

FDTD method applied to Radar Testing of Concrete Structures

Lucas Travassos, Christian Vollaire and Alain Nicolas - CEGELY
Ecole Centrale Lyon - 36, Guy de Collongue – Ecully cedex 69134 – France
Phone : +33(0)4 72 18 61 05 – email : lucas.travassos@ec-lyon.fr

Scope

Algorithms, Finite-difference time-domain method and Non-destructive testing.

Abstract

The non-destructive inspection of concrete structures using radar techniques is increasingly being recognised as an effective way of gathering information. The numerical simulation of this type of inspection may help to minimise the overall cost of an investigation and to increase the likelihood of carrying out fully effective maintenance and repair. In this work, finite-difference time-domain (FDTD) technique is applied for simulating the radar assessment of concrete structures with PVC ducts. The research aim for the numerical experiments is the location of voided regions inside concrete structures.