

As part of knowledge dissemination in the specialized area of waterproofing, we had started publishing a series of publications on various modern waterproofing systems. The present issue of our ReBuild is the concluding one of the series focusing on designing and waterproofing external walls. The detail of such publications is given in the table below, for the reference of our reader. All these publications can be viewed/downloaded on our Institute's website: www.drfixitinstitute.com. Those who have missed any of the issues may visit our website.

Vol.6, No.2	Apr-Jun, 2012	Part 1 - Basement waterproofing
Vol.6, No.3	Jul-Sep, 2012	Part 2 - Remedial basement waterproofing
Vol.6, No.4	Oct-Dec, 2012	Part 3 - Waterproofing of water retaining structures
Vol.7, No.1	Jan-Mar, 2013	Part 4 - Waterproofing of Internal Wet Areas
Vol.7, No.2	Apr-Jun, 2013	Part 5 - Waterproofing of Roof & Terrace (i)
Vol.7, No.3	Jul-Sep, 2013	Part 6 - Waterproofing of Roof & Terrace (ii)
Vol.7, No.4	Oct-Dec, 2013	Part 7 - Waterproofing of Podium slabs, Planter box, Green roof system
Vol.8, No.1	Jan-Mar, 2014	Part 8 - Waterproofing & Low Energy consumption roofing system
Vol.8, No.2	Apr-Jun, 2014	Part 9 - Waterproofing of External Walls

Changing the specification of traditional waterproofing systems to modern waterproofing systems for basements, floors, internal wet areas, tile adhesive and grouts, roof slabs terrace, sunken slabs, external walls, etc. will increase the cost of the building only by three to five percent of the total cost. For a 2BHK flat of 1000 sqft the additional cost for all these waterproofing systems will be rupees two to three lakh only. Though the use of the construction chemicals increases the initial cost to the developers by certain percentage of the total cost, the value-adding inputs being achieved for long-term durability is very beneficial in terms of life-cycle cost and sustainability. However, a lot of money is being spent on protecting and maintaining new as well as existing concrete structures to enhance the durable lifespan. The result of the application of construction chemicals depends mainly on the way or

manner in which the application is being carried out. However, without any technical guidance to get the best results out of such expensive products may not be possible. There is also difficulty to get the skilled labour for the application. At the same time, around seventy five percent of the construction industry personnels are not aware of the concept of construction chemicals. They are even not aware of the productivity improvement and value addition of these construction chemicals. Hence, the structures that are being built brick-by-brick, get damaged by drop-by-drop seepage of water. This calls for knowledge and technology management for designing efficient waterproofing treatments, selection of site-specific materials and methodologies for execution.

A holistic approach consisting of various tasks such as inspection, assessment, condition survey, residual life analysis, specification, recommendation and implementation of the best possible remedial treatment will ensure durability of the structure. Many a times, there is a dilemma over whether damp proofing is to be adopted or waterproofing materials are to be used or both. However, as per ASTM D 1079, waterproofing is defined as "treatment of surface or structure to prevent the passage of water under hydrostatic pressure." Whereas, Damp proofing is defined as "treatment of surface or structure to resist the passage of water in the absence of the hydrostatic pressure." Hence, these are not only two different words with two different meanings, but altogether two different technologies for a similar purpose. The conventional waterproofing systems are slowly becoming outdated due to their inherent disadvantages and membrane waterproofing coatings, are gaining popularity.

The present issue of our ReBuild discusses the concept of 'Building Envelope', within the various issues of designing and waterproofing of external walls. The remedial waterproofing of external walls discusses all kinds of defects, their symptoms, possible causes and the remedial solutions. We will revisit the specialized issues of waterproofing on external walls in the future.