

No More Leakages!

In response to our feature on waterproofing in the May 2004 issue, CICO imparts the technology and products employed on a few prestigious projects.

CICO Technologies Ltd

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At CICO Technologies Ltd (CTL), we aim to take construction chemical technology, products, services and solutions to the customer's doorstep. In order to make CICO a benchmark in customer care, we have a team of professionals who continue to be the strength of our future business approach as well.

Product range

We manufacture a wide range of products to suit various applications. These include waterproofers and water sealers, concrete admixtures, plasticisers, mineral admixture, concreting aids, protective coatings, grouts and grouting compounds, shotcrete products, epoxy-based compounds, rock bolting capsules, tile adhesives, sealants, waterproof coatings, polyurethane coatings as well as bonding agents.

We have introduced two products: Corchem 60 - used to protect steel rebars from corroding. It is used during construction as an admixture to concrete. On a built-up structure, it can be applied externally as a protective coating by painting the surface or by incorporating it in mortar used for plastering.

CICO Corchem 210 (I), a PU based coating, can be applied over large surfaces of cooling towers, where the coating may be subject to continuous seawater flow along with air draft.

Case studies

1. 2mm thick PU (100 per cent solid) industrial maintenance coating on a concrete cooling tower that uses seawater.

Client: Simhadri Thermal Power Project (NTPC)

Contractor: National Buildings Construction Corporation Ltd (NBCC)

Period: January 2002-July 2002.

Product: Corchem 210 (I)

NTPC put up a 2x500 mw state-of-the-art thermal power station at Simhadri, 40 km away from Visakhapatnam, Andhra Pradesh, where seawater is used in the circulating water-cooling (CWC) system. In addition, NBCC designed and constructed two natural draft concrete cooling towers - the largest in Asia. With a capacity of 60,000 cu m/hour and cooling range of

11°C, its diameter measures 110 m at the bottom, 72 m diameter at the top and 165 m in height.

To protect the towers from the adverse affects of seawater, NTPC specifications stipulated an admix organic corrosion inhibitor (MCI type) in concrete above the water zone. This entailed 100 per cent solid polyurethane coating on all concrete and steel members in the water zone (up to 18 m) and hot water basin (1.8 m). The total area for PU coating (2mm) measured as 57,500 sq m involving 88 racker columns supporting shell structure and 1,220 columns, 3,375 beams, 268 baffles and 260 bracing, etc.

CTL supplied Corchem 60, (an organic corrosion inhibitor) that met NTPC specifications. CTL also executed the application of 2 mm thick 100 per cent solid PU coating with NTPC approved material Corchem 210 (I) on cooling tower No. 2. The entire job was completed within schedule. The PU coating job started soon after the completion of shell structure. The pre-cast concrete members were erected and screed concreting was carried out on floor, while the PU coating job was in progress.

Technically, it was very difficult to comply with environmental requirements such as temperature, moisture content of concrete, etc. The CTL team in close consultation with the Indian Institute of Chemical Technology (IICT), Hyderabad, rescheduled various application activities to reasonably suit the environmental conditions and specified conditions to achieve the required progress of PU coating. The change in environmental condition was managed by extensively using a hot air blower before application of primer and PU coating. PU primer was also used where the moisture content in concrete was anticipated to be lower than the permissible level due to various construction activities around the coating area. This enabled NBCC to simultaneously carry out the overhead erection of AC pipe, stainless steel channels and fills, etc. This also resulted in planning parallel activities of testing and commissioning of CWC pump, hot water header and connected pipe line and ensuring commissioning of the second unit as per schedule.

2. Longest head race tunnel excavation done with rock support using resin capsule

Client: Nathpa Jhakri Power Corporation Ltd

Contractors: I. Continental Construction (I) Ltd and

Understanding Property Tax

A closer look at definitions, basic criteria and how it works all over India.

Property tax is computed based on the assessment value of a property. It is generally based on the rateable value and the carpet area or, to put it simply, the 'habitable' area of a structure. Staircases, stilts, and entrance lobbies are excluded from this calculation. A ready table of rateable values, computed on a standardised basis, is available with the municipal authorities.

Hypothetically, the rent of a property is based on the year of construction - and the assessment is based on this. For example, in a city like Mumbai, standard rent is adopted for old structures and fresh assessment is carried out for new structures. Thus, it may well happen that an old building in an uptown locality may require less property tax than a brand new construction adjacent to it. This is because the new building is assessed on the current market value.

Basic criteria

The taxes in the assessment bill depend on the rateable value of the premises, i.e. the amount of rent that a place can fetch hypothetically. This is normally calculated for new constructions. The property tax (calculated on rateable value), thus computed, also constitutes a sum of percentages of other taxes, such as general tax, water tax, water benefit tax, sewerage tax,

sewerage benefit tax, tree tax, street tax, education tax, etc.

The tax that every individual apartment pays to its society, monthly or every quarter, generally includes the charges for property tax, watchman upkeep, water tax, entertainment tax, if any, sinking fund, etc. This, as is obvious, would differ according to the additional facilities and conveniences that are offered by the society. Hence, although general values are computed on a common platform, the provision of additional facilities may result in a variation in the amount of tax.

Each property is given a ward number by the municipality and this is maintained in the municipal records and billed half yearly by the authorities. Also, it must be noted that commercial properties, institutions, etc. have different values of computation. Hence, property tax differs user-wise, locality-wise as well as state-wise. This is also one reason why there is such a radical difference in property prices within the same area. Normally, the house tax does not fluctuate unless and until there is major fluctuation in the estate market.

Defaulters, by law, are given a month's gratis to pay up or else the authorities initiate necessary action to auction the property.

Property taxes include general tax, water tax, sewerage tax and street tax. These taxes are levied as a percentage of rateable value (RV). Thus, the RV is the tax base while the various taxes are levied as tax rates on the tax base. The sum, so arrived at, is the annual property tax liability of a particular property. This liability is to be paid in two half-yearly instalments in April and October.

The RV is calculated as the rent that a property fetches or may fetch, minus certain deductions. In cases where a property is let out on rent, this rent is the base for computing the RV. However, in cases where the property is owner-occupied, the rent-earning capacity of that property is estimated using the residential letting rate or RLR method. For instance, Mumbai is divided into 128 pockets or



Property tax differs user-wise, locality-wise and state-wise.