

Index

a

Anchorage length 117, 147, 200, 203, 249
 Angular deviations 38
 Annex ZA 23, 344
 Annual primary energy consumption 292
 Architectural concrete 257, 260
 Assembly 51

b

Balcony slabs 133
 Basic requirements of construction works 23
 Battery moulds 314
 Beam 37, 101
 Beam shoes 130
 Bearings 141
 concrete, reinforced concrete 326
 deformable sliding bearing 142
 edge distances 146
 fresh concrete 320
 hardened concrete 321
 self-compacting concrete 324
 ultra-high performance concrete 322
 Bonding joint
 dimensioning 180
 fatigue 187
 surface categories 184
 Building physics 292

c

Calculations for fit 40
 CE marking 23, 28, 344

CEN 23
 Certification 344
 Circulation Production 315
 Column joints
 elastomeric bearing 155
 Columns 45, 63, 74, 76, 107, 234
 column head 125
 spun concrete method 107
 vertical cantilever 107, 237
 Column shoes 113, 136, 156
 Concrete 257, 317
 cover allowance 332
 Concrete sandwich panels 269, 298
 bearing layer 278
 connections 279
 deformations 281
 dimensioning 278
 effects 273
 facing layer 278
 foils 283
 layer thickness 268
 retaining anchors 272
 shrinkage 277
 structural design 282
 support anchors 272
 torsion anchors 272
 transport and installation conditions 273
 wear and tear 281
 Connections 130
 Construction joint
 shear friction theory 182
 Construction Products Act
 (*Bauproduktengesetz*) 21
 Construction Products Directive 21

- Construction Products List 24
- Construction Products Regulation 21, 28, 344
- Corbels
 - main tension reinforcement 205, 207, 212
 - steel brackets 216
 - stirrups 206
 - struts 206
- Costs 18
 - formwork costs 17
 - mould costs 44
 - production costs 17
- Cranes
 - crawler mounted cranes 52
 - mobile cranes 52
 - tower cranes 51
- Curing 321, 325, 327
- d**
- DAfStb directives 13
- DBV publications 14
- Declaration of performance 23, 28, 344
- Deformations 35, 84, 341
- Design
 - principles 31
- Dimensional deviations 36, 63
- Double-T sections 34, 45, 53
- Draft 31, 257
- e**
- Earthquake effects 64, 65, 68
- ECJ ruling 28, 345
- Elastomeric bearings 149
 - bearing 142
 - dimensioning 144
 - horizontal forces 145
 - reinforced 142
 - standards 143
 - unreinforced 141
- Erection 36, 46, 56, 136
 - erection condition 95, 217
 - erection instructions 52, 178
 - erection times 53
- External monitoring 344
- f**
- Façade panels
 - large format suspended 284
 - small format curtains 287
- Façades 257
 - design 261
 - joint sealing 266
 - rear-ventilated 284
 - surface protection 266
 - surfaces 260
 - weathering behaviour 263
- Factory production control 23, 342
- FDB publications 13
- Federal state building regulations 24, 28, 228, 345
- Fire protection 228
 - classification 232
 - critical temperature 230
 - fire walls 237, 239
 - junctions, joints, connections 238
 - linings 238
 - material classes 229
 - method of calculation 230
 - principles 229
 - reinforced concrete and prestressed concrete 233
 - reinforced concrete columns 234
 - standardization 230
- Fixed tables 311
- Flatness deviations 38
- Floor diaphragms 63, 69, 79, 81, 86
- Floor slabs 188, 189
- Forked support 125, 226
- Formwork tables 314
- Foundations 68, 111, 135
 - block foundations 117
 - foundation rotation 84, 85
 - monolithic 111
 - pad foundations 111
 - plinths 114
 - pocket foundations 111
 - U-shaped footings 118
- Frame joints 130

g

German energy conservation legislation 292
 Glass-concrete composite 292

h

Heat loss 292
 Heat treatment 324, 327

i

Inclination 63
 Industrial buildings requirements 228
 Insulating materials 283, 284, 285
 Intersection 123
 ceiling panels beams 125
 prestressed concrete hollow core slabs 128
 purlin beams 124
 roof beam 128
 roof slabs 126
 stairs beams 134
 support/foundation 135
 wall slabs support 130

j

Joints 35, 74, 76, 77, 188, 189, 191, 192, 195, 238, 239
 elastomeric sealing tapes 267
 expansion joints 70, 75, 78
 joint losses 299
 joint sealing 35, 266
 joint sealing compounds 35
 joint shear force 198
 joint thickness 154
 joint width 35, 41–43, 147, 259, 267
 pre-compressed sealing strips 267

l

Lap length 116, 118
 Lateral bolt 161
 concrete failure 163, 164
 edge distances 163, 164
 steel failure 163, 164
 Lateral buckling
 erection condition 218
 initial deformation 222

torsional cracking moment 224
 Lattice beams 95, 97, 187
 Limits of size 36, 37, 39, 146

m

Manufacturing 311
 bar-shaped components 311
 prestressed concrete 313
 production methods 311
 TT-plates 312
 Minimum concrete cover 243, 332
 Model Administrative Directive for Technical Code of Practice 28
 Model Building Code 28
 Model list of technical codes of practice 24
 Mounting 204
 design 205
 duty brackets 214
 structural engineering 213
 subsequently filled 215

n

Notched beam 200

p

Part surface load 139
 Photoconcrete 292
 Plates
 full plates 91
 hollow plates 91
 reinforced concrete hollow core slabs 95
 shear capacity 195
 Precast concrete element drawing 330, 331
 Precast concrete planks 95
 Precast concrete wall elements 109, 110
 Precast planks 95, 96, 180, 315
 Prefabricated components 95
 prestressed 97
 Prefabrication 17
 Preload 242
 degree of prestressing 243
 manufacturer 338

- Preload (*contd.*)
 - preload in immediate bond 242
 - pretensioning 334
- Prestress 243
- Prestressed concrete 242, 244
 - anchorage length 248
 - concrete cover 243
 - cracked 249
 - decompression 243, 246
 - dispersion length 248
 - hollow-core slabs 92
 - Hoyer effect 249
 - loss of prestress 245
 - stirnzug 249
 - transmission length 248
- Prestressed hollow-core slabs 92, 251, 316
- Prestressing 257
 - heat treatment 342
 - prestressing bed 313, 338
 - prestressing log 337
 - prestressing specification 245, 336
 - steel stress 243
- Prestressing steel 229, 335
- Production method 42
- Product standards 23, 25
- Protection against moisture 300
- Punching shear 118
- Purlins 101, 124

- q**
- Quality control 342

- r**
- Range of standard elements 47, 127
- Reinforcement 59, 329
 - constructional design 86
 - cutting, bending and fixing 329
 - distribution of horizontal loads 80
 - earthquake load case 64
 - frame 72
 - joint reinforcement 128, 198
 - out-of-plumb load case 63
 - predimensioning 81
 - proof 84
 - reinforcement arrangement at support 149
 - reinforcement drawings 330
 - reinforcement elements 70, 74
 - reinforcement projection 147
 - restraint load case 69
 - wall panels 71, 86
 - wind load case 60
- Reinforcing bar lap 116
- Reinforcing steel 330
- Ribbed elements 98
- Roof beams 217
- Roof trusses 101

- s**
- Securing loads 50
- Shear dowels 46
- Shear joint 96
- Shear walls 79
- Sheathing rolls 315
- Stability
 - bracing systems 76
 - shear walls 79
- Stairs 134
- Standardization 42
 - European 21
- Standards
 - European 6
 - international 13
 - national 2
- Steel reinforcement 157
 - high-strength 156
- Storage 140, 146
 - design and construction 147
- Subdivision into prefabricated parts 303
- Summer heat protection 299
- Support 103, 135
 - bearing class 143
 - bearing dimensions 146
- Support surges 151
 - front surface reinforcement 152
 - high-strength reinforcing steel 156
 - mortar bed 152
 - rigid 156
 - steelplate 154
- Sustainability 53

t

T-beams 45, 104
Tensile splitting forces 140, 149, 155, 249
Textile-reinforced concrete 290, 327
Thermal bridges 133, 293
Thermal insulation 293
Thrust transmission in joints 180
Tilting 217
 border rotation 224
 proof of the bearing 226
 tiltproof 217
Tilting table 45, 314
Tolerances 35, 36, 41
 erection tolerances 36, 136
 production tolerances 36, 40
 standards 36
Torsion 223
 torsional stiffness 81, 82
 torsional vibrations 67
Torsional stiffness 80
Translucent concrete 290
Transport 46, 48, 50
Transport fixings 173
 bearing resistance 176

compatibility 179
effects 174
Machinery Directive 179
mold adhesion 174

u

Ü mark 24, 28, 345

v

Vertical deflection 63

w

Wall-ceiling compound 160
Wall panels 71, 86, 188, 192
Walls 34, 39, 109, 160, 239
 wall component 109
Warehouse
 elastomeric bearings 141
Welded joints 167, 168
Welding method 167
Welds 166

z

Züblin House 78, 300

