

ISO 5091-3:2023-07 (E)

Structural intervention of existing concrete structures using cementitious materials - Part 3: Bottom-surface (soffit) underlaying

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Investigation of existing structure	2
4.1	General	2
4.2	Investigation	3
4.2.1	Investigation using documents, records	3
4.2.2	On-site investigation	3
5	Intervention design	3
5.1	General	3
5.2	Structural plan	4
5.3	Structural details	4
6	Materials	4
6.1	General	4
6.2	Materials in existing structure	4
6.3	Materials used in repairing or strengthening parts	4
6.3.1	General	4
6.3.2	Cementitious materials	4
6.3.3	Reinforcing materials	5
6.3.4	Bonding products	5
6.4	Characteristic values and design values of materials for repaired or strengthened parts	5
6.4.1	General	5
6.4.2	Cementitious materials	5
6.4.3	Reinforcing materials	5
6.4.4	Bonding products	5
7	Actions	5
7.1	General	5
7.2	Actions for intervention design	5
8	Performance verification for repaired or strengthened structure	6
8.1	General	6
8.2	Calculation of response values	6
8.2.1	General	6
8.2.2	Modelling of structure	6
8.2.3	Structural analysis	6
8.2.4	Calculation of design response values	6
8.3	Durability verification	8
8.4	Safety verification	8
8.4.1	General	8
8.4.2	Verification related to failure	8
8.4.3	Verification related to fatigue failure	8

8.5	Serviceability verification	9
8.5.1	General	9
8.5.2	Verification related to appearance	9
8.5.3	Verification related to displacement and deformation	9
8.6	Restorability verification	9
8.7	Structural details	9
8.7.1	Thickness of bottom-surface (soffit) underlaying parts	9
8.7.2	Cover	10
8.7.3	Space between reinforcing materials	10
8.7.4	Joints for reinforcing materials	10
8.7.5	Anchoring and securing methods of reinforcing materials	10
9	Construction	10
9.1	General	10
9.2	Prior investigation and construction plan	10
9.3	Surface treatment	11
9.4	Assembly of reinforcing materials	12
9.5	Surface preparation	12
9.6	Storage, mixing and transportation of underlaying materials	12
9.7	Execution of underlaying	13
9.8	Curing	13
9.9	Quality control	13
9.10	Inspection	13
10	Records	14
11	Maintenance	14
	Annex A (informative) Examples of design and execution procedure	15
	Bibliography	28