

State DOT: Louisiana

State Report Questions on NDT Testing

1. What NDT testing methods for concrete materials, concrete pavements, and overlays are you trying?

LADOTD does not test concrete pavements or overlays non-destructively. We do use the surface resistivity meter for non-destructive testing of resistance to chloride ion penetration on field cast cylinders for structural concrete. We have developed a pay schedule and requirements for our structural concrete using the surface resistivity meter.

LADOTD has used GPR testing for pavements suspected of having clay balls.

2. In your experience, how does the reliability of NDT testing methods compare to traditional testing methods?

LADOTD's experience on the surface resistivity meter is excellent. We have great results with excellent precision. We have found the test method to be more accurate than the ASTM C1202 Rapid Chloride Permeability Test.

The following links are available detailing our testing procedures. The first link is for our TR 233 test procedure. The second link is to a training video for training our personnel. The third link is to a copy of our final report on the surface resistivity meter.

http://www.dotd.la.gov/highways/construction/lab/testproc/tr_233_final.pdf

<http://www.ltrc.lsu.edu/videotraining/Resistivity/Resistivity.swf>

http://www.ltrc.lsu.edu/pdf/2011/fr_479.pdf

Our experience with GPR was not very good. The GPR profile consistently overestimated the clay ball or void size in the pavement structure.