

# Non Destructive Testing in Civil Engineering: Quality Control and Structural Integrity of Reinforced Concrete Structures

Loveetah Chummun Bhujohory

Mauritius Standards Bureau



International Atomic Energy Agency Scientific Forum

**ATOMS IN INDUSTRY**

Radiation Technology for Development

15–16 September 2015, Vienna, Austria

# Civil works-drain/footpath

Government Projects/  
public funds disbursement



NDT Tests prior to approving  
payment



# Private House

Quality conscious, NDT on site



Strength tests in lab

Strength test on concrete cube combined with on site tests

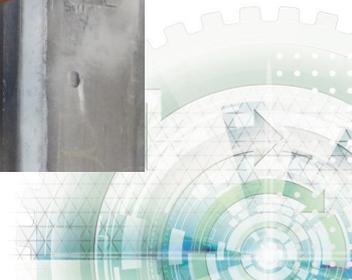


# Building affected by fire

Insurance purposes and structural integrity



Visual inspection and NDT and semi-destructive

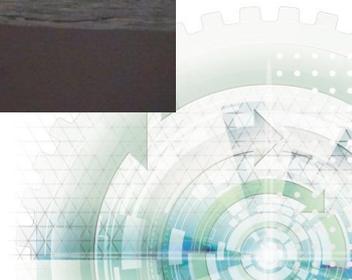


# Airport sheds: Repair/maintenance works

Visual inspection and NDT



Leakage and damage visible



# Airport Pathways

## Heavy Duty Flooring

## NDT methods



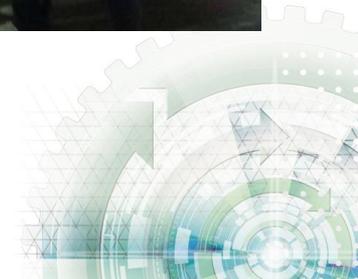
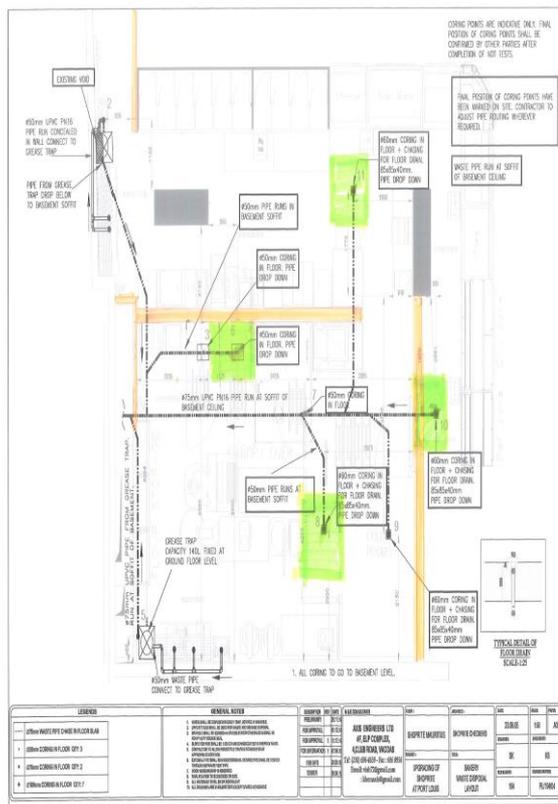
- Checking uniformity of flooring



# Change of use of Commercial

New Plans requiring drilling for Electrical and plumbing services

NDT Scanning to identify potential clear drilling areas



# Highways

## Major Structural failure



## Materials used?/Design problem?

NDT Tests at  
Foundation level/  
below ground  
level



NDT Tests at  
above ground level



# Water treatment plants

## Water treatment plant under construction

## Inspection to Identify Defects using NDT Tests



# Bridges

## Inspection

- RC Bridge



## Defects and NDT inspection



**Thank you!**



# Three questions *(4 given for choice)*

1. Who are the stakeholders who are mostly making use of NDT techniques in Civil Engineering in Mauritius?
2. How does NDT in Civil Engineering benefit the mauritian market?
3. How do you find the demand trend for such services?
4. After having set up a good starting foundation for NDT Concrete in Mauritius, what is the way forward?

