

DISTINCTIVENESS

The institute has started focusing on the consultancy. The Civil Engineering Department of the institute has been awarded the consultancy by Amritsar Smart City Ltd. for NON DESTRUCTIVE TESTING OF OVERHEAD SERVICE RESERVOIRS (OHSRs) IN AMRITSAR CITY. The detail of the same is Ground water levels in major cities of Punjab have witnessed sharp decline in recent few years and the situation is worsening due to unregulated and over extraction of ground water. In order to check rapid decline and deterioration of ground water, Government has initiated the process to switch over to Surface water (Canal water) based water supply to provide treated potable water in Amritsar city. In this proposal, the Off take is proposed at Tarowali cross regulator and WTP near it on the land owned by Irrigation Department, GoP. This initiative also require a study of present water storage and supply distribution network of Amritsar city in order to gradually upgrade the existing water supply infrastructure to a robust and sustainable 24x7 surface water source based water supply system.

There are 41 RCC Over Head Service reservoirs present in Amritsar city as a part of infrastructure available for water storage and supply distribution network of Amritsar city. Some of these OHSRs are functional and some are non functional due to various reasons. A study is required to make an assessment of present condition and structural integrity of these OHSRs. Amritsar Smart City Ltd. (ASCL) a PMC for Amritsar Smart City has decided to prepare a report on condition assessment and structural integrity of OHSRs based on Non Destructive Testing.

ASCL has awarded the work of preparation of above mentioned report to DAV Institute of Engineering & Technology, Jalandhar. The objective of the study is to assess general insitu strength, concrete homogeneity, corrosion risk, Carbonation depth, Cover estimation, uniformity of surface strength. Following tests will be conducted in order to achieve the objectives:

- 1) Rebound test to evaluate the surface hardness of concrete
- 2) Ultrasonic Pulse Velocity (UPV) test to measure the sound velocity of the concrete and hence the compression strength of the concrete.
- 3) Core extraction and testing for in situ strength of concrete
- 4) Cut And Pull Out (CAPO) Test for in situ strength of concrete
- 5) Carbonation Test – to estimate depth of carbonation
- 6) HalfCell Potential Survey to detect the corrosion potential of reinforcing bars in concrete.
- 7) Visual inspection for condition assessment.