

**CRITICAL EVALUATION ON WATERPROOFING
PRACTICES IN THE INDUSTRY**

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Degree of Master of Science

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Thesis/Dissertation submitted in partial fulfillment of the requirements for
the degree of Master of Science in Building Services Engineering

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Declaration

“I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of our knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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.....

Dr. L. L. Ekanayake

Date

Abstract

Waterproofing is the process of rendering an object or surface resistant to water. Importance of waterproofing in construction cannot be overstated. It is essential for durability, hygiene and also for a pleasant appearance. Water tanks, reservoirs, ponds, planter boxes, sewerage plants, water treatment plants, swimming pools, basements, roofs, bathrooms, kitchens, floors, balconies, tunnels, silos, parking decks, bridge decks, ducts, parapet walls and foundations all require waterproofing to last longer and to secure its aesthetic appearance.

Also, there are several factors to be taken into consideration when selecting the most suitable waterproofing system for the required structure. The selected waterproofing system should be non-toxic, economical, permanent, easily applied, highly resistant to water, stable at a range of temperatures, compatible, resistant to bacterial & other growth and also provide a good texture.

There is a proper procedure to be followed before applying any waterproofing system on the surface. First of all, inspect the area and get accurate information about the site. Then measure the right area and calculate the correct material requirements. Next prepare the substrate effectively. Weak areas such as cracks, honeycombs and joints, etc. have to be repaired. Then seal around the pipes/protrusions. Lay a sloping screed (if required) and fillets at right angled edges. Now apply the waterproofing system strictly conforming to the manufacturer's specifications. Cure the waterproofing system as specified.

Various reasons may lead to failures in waterproofing. Some of them are application of an unsuitable waterproofing system, using incorrect application tools, incorrect mixing proportions, poor storage of waterproofing materials, poor substrate or surface preparation, bad maintenance practices, application under direct sunlight or during rain and failure to protect application from other sources.

(Keywords – waterproofing, consultants, applicators)

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Table of Contents

Declaration.....	ii
Abstract.....	iii
Acknowledgement.....	iv
Table of Figures.....	x
Table of Tables.....	xiv
1 Introduction.....	1
1.1 Background.....	1
1.2 Problem Identification.....	1
1.3 Aim & Objectives.....	2
1.3.1 Aim.....	2
1.3.2 Objectives.....	2
1.4 Methodology.....	2
1.5 Key Findings.....	3
1.6 Structure of the Thesis.....	3
2 Literature Review.....	4
2.1 History of Waterproofing.....	4
2.2 Introduction to Waterproofing.....	5
2.3 Waterproofing Principles.....	9
2.3.1 The 90%/1/11% Principle.....	9
2.3.2 The 919% Principle.....	9
2.4 Benefits of Waterproofing.....	10
2.5 Structural Components that require Waterproofing.....	10
2.6 Physical Factors to be considered when selecting the Waterproofing System.....	11
2.7 Types of Waterproofing Products Available in the Market.....	12
2.8 Different Selective Factors Considered according to the Target Market.....	14
2.9 Procedure of Selecting the Most Suitable Waterproofing System.....	14
2.10 Deterioration of Concrete.....	15
2.11 Types of Waterproofing.....	22
2.11.1 Below-grade Waterproofing.....	22
2.11.1.1 Cementitious Systems.....	24
2.11.1.1.1 Metallic Systems.....	25

2.11.1.1.2	Crystalline / Capillary Systems	25
2.11.1.1.3	Chemical Additive Systems	26
2.11.1.1.4	Acrylic Modified Systems	26
2.11.1.2	Fluid-applied Systems.....	26
2.11.1.2.1	Urethane.....	27
2.11.1.2.2	Rubber Derivatives	28
2.11.1.2.3	Polymeric Asphalt.....	28
2.11.1.2.4	Coal Tar or Asphalt Modified Urethane	28
2.11.1.2.5	Polyvinyl Chloride	28
2.11.1.2.6	Hot-applied Fluid Systems.....	28
2.11.1.3	Clay Systems.....	29
2.11.1.3.1	Bulk Bentonite.....	30
2.11.1.3.2	Bentonite Sheets	30
2.11.1.3.3	Bentonite Mats.....	31
2.11.1.4	Summary of Below Grade Waterproofing Systems.....	31
2.11.2	Above-grade Waterproofing	32
2.11.2.1	Vertical Applications.....	34
2.11.2.1.1	Clear Sealers	34
2.11.2.1.2	Elastometric Coatings.....	42
2.11.2.1.3	Cementitious Coatings	46
2.11.2.2	Horizontal Applications	50
2.11.2.2.1	Surface Coatings.....	50
2.11.2.2.1.1	Clear Siloxane Types.....	50
2.11.2.2.1.2	Solid Coatings of Urethane or Epoxy.....	50
2.11.2.3	Above-grade Exposure Problems	50
2.11.2.4	Application of Water Repellents	51
2.11.3	Waterproofing of Civil Structures.....	53
2.11.4	Interior Waterproofing Applications	54
2.11.5	Residential Waterproofing	55
2.12	Procedure of Waterproofing	58
2.12.1	Material Selection	59
2.12.2	Specification	60

2.12.3	Installation.....	61
2.13	Technical Drawings of Waterproofing of Selected Surfaces	62
2.13.1	Rooftop.....	62
2.13.2	Sealant Details of Walls and Floors	63
2.13.3	Waterproofing of Bathrooms and Toilets	64
2.13.3.1	Single Layer System	64
2.13.3.2	Double Layer System	65
2.13.4	Waterproofing of Exposed Driveways and Ramp Slabs	65
2.13.5	Waterproofing of Basements, Underground Sumps, Swimming Pools, Lifts, Tanks & Reservoirs.....	66
2.13.5.1	External.....	66
2.13.5.2	Internal.....	67
2.13.6	Sealing of Expansion Joints.....	68
3	Methodology	69
3.1	Literature Survey	69
3.2	Field Study.....	69
3.3	Field Survey.....	69
4	Data Analysis	71
4.1	Field Study.....	71
4.1.1	Case Study I.....	83
4.1.2	Case Study II	86
4.1.3	Case Study III	90
4.1.4	Case Study IV	97
4.1.5	Case Study V	105
4.1.6	Case Study VI	113
4.2	Questionnaire Survey	116
5	Conclusion & Recommendations	133
5.1	Conclusion.....	133
5.2	Recommendations	135
5.4	Future Works.....	138
5.5	Summary.....	138
	References.....	140

Appendices.....142

Table of Figures

Figure 2-1: Types of Waterproofing Products Available in the Market	12
Figure 2-2 : Rooftop Waterproofing	62
Figure 2-3: Sealant Details of Walls and Floors	63
Figure 2-4: Waterproofing of Bathrooms and Toilets (Single Layer System)	64
Figure 2-5: Waterproofing of Bathrooms and Toilets (Double Layer System)	65
Figure 2-6: Waterproofing of Exposed Driveways and Ramp Slabs	65
Figure 2-7: External Waterproofing of Basements, Underground Sumps, Swimming Pools, Lifts, Tanks and Reservoirs	66
Figure 2-8: Internal Waterproofing of Basements, Underground Sumps, Swimming Pools, Lifts, Tanks and Reservoirs	67
Figure 2-9: Sealing of Expansion Joints	68
Figure 4-1: Deteriorated surface of the rooftop of the Mechanical Engineering Department new building - 1	71
Figure 4-2: Deteriorated surface of the rooftop of the Mechanical Engineering Department new building - 2	72
Figure 4-3: Deteriorated surface of Goda Canteen rooftop - 1	72
Figure 4-4: Deteriorated surface of Goda canteen rooftop - 2	73
Figure 4-5: Deteriorated surface of Goda canteen rooftop - 3	73
Figure 4-6: Deteriorated surface of Goda canteen rooftop - 4	74
Figure 4-7: Deteriorated surface of Goda canteen rooftop - 5	74
Figure 4-8: Remedial action taken on Goda Canteen rooftop - 1	75
Figure 4-9: Remedial action taken on Goda Canteen rooftop - 2	75
Figure 4-10: Remedial action taken to prevent water leakage	76
Figure 4-11: Deteriorated surface of the new building of the Textile Engineering department - 1	77
Figure 4-12: Deteriorated surface of the new building of the Textile Engineering department - 2	77
Figure 4-13: Deteriorated surface of the new building of the Textile Engineering department - 3	78
Figure 4-14: Deteriorated surface of the new building of the Textile Engineering department - 4	78
Figure 4-15: Deteriorated surface of the new building of the Textile Engineering department - 5	79
Figure 4-16: Deteriorated surface of the new building of the Textile Engineering department - 6	79
Figure 4-17: Deteriorated surface of the new building of the Textile Engineering department - 7	80
Figure 4-18: Deteriorated surface of the new building of the Textile Engineering department - 8	80
Figure 4-19: Deteriorated surface of the rooftop of the IT faculty old building - 1	81

Figure 4-20: Deteriorated surface of the rooftop of the IT faculty old building - 2	81
Figure 4-21: Deteriorated surface of the rooftop of the IT faculty old building - 3	82
Figure 4-22: Initial surface with the deteriorated plaster chipped off and catch up plaster applied	84
Figure 4-23: After surface preparation for waterproofing	85
Figure 4-24: After application of waterproofing	85
Figure 4-25: After application of cover plaster - 1	86
Figure 4-26: After application of cover plaster - 2	86
Figure 4-27: Open slab area in the IT faculty building of University of Moratuwa considered for case study II	87
Figure 4-28: Open slab area prone to collection of rainwater	87
Figure 4-29: Another problematic inaccessible narrow strip of slab area	88
Figure 4-30: No proper means of access to the area	88
Figure 4-31: Labs onto which water leaks from the considered area	89
Figure 4-32: The area poses a health issue by being a breeding ground for mosquitoes	89
Figure 4-33: Flooding of the basement in the Civil Engineering Department building including the staircase - 1	90
Figure 4-34: Flooding of the basement in the Civil Engineering Department building including the staircase - 2	91
Figure 4-35: Flooding of the basement in the Civil Engineering Department building including the staircase - 3	92
Figure 4-36: Flooding of the basement in the Civil Engineering Department building including the staircase - 4	93
Figure 4-37: The basement of the Civil Engineering Department building prone to flooding	93
Figure 4-38: Non-return nozzles fixed to inside walls for the injection process - 1	94
Figure 4-39: Non-return nozzles fixed to inside walls for the injection process - 2	94
Figure 4-40: Injection Process - 1	95
Figure 4-41: Injection Process - 2	95
Figure 4-42: Injection Process - 3	96
Figure 4-43: Injection Process - 4	96
Figure 4-44: Injection Process - 5	96
Figure 4-45: Construction joint line in floor level of 7 th floor	97
Figure 4-46: Water seepage from construction joint line at slab level of 7 th floor - 1	97
Figure 4-47: Water seepage from construction joint line at slab level of 7 th floor - 2	98
Figure 4-48: Water seepage from construction joint at floor level of 7 th floor	98
Figure 4-49: Water seepage along the wall of the ground floor	99
Figure 4-50: Water seepage along the walls from the duct line in the ground floor	99
Figure 4-51: Rooftop deteriorated tile skirting expelled	100
Figure 4-52: Rooftop location of water meters prone to collection of water	100
Figure 4-53: Rooftop location prone to collection of water - 1	101
Figure 4-54: Rooftop location prone to collection of water - 2	101

Figure 4-55: Passive waterproofing mechanism on rooftop drains into which water gets drained beneath the tile surface - 1	102
Figure 4-56: Rooftop drains into which water gets drained beneath the tile surface - 2	102
Figure 4-57: Remedial action taken to prevent collection of water at rooftop level using passive waterproofing design	103
Figure 4-58: Rooftop surface to be finished	103
Figure 4-59: Post application of waterproofing solution at rooftop level	104
Figure 4-60: Finished surface and unfinished construction joint line of rooftop	104
Figure 4-61: Rooftop drainpipes to facilitate proper drainage	105
Figure 4-62: Sluice gates located at the far left were affected by waterproofing issues	106
Figure 4-63: Affected surfaces were injected with waterproofing solutions - 1	107
Figure 4-64: Affected surfaces were injected with waterproofing solutions - 2	108
Figure 4-65: Top surface of the underground control room from which water leaks in	109
Figure 4-66: Bottom surface through which water leaks in	109
Figure 4-67: Water seeping in from puddle collar - 1	110
Figure 4-68: Water seeping in from puddle collar - 2	110
Figure 4-69: Surface injected with waterproofing solutions - 1	111
Figure 4-70: Surface injected with waterproofing solutions - 2	111
Figure 4-71: Surface injected with waterproofing solution from top level - 1	112
Figure 4-72: Surface injected with waterproofing solution from top level - 2	112
Figure 4-73: Water leaks to be injected with waterproofing solutions	113
Figure 4-74: Water leaks in the front wall of the Galle Town Hall	113
Figure 4-75: Water leaks - 2	114
Figure 4-76: Water leaks - 3	114
Figure 4-77: Structural deterioration of ground floor slab level due to lack of waterproofing - 1	115
Figure 4-78: Structural deterioration of ground floor slab level due to lack of waterproofing - 2	115
Figure 4-79: Structural deterioration of ground floor slab level due to lack of waterproofing - 3	116
Figure 4-80: Structural deterioration of ground floor slab level due to lack of waterproofing - 4	116
Figure 4-81: Most Important Factor to Consider when Selecting a Waterproofing System	117
Figure 4-82: Factor Combination Frequencies for importance of factors	118
Figure 4-83: Willingness to Consider an Applicator's Suggestion of a New Product	120
Figure 4-84: Necessity of Specialized Waterproofing Consultants	121
Figure 4-85: Industry Experience of Applicators in Specialized Areas	123
Figure 4-86: Existence of a Preferred Brand of Waterproofing	124
Figure 4-87: Applicators Experience in More than one Brand of Products	125
Figure 4-88: Selection of Specific Products for Each Area	126
Figure 4-89: Process of Selecting a Specific Product to Apply	127
Figure 4-90: Availability of Warranty for Application	128

Figure 4-91: Years of Warranty Provided by Applicators 129

Figure 4-92: Percentage of Rework Done Free of Charge due to Application Failure during
Warranty Period 130

Table of Tables

Table 2-1 : Analysis of physical factor of two locations	11
Table 2-2: Selective Factors considered by different groups of the market	14
Table 2-3: Advantages and Disadvantages of Negative & Positive Systems	23
Table 2-4: Advantages and Disadvantages of Waterproofing Systems that are Cementitious	25
Table 2-5: Advantages and Disadvantages of Fluid Applied Systems	27
Table 2-6: Advantages and Disadvantages of Clay Systems	30
Table 2-7: Summary of below-grade waterproofing systems	31
Table 2-8: Differences between above-grade and below-grade waterproofing	33
Table 2-9: Clear Sealant Types	34
Table 2-10 : Advantages and Disadvantages of Acrylics	38
Table 2-11: Advantages and Disadvantages of Silicones	39
Table 2-12: Advantages and disadvantages of Urethanes	39
Table 2-13: Advantages and Disadvantages of Silanes	40
Table 2-14: Advantages and Disadvantages of Siloxanes	41
Table 2-15: Advantages and Disadvantages of Silicone Rubbers	42
Table 2-16: Advantages and disadvantages of Elastometric Coatings	44
Table 2-17: Advantages and Disadvantages of Cementitious Coatings	48
Table 3-1: Justification of class size	70
Table 4-1: Most Common Combination for Importance of Factors to be considered for selecting a Waterproofing System	119