From the Editor's Desk

Many high rise buildings and high end projects today incorporate landscaped basements and roofs commonly known as plazas or podiums. The basement can vary from habitable space to commonly used car parking. Whatever the usage, it is vital that the correct waterproofing system is selected when waterproofing podium decks. Depending upon the type of the podium deck, the waterproofing system that needs to be installed is determined. A garden bed type podium will require a different system compared to a trafficable podium system or a tiled podium system or a podium having a swimming pool.

There are many considerations to be taken into account while waterproofing podium decks, such as deck movement, differential movement, drainage, waterproofing continuity at expansion joints, drainage outlets and landscaping. The use of a seamless liquid applied membrane than the use of a sheet membrane is preferred thus disallowing any chance of delamination at any seam or junction.

It is also important to design the deck slab as watertight concrete and accordingly use such waterproofing materials during the laying of the concrete. The pore blocking admixtures and integral crystalline are more commonly added to the concrete mix. Drainage is an integral part of the podium waterproofing system and can be laid over the flexible waterproofing layer. It will also act as an effective drainage medium, channeling water to the drainage outlets. Drainage boards can also be used over the flexible waterproofing membrane, to create both a drainage layer and a water storage layer where required. Adequate drainage needs to be factored into podiums due to the large volume of water they can collect very quickly due to their size. In the garden roof system, a root barrier is very important since it prevents the migration of plant roots and prevents them from damaging the membrane. Similarly the growth medium has to be designed for different types of extensive, semi-intensive or intensive plantings. Extensive planting uses a narrower range of species limited to herbs, low-growing grasses, and mosses, whereas a semi-intensive roof garden system uses a combination of plant species that may include small shrubs and species like grasses and herbs. However, an intensive garden roof system uses a wide variety of plant species that may include trees and shrub.

Green or vegetative roof systems perceived by many as durable, sustainable, energy-efficient and high-performing, comprise layered assemblies combining landscaping, thermal insulation, waterproofing components and other elements to provide a functioning system. Green, or vegetative roof systems are one of the ways we can introduce and improve ecosystem services in urban areas. Vegetative roofs can manage storm water runoff, reduce energy use and noise, mitigate the urban heat island effect, alleviate air pollution, increase biodiversity and wildlife habitat, and add value to a building. Finding ways to improve, expand or increase the number of urban ecosystems may offer solutions to many environmental challenges by green or vegetative roofing. Sustainability and energy efficiency of the built environment have become essential parameters of any development. A high performance green roofing system is also based on the concept of the 5 Es: Energy, Environment, Endurance, Economics and Engineering. The roof garden system or vegetative roof system includes the concept of the 5 Es and moves towards sustainable development. We need to catch up to the fast trend of vegetative roofing system and participate in green technology for the cause of global sustainability, and the environment.

We have covered some of the aspects of podium waterproofing along with green or vegetative roofing in this issue, where waterproofing is the key issue for the success of these systems. We hope everybody contributes to create awareness, promotes the technology and takes active steps in green roofing. We will focus more on low energy conservation roofing systems along with waterproofing for a sustainable construction in the next issue of our ReBuild.