AISICO
for a safer life

T.H.O.R. 3
Testing Head Over Road

T.H.O.R. 3, THE NEW AISICO INSTRUMENTATION FOR TESTING THE CORRECT MAST/GROUND INTERACTION

The T.H.O.R. 3 test system originates from the need to test the correct installation of restraint systems on the carriageway, through dynamic impact tests. T.H.O.R. 3 tests the interaction between the barrier post and the ground in which the barrier is installed, to ensure proper operation and that, in the event of a vehicle spillage from the roadside, the system installed on-site behaves similarly to a full-scale crash test.

METHODOLOGY

During the test phase, T.H.O.R. 3 is positioned at a certain distance from the post that needs to be tested. Based on preliminary evidence, T.H.O.R. 3 transfers a certain amount of energy to the post, at a certain height.

By dynamic impact tests and the use of a pneumatic propulsion system, T.H.O.R. 3 can verify the reliability of the interaction between the ground and the post of the barrier in situ, thus allowing the comparison with the results obtained on the test field, with the same device.

The instrumentation is remotely controlled by radio: the movement of the vehicle, the positioning of the hammer impacting the post, the height of the impact, and the impact energy may be easily set up.

The four steering wheels move longitudinally and transversely, allowing a rapid and appropriate positioning for the test. Thanks to its small dimensions, T.H.O.R. 3 may work on the emergency lane.

It measures the displacement induced on the post (mm) and the time interval (s) in which the energy of the impact is completely released. Similarly, it measures the speed of this displacement and its force.

The data acquired are then processed - according to a procedure, patented and developed by AISICO - which provides a value (CE) to each test and this value represents the energy dissipation capacity. This value is then compared to the same reference value measured on the stake installed on the ground of the test field. These values generally differ by a percentage, which varies according to the type of the stake. It follows that, in the event of an impact, the system can offer the expected performance.

MAIN CHARACTERISTICS

- **Greater solidity**
- **Easy to be handled**
- **Certainty of results**
- **Adjustable impact speed between 7m/s and 14m/s**
- **Impact energy adjustable between 7Kj and 12 Kj**

Length: 2,05 m **Width:** 1,763 m **Height:** 1,712 ÷ 2,55 m

TEST ON CURBS

T.H.O.R. 3 may also be used to check the dynamic impact resistance of the bridge's guardrail posts and the curb on which they are installed.

THE TEST

The impactor and the technical instrumentation for the data survey are installed on a trolley that in transport configuration on the road is towed by an engine, but once it reaches the testing ground it can be moved using an autonomous transmission that allows the operator to control it remotely, making movements swift and precise.

To discover more about T.H.O.R. 3 scan the QR-code.

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For over thirty years, AISICO has been committed to road safety, offering testing and verification services, both in the laboratory and on site, for transport infrastructure and street furniture, conformity certification, research and development projects, and training.

SAFER ON THE ROAD,
SAFER IN LIFE.

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