysis	27
10 Floating structures	27
Annex A (informative) Additional information and guidance	28
Annex B (normative) Seismic maps with spectral accelerations for simplified action procedure	41
Annex C (normative) Regional information	88
Bibliography	93