

# AIN SHAMS UNIVERSITY FACULTY OF ENGINEERING STRUCTURAL ENGINEERING DEPARTMENT

# EFFECT OF CHANGE CONCRETE GRADE ON THE BEHAVIOR OF BEAM-COLUMN JOINTS

A Thesis Submitted in partial fulfillment for the requirements of the Degree of

### **DOCTOR OF PHILOSOPHY**

In

CIVIL ENGINEERING (STRUCTURES)

 $\mathbf{BY}$ 

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**STATEMENT** 

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No part of this thesis has been submitted for a degree or qualification at any other

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ii



# AIN SHAMS UNIVERSITY FACULTY OF ENGINEERING

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### LIST OF CONTENTS

1.	ABS	STRACT	xvii
2.	CH	APTER ONE	1
	2.1	General	1
	2.2	Statement of the problem	2
	2.3	Objectives	3
	2.4	Scope of the work	4
	2.5	Thesis Arrangement	5
3.	CH	APTER TWO	7
	3.1	Introduction	7
	3.2	Materials used in producing ultra-high strength concrete	11
	3.2.	1 Aggregates	12
	3.2.	2 Cement	15
	3.2.	3 Fly-Ash	16
	3.2.	4 Slag	17
	3.2.	5 Silica-Fume	18
	3.2.	6 Superplasticizers	19
	3.3	Mechanical Properties of Ultra-High Strength Concrete	19
	3.3.	1 Axial stress-strain	19
	3.3.	2 Modulus of elasticity	20
	3.3.	3 Poisson's ratio	23
	3.3.	4 Strength	24
	3.3.	5 Shrinkage and creep:	25
	3.3.	6 Resistance to freezing and thawing	28
	3.3.	7 Fire resistance	28
	3.4	Seismic Action and Seismic Design	29
	3.4.	Cause, Nature Experimental Simulation of Earthquakes	29
	3.4.	The Performance of R.C. Members	31
	3.4.	3 Seismic Design Philosophy	33
	3.4.	4 Seismic design limit state	34
	3.5	Beam-Column Joints	35
	3.5.	1 General design criteria:	35
	3.6	Type of Beam Column Joint	36
	3.7	Recommendation of Connections	36
	3.7.	1 Design Criteria of Connections	36
	3.7.	2 Critical Features of Joint Behavior	39
	3.7.	3 Design Considerations of Beam-Column Joints	40

	3.8	Basic Structural Properties	43
	3.8	8.1 Strength	43
	3.8	8.2 Strength	43
	3.8	8.3 Ductility	44
	3.9	Factors Affecting on Beam-Column Joint Behavior	46
	3.9	9.1 Confinement and Shear Reinforcement	46
	3.9	9.2 Concrete Compressive Strength	46
	3.9	9.3 Column Axial Load	47
	3.9	9.4 Bond	48
	3.9	9.5 Dimension of Beam Column Joint	49
	3.10	Conclusion of the Previous Works	49
4.	СН	HAPTER THREE	56
	4.1	Introduction	56
	4.2	Purpose of the Study	56
	4.3	Materials Used for Fabrication of Test Specimens	57
	4.3	3.1 Aggregates	57
	4.3	3.2 Additives	60
	4.3	3.3 Reinforcement Steel	61
	4.3	3.4 Cement	62
	4.4	Mix Compositions	63
	4.5	Cubic and Cylindrical Concrete Compressive Strength	64
	4.6	Preparing Specimens	67
	4.6	6.1 Specimens Describing	67
	4.6	6.2 Details of test specimens	68
	4.6	6.3 Specimens Reinforced Details	68
	4.6	6.4 Casting and Curing	86
	4.6	6.5 Testing the Specimens	86
	4.6	6.6 Arranging the Measuring Devices	87
5.	СН	HAPTER FOUR	90
	5.1	Introduction	90
	5.2	Cracking Behavior and Mode of Failure	90
	5.3	Load-Displacement Hysteresis Loops	100
	5.4	Strains in the Vertical and Transverse Reinforcement	105
	5.5	Moment-Curvature Hysteretic Responses	106
	5.6	Shear Stress-Distortion Responses	112
6.	СН	HAPTER FIVE	
	6.1	Introduction	122

(	5.2	Ana	lysis of the Results	122
	6.2	.1	Strength Decay	123
	6.2	.2	Stiffness Degradation	124
	6.2	.3	Ductility	135
	6.2	.4	Energy Dissipation	138
(	6.3	Effe	ects of Major Test Variables of Specimens	148
	6.3	.1	Effect of Concrete Compressive Strength	148
	6.3	.2	Effect of Joint Transverse Reinforcement	150
	6.3	.3	Effect of Joint Shear Stress	152
	6.3	.4	Effect of Level of Axial Loading	153
7.	CH	APTI	ER SIX	155
7	7.1	Intro	oduction	155
-	7.2	Finit	te Element Idealizations	155
•	7.3	Finit	te Element Method	157
•	7.4	Mair	n Steps for Modeling Using ANSYS (16.0)	158
	7.4	.1	Elements Types	158
	7.4	.2	Real Constants	161
	7.4	.3	Material Properties	163
	7.4	.4	Geometry of Specimen	175
	7.4	.5	Numbering Controls	184
	7.4	.6	Loads and Boundary Conditions	184
	7.4	.7	Analysis Type F	Error! Bookmark not defined.
	7.4	.8	Iterative Solution Methods	Error! Bookmark not defined.
	7.4	.9	Load Stepping and Failure Definition for FE Models	Error! Bookmark not defined.
	7.4	.10	Steps of Modelling and Procedure F	Error! Bookmark not defined.
	7.4	.11	Non-Linear Solution and Failure Criteria F	Error! Bookmark not defined.
8.	CH	APTI	ER SEVEN	254
8	8.1	Intro	oduction	254
8	8.2	Beha	avior of the Analyzed Models	254
	8.2	.1	Cracking and Failure Loads	255
	8.2	.2	Load-Deflection Response	264
	8.2	.3	Steel Stain	273
9.	CH	APTI	ER EIGHT	Error! Bookmark not defined.
Ģ	9.1	Sum	nmary E	Error! Bookmark not defined.
٥	9.2	Con	clusions E	Error! Bookmark not defined.
10.	RE	FERE	ENCES	324
Ref	erence	es		324

## LIST OF FIGURE

Figure 2-1 Terminology of RC beam-column connections	10
Figure 2-2 Joint shear resistance mechanisms (per Paulay et al. 1978)	10
Figure 2-3 Joint shear at the mid-height of an interior connection subassembly	11
Figure 2-4 Effect of cement content on compressive strength at 28 day of aggregate	
Figure 2-5 Strength efficiency of Portland cement in concretes produced aggregates	
Figure 2-6 A micrograph of fly ash showing typical particles	16
Figure 2-7 Compressive strength of concrete produced with fly-ash opercent calcium-oxide in conventional-strength and moderately high-strength conventional strength and moderately high-strength a	
Figure 2-8 Micrograph of ground granulated blast-furnace slag grains	17
Figure 2-9 Scanning electron microscope micrograph of silica fume particles at	20,000X18
Figure 2-10 Typical stress-strain relationship for high-, moderate-, concrete	
Figure 2-11 Measured modulus of elasticity at 28, 91 and 426 days cured 150x300 mm cylinders	
Figure 2-12 Measured modulus of elasticity at 91 days from Burg and specimens cured under varying conditions.	
Figure 2-13 Beam Column Joints are Critical Parts of a Building.	30
Figure 2-14 Pull - Push Forces on Joint Casus Two Problem.	31
Figure 2-15 Exterior Beam-Column Joints Subjected to Seismic Loading	32
Figure 2-16 Test specimen definition with forces acting on a joint core	33
Figure 2-17 Type of Beam-Column Joints.	36
Figure 2-18 Development Concrete Wedge Mechanism During Earthquake	38
Figure 2-19 Beam Reinforcement at the Joint for Moving the Plastic Hinging	39
Figure 2-20 The Force Acting on the Joint By ( ACI 352R-02)	42
Figure 2-21 Load-Displacement Curve for R.C Member	44
Figure 2-22 Ductility of the Structure	45
Figure 2-23 Concrete Shear under Seismic Loading	47
Figure 2-24 Bond Stresses in Interior Joint.	49
Figure 2-25 Joint Truss Mechanism	.Error! Bookmark not defined.
Figure 2-26: Dimensions and reinforcement details of specimens [39]	.Error! Bookmark not defined.
Figure 2-27 Dimensions and reinforcement details of specimens [40]	.Error! Bookmark not defined.
Figure 2-28 : Dimensions and reinforcement details of specimens [41]	.Error! Bookmark not defined.
Figure 2-29 Dimensions and reinforcement details of specimens [43]	.Error! Bookmark not defined.
Figure 2-30 : Ultimate Capacity Predictions [43]	.Error! Bookmark not defined.
Figure 2-31 : Dimensions and reinforcement details of specimens [45]	.Error! Bookmark not defined.
Figure 3-1 Grading Curve for the Implemented Coarse Aggregate	.Error! Bookmark not defined.
Figure 3-2 : Grading Curve for the Implemented Fine Aggregate	.Error! Bookmark not defined.
Figure 3-3: Grading Curve for the Combined Aggregate	.Error! Bookmark not defined.

Figure 3-4 : Casting the Standard Cubes and Cylinder	65
Figure 3-5 :Standard Cube Failure Shape.	65
Figure 3-6 : Standard cylinder Failure Shape.	66
Figure 3-7: Test Specimen Model	67
Figure 3-8 : Cyclic Displacement History.	68
Figure 3-9 Concrete Dimensions of a specimen (S100P1)	70
Figure 3-10 Reinforcement Details of a Specimen (S100P1)	71
Figure 3-11 Reinforcement of Specimen (S100P1) in Laboratory	Error! Bookmark not defined.
Figure 3-12 Concrete Dimensions of a specimen (S60P1)	72
Figure 3-13 Reinforcement Details of a Specimen (S60P1)	73
Figure 3-14 Reinforcement of Specimen (S60P1) in Laboratory	Error! Bookmark not defined.
Figure 3-15 Concrete Dimensions of a specimen (S40P1)	74
Figure 3-16 Reinforcement Details of a Specimen (S40P1)	75
Figure 3-17 Reinforcement of Specimen (S40P1) in Laboratory	Error! Bookmark not defined.
Figure 3-18 Concrete Dimensions of a specimen (S25P1)	76
Figure 3-19 Reinforcement Details of a Specimen (S25P1)	77
Figure 3-20 Reinforcement of Specimen (S25P1) in Laboratory	Error! Bookmark not defined.
Figure 3-21 Concrete Dimensions of a specimen (S40P0)	78
Figure 3-22 Reinforcement Details of a Specimen (S40P0)	79
Figure 3-23 Reinforcement of Specimen (S40P0) in Laboratory	Error! Bookmark not defined.
Figure 3-24 Concrete Dimensions of a specimen (X40P1)	80
Figure 3-25 Reinforcement Details of a Specimen (X40P1)	81
Figure 3-26 Reinforcement of Specimen (X40P1) in Laboratory	Error! Bookmark not defined.
Figure 3-27 Concrete Dimensions of a specimen (XS40P1)	82
Figure 3-28 Reinforcement Details of a Specimen (XS40P1)	83
Figure 3-29 Reinforcement of Specimen (XS40P1) in Laboratory	Error! Bookmark not defined.
Figure 3-30 Concrete Dimensions of a specimen (N40P1)	84
Figure 3-31 Reinforcement Details of a Specimen (N40P1)	85
Figure 3-32 Reinforcement of Specimen (N40P1) in Laboratory	Error! Bookmark not defined.
Figure 3-33 Wood Forms for Specimens	Error! Bookmark not defined.
Figure 3-34 Casting the Normal strength part of Beam in Specimens	Error! Bookmark not defined.
Figure 3-35 Casting the ultra- strength part of Column in Specimens	Error! Bookmark not defined.
Figure 3-36 Finishing Casting in the first part.	Error! Bookmark not defined.
Figure 3-37 Specimen after Finishing Casting.	Error! Bookmark not defined.
Figure 3-38 The Mechanical Vibrator During Casting	Error! Bookmark not defined.
Figure 3-39 General View of Test Setup	Error! Bookmark not defined.
Figure 3-40 Test Setup	86
Figure 3-41 : Location of Strain gauge in N-Specimen	Error! Bookmark not defined.
Figure 3-42 Location of Strain gauge in S-Specimen	Error! Bookmark not defined.

Figure 3-43 Location of Strain gauge in XS-Specimen	Error! Bo	ookmark not de	fined.
Figure 3-44 Location of Strain gauge in X-Specimen	Error! Bo	okmark not de	fined.
Figure 3-45 Position of LVDT for All Specimen			88
Figure 4-1 : Crack pattern of specimen N40P1			91
Figure 4-2 : Crack pattern of specimen S40P1			92
Figure 4-3 : Crack pattern of specimen X40P1			93
Figure 4-4 : Crack pattern of specimen XS40P1			94
Figure 4-5 : Crack pattern of specimen S25P1			95
Figure 4-6 : Crack pattern of specimen S60P1			96
Figure 4-7 : Crack pattern of specimen S100P1			97
Figure 4-8 : Crack pattern of specimen S40P0			98
Figure 4-9: Load-Displacement hysteresis loop of Specimen N40P1	Error! Bo	ookmark not de	fined.
Figure 4-10 : Load-Displacement hysteresis loop of Specimen S40P1	Error! Bo	ookmark not de	fined.
Figure 4-11 : Load-Displacement hysteresis loop of Specimen X40P1	Error! Bo	ookmark not de	fined.
Figure 4-12 : Load-Displacement hysteresis loop of Specimen XS40P1	Error! Bo	ookmark not de	fined.
Figure 4-13: Load-Displacement hysteresis loop of Specimen S25P1	Error! Bo	okmark not de	fined.
Figure 4-14: Load-Displacement hysteresis loop of Specimen S60P1	Error! Bo	ookmark not de	fined.
Figure 4-15: Load-Displacement hysteresis loop of Specimen S100P1	Error! Bo	okmark not de	fined.
Figure 4-16: Load-Displacement hysteresis loop of Specimen S40P0	Error! Bo	okmark not de	fined.
Figure 4-17: Load-Displacement envelope of Specimen of N40P1, S40P0, X4 <b>not defined.</b>	0P1& XS40	P1Error! Book	mark
Figure 4-18: Load-Displacement envelope of Specimen of S25P1, S40P0, S60 <b>not defined.</b>	P1& S100P	lError! Book	mark
Figure 4-19: Load-Displacement envelope of Specimen of XS40P0 & S100P1	Error! Bo	okmark not de	fined.
Figure 4-20: Strain in beam upper longitudinal reinforcement of specimen N4 <b>defined.</b>	OP1 <b>Error!</b>	Bookmark	not
Figure 4-21: Strain in beam upper longitudinal reinforcement of specimen S40 <b>defined.</b>	P1Error!	Bookmark	not
Figure 4-22: Strain in beam upper longitudinal reinforcement of specimen X4 <b>defined.</b>	OP1 <b>Error!</b>	Bookmark	not
Figure 4-23: Strain in beam upper longitudinal reinforcement of specimen XS <b>defined.</b>	40P1 <b>Error!</b>	Bookmark	not
Figure 4-24: Strain in beam upper longitudinal reinforcement of specimen S25 <b>defined.</b>	P1 <b>Error!</b>	Bookmark	not
Figure 4-25: Strain in beam upper longitudinal reinforcement of specimen S60 <b>defined.</b>	P1Error!	Bookmark	not
Figure 4-26: Strain in beam upper longitudinal reinforcement of specimen S10 <b>defined.</b>	00P1 <b>Error!</b>	Bookmark	not
Figure 4-27: Strain in beam upper longitudinal reinforcement of specimen S40 <b>defined.</b>	POError!	Bookmark	not
Figure 4-28: Strain in Column longitudinal reinforcement of specimen N40P1	Error! Bo	okmark not de	fined.
Figure 4-29: Strain in Column longitudinal reinforcement of specimen S40P1			
Figure 4-30: Strain in Column longitudinal reinforcement of specimen X40P1			

Figure 4-31: Strain in Column longitudinal reinforcement of specimen XS40P1 .Error! Bookmark not defined.				
Figure 4-32: Strain in Column longitudinal reinforcement of specimen S25P1Error! Bookmark not define	ned.			
Figure 4-33: Strain in Column longitudinal reinforcement of specimen S60P1Error! Bookmark not define	ned.			
Figure 4-34: Strain in Column longitudinal reinforcement of specimen S100P1Error! Bookmark not define	ned.			
Figure 4-35: Strain in Column longitudinal reinforcement of specimen S40P0Error! Bookmark not define	ned.			
Figure 4-36: Load-Steel Strain in Beam Transverse reinforcement of Specimen N40P1 <b>Error! Bookmark defined.</b>	not			
Figure 4-37: Load-Steel Strain in Beam Transverse reinforcement of Specimen S40P1Error! Bookmark defined.	not			
Figure 4-38: Load-Steel Strain in Joint Transverse reinforcement of Specimen S40P1 <b>Error! Bookmark defined.</b>	not			
Figure 4-39: Load-Steel Strain in Beam Transverse reinforcement of Specimen X40P1Error! Bookmark defined.	not			
Figure 4-40: Load-Steel Strain in Joint Transverse reinforcement of Specimen X40P1Error! Bookmark defined.	not			
Figure 4-41:Load-Steel Strain in Beam Transverse reinforcement of Specimen XS40P1 <b>Error! Bookmark defined.</b>	not			
Figure 4-42: Load-Steel Strain in Joint Transverse reinforcement of Specimen XS40P1 <b>Error! Bookmark defined.</b>	not			
Figure 4-43: Load-Steel Strain in Joint X-bar reinforcement of Specimen XS40P1Error! <b>Bookmark defined.</b>	not			
Figure 4-44: Load-Steel Strain in Beam Transverse reinforcement of Specimen S25P1Error! Bookmark defined.	not			
Figure 4-45: Load-Steel Strain in Joint Transverse reinforcement of Specimen S25P1Error! Bookmark defined.	not			
Figure 4-46: Load-Steel Strain in Beam Transverse reinforcement of Specimen S60P1Error! Bookmark defined.	not			
Figure 4-47: Load-Steel Strain in Joint Transverse reinforcement of Specimen S60P1Error! Bookmark defined.	not			
Figure 4-48: Load-Steel Strain in Beam Transverse reinforcement of Specimen S100P1Error! Bookmark defined.	not			
Figure 4-49: Load-Steel Strain in Joint Transverse reinforcement of Specimen S100P1Error! Bookmark defined.	not			
Figure 4-50 : Moment-Curvature hysteretic response of specimen N40P1	108			
Figure 4-51 : Moment-Curvature hysteretic response of specimen S40P1	108			
Figure 4-52 : Moment-Curvature hysteretic response of specimen X40P1	109			
Figure 4-53 : Moment-Curvature hysteretic response of specimen XS40P1	109			
Figure 4-54 : Moment-Curvature hysteretic response of specimen S25P1	110			
Figure 4-55 : Moment-Curvature hysteretic response of specimen S60P1	110			
Figure 4-56 : Moment-Curvature hysteretic response of specimen S100P1	111			
Figure 4-57 : Moment-Curvature hysteretic response of specimen S40P0	111			
Figure 4-58 : Shear forces and shear strains in the joint core	115			
Figure 4-59 : Shear Stress-Distortion Envelope of Specimen N40P1	116			
Figure 4-60 : Shear Stress-Distortion Envelope of Specimen S40P1	116			

Figure 4-61 : Shear Stress-Distortion Envelope of Specimen X40P1	117
Figure 4-62 : Shear Stress-Distortion Envelope of Specimen XS40P1	117
Figure 4-63 : Shear Stress-Distortion Envelope of Specimen S25P1	118
Figure 4-64 : Shear Stress-Distortion Envelope of Specimen S60P1	118
Figure 4-65 : Shear Stress-Distortion Envelope of Specimen S100P1	119
Figure 4-66 : Shear Stress-Distortion Envelope of Specimen S40P0	119
Figure 4-67: Shear Stress-Distortion Envelope of Specimen N40P1, S40P1, X40P1 & XS40P1	120
Figure 4-68 : Shear Stress-Distortion Envelope of Specimen S25P1, S40P1, S60P1 & S100P1	120
Figure 4-69 : Shear Stress-Distortion Envelope of Specimen XS40P1 & S100P1	121
Figure 5-1 : Definition of cycle stiffness	126
Figure 5-2 : Stiffness Degradation for Specimen N40P1	127
Figure 5-3 : Stiffness Degradation for Specimen S40P1	128
Figure 5-4 : Stiffness Degradation for Specimen X40P1	129
Figure 5-5 : Stiffness Degradation for Specimen XS40P1	130
Figure 5-6: Stiffness Degradation for Specimen S25P1	131
Figure 5-7: Stiffness Degradation for Specimen S60P1	132
Figure 5-8 : Stiffness Degradation for Specimen S100P1	133
Figure 5-9: Stiffness Degradation for Specimen S40P0	134
Figure 5-10 : Definitions of $\Delta_y$ and $\Delta_{85}$	137
Figure 5-11 : Energy dissipated during single loading cycle	139
Figure 5-12: Energy dissipated by Joint N40P1	140
Figure 5-13: Energy dissipated by Joint S40P1	141
Figure 5-14: Energy dissipated by Joint X40P1	142
Figure 5-15: Energy dissipated by Joint XS40P1	143
Figure 5-16: Energy dissipated by Joint S25P1	144
Figure 5-17: Energy dissipated by Joint S60P1	145
Figure 5-18: Energy dissipated by Joint S100P1	146
Figure 5-19: Energy dissipated by Joint S40P0	147
Figure 5-20: Rotation Capacity of Reinforced Section for Normal and Ultra-High strength Concrete	150
Figure 6-1: Solid65– 3-D reinforced concrete solid (ANSYS 16.0)	158
Figure 6-2: Models for Reinforcement in Reinforced Concrete (a) discrete, (b) smeared	159
Figure 6-3: Link180 – 3-D spar (ANSYS 16.0)	160
Figure 6-4: Element connectivity, concrete solid and link elements.	160
Figure 6-5 : Solid 185 Element (ANSYS 16.0)	161
Figure 6-6: Multi-linear isotropic Stress-Strain Curve for Concrete.	171
Figure 6-7 Stress-Strain Curve for Steel Reinforcement.	173
Figure 6-8 Typical idealized stress-strain curves for reinforcement steel	174
Figure 6-9 Geometry of Specimen (S100P1)	176
Figure 6-10 Perspective View for Finite Element Modeling of Specimen (S100P1)	176

Figure 6-11 Geometry of Specimen (S60P1)	.177
Figure 6-12 Perspective View for Finite Element Modeling of Specimen (S60P1)	. 177
Figure 6-13 Geometry of Specimen (S40P1)	.178
Figure 6-14 Perspective View for Finite Element Modeling of Specimen (S40P1)	.178
Figure 6-15 Geometry of Specimen (S25P1)	.179
Figure 6-16 Perspective View for Finite Element Modeling of Specimen (S25P1)	.179
Figure 6-17 Geometry of Specimen (S40P0)	.180
Figure 6-18 Perspective View for Finite Element Modeling of Specimen (S40P0)	.180
Figure 6-19 Geometry of Specimen (X40P1)	.181
Figure 6-20 Perspective View for Finite Element Modeling of Specimen (X40P0)	.181
Figure 6-21 Geometry of Specimen (XS40P1)	.182
Figure 6-22 Perspective View for Finite Element Modeling of Specimen (XS40P1)	.182
Figure 6-23 Geometry of Specimen (N40P1)	.183
Figure 6-24 Perspective View for Finite Element Modeling of Specimen (N40P1)	.183
Figure 6-25 Load – Time Curve	. 184
Figure 6-26 Boundary condition in top & bottom of column	.185
Figure 6-27 Arc-Length Control Technique Error! Bookmark not defi	ned.
Figure 7-1: (a) Integration points in the concrete solid element, (b) Cracking sign	.257
Figure 7-2: typical cracking signs occurring in finite elements models: (a) flexural cracks, diagonal tensile cracks, (c) compressive cracks.	(b) . 257
Figure 7-3: Analytical Cracks Pattern of Specimen (N40P1)	.259
Figure 7-4: Analytical Cracks Pattern of Specimen (S40P1)	.260
Figure 7-5: Analytical Cracks Pattern of Specimen (X40P1)	.261
Figure 7-6: Analytical Cracks Pattern of Specimen (XS40P1)	.261
Figure 7-7: Analytical Cracks Pattern of Specimen (S25P1)	. 262
Figure 7-8: Analytical Cracks Pattern of Specimen (S60P1)	. 262
Figure 7-9: Analytical Cracks Pattern of Specimen (S100P1)	. 263
Figure 7-10: Analytical Cracks Pattern of Specimen (S40P0)	.263
Figure 7-11: Analytical load-displacement hysteresis loop of Specimen N40P1	. 265
Figure 7-12: Analytical load-displacement hysteresis loop of Specimen S40P1	. 265
Figure 7-13: Analytical load-displacement hysteresis loop of Specimen X40P1	.266
Figure 7-14: Analytical load-displacement hysteresis loop of Specimen XS40P1	.266
Figure 7-15: Analytical load-displacement hysteresis loop of Specimen S25P1	.267
Figure 7-16: Analytical load-displacement hysteresis loop of Specimen S60P1	.267
Figure 7-17: Analytical load-displacement hysteresis loop of Specimen S100P1	.268
Figure 7-18: Analytical load-displacement hysteresis loop of Specimen S40P0	.268
Figure 7-19: Analytical and Experimental Load Deflection Envelope for Specimen (N40P1)	. 269
Figure 7-20: Analytical and Experimental Load Deflection Envelope for Specimen (S40P1)	. 269
Figure 7-21: Analytical and Experimental Load Deflection Envelope for Specimen (X40P1)	. 270
Figure 7-22: Analytical and Experimental Load Deflection Envelope for Specimen (XS40P1)	.270

Figure 7-23: Analytical and Experimental Load Deflection Envelope for Specimen (S25P1)	271
Figure 7-24: Analytical and Experimental Load Deflection Envelope for Specimen (S60P1)	271
Figure 7-25: Analytical and Experimental Load Deflection Envelope for Specimen (S100P1)	272
Figure 7-26: Analytical and Experimental Load Deflection Envelope for Specimen (S40P0)	272
Figure 7-27: Steel Strain of Specimen N40P1	274
Figure 7-28: Steel Strain of Specimen S40P1	274
Figure 7-29: 1 Steel Strain of Specimen X40P1	275
Figure 7-30: Steel Strain of Specimen XS40P1	275
Figure 7-31: Steel Strain of Specimen S25P1	276
Figure 7-32: Steel Strain of Specimen S60P1	276
Figure 7-33: Steel Strain of Specimen S100P1	277
Figure 7-34: Steel Strain of Specimen S40P0	277
Figure 7-35: Load-Steel Strain Curve for longitudinal reinforcement Column for specimen N40P1	278
Figure 7-36: Load-Steel Strain Curve for longitudinal reinforcement Beam of specimen N40P1	278
Figure 7-37: Load-Steel Strain Curve for longitudinal reinforcement Column of specimen S40P1	279
Figure 7-38: Load-Steel Strain Curve for longitudinal reinforcement Beam of specimen S40P1	279
Figure 7-39: Load-Steel Strain Curve for longitudinal reinforcement Column of specimen X40P1	280
Figure 7-40: Load-Steel Strain Curve for longitudinal reinforcement Beam of specimen X40P1	280
Figure 7-41: Load-Steel Strain Curve for longitudinal reinforcement Column of specimen XS40P1	281
Figure 7-42: Load-Steel Strain Curve for longitudinal reinforcement Beam of specimen XS40P1	281
Figure 7-43: Load-Steel Strain Curve for longitudinal reinforcement Column of specimen S25P1	282
Figure 7-44: Load-Steel Strain Curve for longitudinal reinforcement Beam of specimen S25P1	282
Figure 7-45: Load-Steel Strain Curve for longitudinal reinforcement Column of specimen S60P1	283
Figure 7-46: Load-Steel Strain Curve for longitudinal reinforcement Beam of specimen S60P1	283
Figure 7-47: Load-Steel Strain Curve for longitudinal reinforcement Column of specimen S100P1	284
Figure 7-48: Load-Steel Strain Curve for longitudinal reinforcement Beam of specimen S100P1	284
Figure 7-49: Load-Steel Strain Curve for longitudinal reinforcement Column of specimen S40P0	285
Figure 7-50: Load-Steel Strain Curve for longitudinal reinforcement Beam of specimen S40P0	285
Figure 7-51: Load-Steel Strain Curve for Transverse reinforcement of beam for specimen N40P1	287
Figure 7-52: Load-Steel Strain Curve in Joint Transverse reinforcement for specimen S40P1	287
Figure 7-53: Load-Steel Strain Curve for Transverse reinforcement of beam for specimen S40P1	288
Figure 7-54: Load-Steel Strain Curve for Transverse reinforcement of beam for specimen X40P1	288
Figure 7-55: Load-Steel Strain Curve for joint X-bar reinforcement of beam for specimen X40P1	289
Figure 7-56: Load-Steel Strain Curve for joint X-bar reinforcement of beam for specimen XS40P1	289
Figure 7-57: Load-Steel Strain Curve in Joint Transverse reinforcement for specimen XS40P1	290
Figure 7-58: Load-Steel Strain Curve for Transverse reinforcement of beam for specimen XS40P1	290
Figure 7-59: Load-Steel Strain Curve in Joint Transverse reinforcement for specimen S25P1	291
Figure 7-60: Load-Steel Strain Curve for Transverse reinforcement of beam for specimen S25P1	291
Figure 7-61: Load-Steel Strain Curve in Joint Transverse reinforcement for specimen \$60P1	292