## Contents

1	Int	roduction	1
2	Post-tensioning in buildings		
	2.1	General	3
	2.2	Basic concepts of prestressing (2.2.1 Introduction - 2.2.2 Prestressing in cocrete structures - 2.2.3 Main systems for prestressing)	3
	2.3	Design aspects (2.3.1 Structural effects and tendon profiles - 2.3.2 Prestressing force - 2.3.3 Serviceability limit states (SLS) - 2.3.4 Ultimate limit states - 2.3.5 End anchorage and intermediate anchorages - 2.3.6 Structural restraints)	8
	2.4	Technology of Prestressing in Building (2.4.1 The monostrand post-tensioning system with unbonded greased and sheathed strand - 2.4.2 The bonded slab post-tensioning system - 2.4.3 Stressing equipment and clearance - 2.4.4 Installation - 2.4.5 Fire resistance - 2.4.6 Specifications)	23
	Ann	nex: Specification example	39
3	Post-tensioned floors		
	3.1	Conceptual design (3.1.1 General - 3.1.2 Solid slabs - 3.1.3 Slabs with variable depth)	42
	3.2	Applications (3.2.1 Solid slabs with bonded tendons "Fuenlabrada Shopping Center" - 3.2.2 Waffle slab with unbond monostrands "Alicante OAMI Headquarters" - 3.2.3 Parking deck oneway banded solution "GAD Munsten" - 3.2.4 Particular applications)	46
4	Post-tensioned foundations		
	4.1	Conceptual design (4.1.1 Influence of stiff elements and subgrade friction - 4.1.2 Raft foundations - 4.1.3 Post tensioned slab on ground)	66
	4.2	Applications (4.2.1 Foundation raft "P&C Bergisch Gladbach" - 4.2.2 Slabs on ground - 4.2.3 Isolated footing "Lisbon St. Gabriel Tower")	70
5	Post-tensioned transfer slabs and beams		
	5.1	Conceptual design	85
	5.2	Applications (5.2.1 Pacific Place Hong Kong - 5.2.2 Sandwich-Class Housing Development - 5.2.3 Transfer slab "Lisbon Eden Hotel" - 5.2.4 Transfer beams "Funchal Crown Plaza Hotel" - 5.2.5 Transfer grid "Lisbon St. Gabriel Tower" - 5.2.6 Curved transfer beam "School Building-Auditorium Zug")	86
6	Prefabricated post-tensioned solutions		
	6.1	Conceptual design	103
	6.2	Applications (6.2.1 Prefabricated beams used as scaffolding "Printers Bucher-Luzern" - 6.2.2 Platform for a Heliport "KHIB-Ibbenburen")	103