

Dominican Republic

Through visual inspection it was determined that the general structure of the house is in good condition. The main injuries are in the enclosures, floors, ceilings and veranda, which show an advanced deterioration, and are mainly caused by moisture. There is also indications of improper repair, loose joint and connection, missing wood and color change are some of the damage that are appreciated by sight. Ultrasonic tomography, coupled with image analysis and the resistograph provides an efficient, noninvasive approach to evaluate the condition of the internal decay of the timber and the structural. In general, the Arbotom indicated that some structural elements had internal lesions although they were not visually appreciated. Gaps and soft areas were detected in some columns while in others can observed the good state in which they are. The resistograph affirmed the data obtained with the ultrasound and also indicated the resistance of the samples. The thermographic inspection allowed to know the presence of moisture on the pieces, detect insects and anomalies. The moisture level was tested with thermohygrometer. In conclusion, the benefit to used NDT is that it can be applied "in situ", it does not require big samples that destroy the building to obtain important information. Also, these instruments are the most appropriate methods for the evaluation of the external and internal wood structure and materials quality in cultural heritage.