



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2020-2021/EVEN
INTERNAL STAFF SEMINAR – REPORT

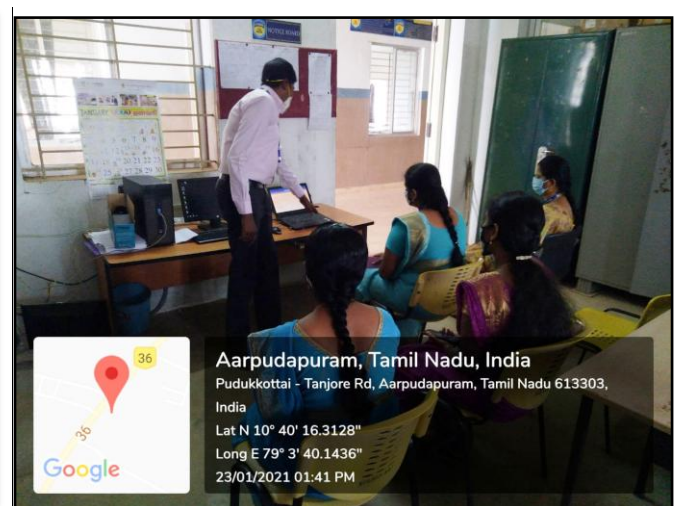
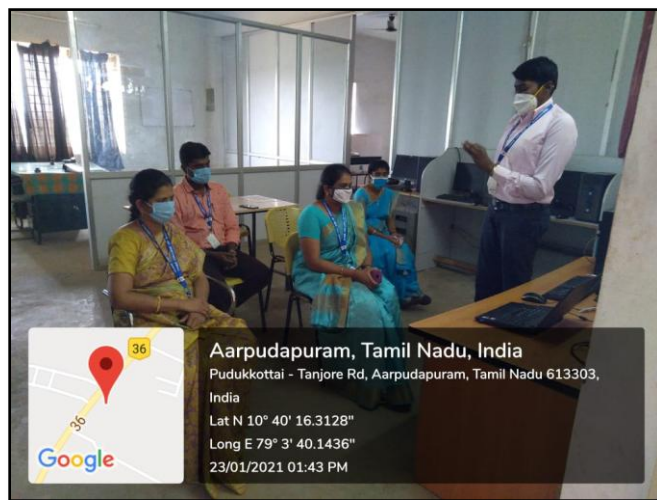
23/01/2021

Background & Objective

Department of Civil Engineering had organized an Internal staff Seminar for the staff members for accessing online journals (Springer). The purpose of this seminar is to equip the faculty in new techniques through accessing online journals.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 23rd January, 2021 at 01:15PM. The seminar was presided over by **Ms.R.Revathi, HoD.**, Department of Civil Engineering. All the faculties were present in the seminar. **Mr.R.Sundharam/AP** delivered his seminar talk on “**SEISMIC PERFORMANCE OF EXISTING WATER TANK AFTER CONDITION RANKING USING NON-DESTRUCTIVE TESTING**”



Seminar talk by Mr.R.Sundharam /AP

The themes discussed were: Seismic diagnosis and seismic retrofit for the existing tanks. DER, i.e., degree (*D*), extent (*E*) and relevancy (*R*) rating technique was employed to find out the condition

index of the elevated service reservoir (ESR). The ranking assessment of the elevated service reservoir was carried out using different non-destructive tests (NDTs). Numerous techniques have been originated and applied to improve the seismic behavior of these structures. Among all the natural disasters, earthquakes, being the most destructive and affecting structures, have also created a need to raise the current safety levels in structures. As per the recommendations of the prevalent codes, several existing structures were analyzed, designed and detailed. To make existing weak structures safe against future natural forces and possible earthquakes, retrofitting is one of the best options. In this research work, retrofitting techniques used are diagonal braces as a retrofitting system, FRP as a newly emerging material, and damper as technology.

Outcome

The Seminar obviously underlined the seismic vulnerability of the existing structures and the assessment of the elevated service reservoirs using non-destructive tests. The merits and demerits of the structure under seismic activity were discussed. Also the DER rating techniques used to find out the condition ranking of ESR and safety evaluation for rehabilitation or reconstruction, increasing the base shear of the structures using bracing, damper and FRP were also presented. At the end of seminar, discussions were done among the faculty members in various retrofitting techniques for different structures. Staff members shared their views regarding seminar and gave their feedback.