

MORANDI Bridge in BASILICATA (Italy) :

it is the "Carpineto I" viaduct of 241 meters on the Potenza-Sicignano motorway junction

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[Automatic translation]

The **collapse of the Morandi Bridge in Genoa (Italy)** has shaken everyone.

The tragedy of the collapse, in fact, left an immense pain but also many questions about the state of the national road network.

Basilicata is not far behind, so much so that there are some critical points that need urgent maintenance.

The Anas of Basilicata will soon adopt the ban on the movement of heavy vehicles on those viaducts that are critical, so as to allow the technicians to make all the appropriate assessments.

Basilicata also has a bridge built by Ing. Riccardo Morandi, also that was built with the technique to stralli and also that bridge has shown problems.

This is the "Carpineto I" viaduct on the Potenza-Sicignano motorway link and built between 1971 and 1974 by the CMC-Cooperative Muratori and Cementisti di Ravenna.

It is a straight stretch of 241.8 meters, with two parallel, separate and independent lanes, each 9 meters and a half wide.

An architectural peculiarity for those traveling on the route from Metaponto to Campania; pity, however, that the structure has begun to show signs of slowing down and in 2013 the Anas commissioned a team of three engineers, led by Professor Luigi Della Sala, a professor of construction of bridges at the University of Basilicata and composed of Rosario Cerone and Angelo Sabatiello, a survey which has revealed many problems that have led to work in progress as part of a € 53 million program for the restoration of the viaducts on the Basentana road network.

In detail, the technical team pointed out how the manufacturing defects, together with the degradation conditions of the materials, have determined over the years corrosion anomalies affecting the strands that precompress the reinforced concrete sheaths and the consequent reduction of the stress state.

The analyzes allowed to notice a fairly widespread degradation state consisting of iron cover detachments of the sheaths of the sheaths, as well as detachments along the lids of the prefabricated segments which constitute them, with surface oxidation on all the strands (the interwoven steel wires) investigated, with more widespread anomalies on some cables.

Always on the strands have been highlighted deformations due to the elastic return resulting from the cutting of a single wire and a voltage drop of about 20% compared to the design values.

For the three technicians, who worked out the intervention plan, the state of residual pre-compression was not sufficient to avoid the cracking of the stay under the load application.

In a recent interview made to the Regional TG the Prog.Ing.Lucio Della Sala has informed that the load tests, carried out on the deck of the same bridge in previous years, have given satisfactory results and not worrying.

The Morandi Bridge. in loc.Carpineto on the road axis of the SS. 407 Basentana. it was built between 1971 and 1974.

The same bridge showed signs of slowing down in 2013, so as to induce the Anas to launch a 53 million euro investment program to secure the arterial viaducts.

Recall that the highway 407 Basentana (SS 407) is an important Italian highway, the most important of Basilicata, whose route follows the course of the river Basento from Potenza to Metaponto, entirely in Basilicata.

The Basentana was built in the sixties of the twentieth century, along with other arteries of the valley floor of Basilicata, to give a boost to the regional economy and solve the problem of isolation that has always characterized the Basilicata.

It was built in anticipation of the intense traffic produced by the industrial areas of the Basento Valley distributed between Potenza, Pisticci and Ferrandina.

However, the industrial development of the Basilicata Region has never taken off and therefore the Basentana currently has a capacity greater than the volume of traffic that habitually passes through it.

The Basentana road artery begins on the 7 Via Appia road and in combination with this and the highway 5 connects the route of the European road E 847, north-south ridge that connects Sicignano degli Alburni (SA) to Metaponto (MT) .

There are warning signs, for several bridges built in Basilicata, also by users who daily move on the roads of Basilicata.

The viaduct 'Molino' at the height of Vaglio di Basilicata, also on the SS407 Basentana, a few kilometers from Potenza, 'under observation' for several years, for which no intervention has been carried out, despite the reports and the signs highlighted along the route towards Potenza.

Among the viaducts put under accusation we remember the bridge 'Scescio' on the Potenza-Melfi, at the height of the Municipality of Barile; certainly a very disturbing situation with a state of very evident degradation, with the armor of the highly corroded and damaged pylons, without iron cover and which would require the closure of the circulation, closing, however, which did not happen with great responsibility of the managing body.

Regarding the problem of the danger of existing bridges, the President of UPI Achille Variati, said that the technicians of the Provinces are now forced to carry out checks 'on sight', and when the danger is evident, the only possibility we have is to close stretches of road.

More than 5,000 kilometers of roads have been reached, including bridges and viaducts, closed due to landslides, landslides or because of insecurity, and over 50% of the road network has been forced to set the speed limit between 30 and 50 kilometers per hour .

An emergency situation such that last year all the Presidents of the Provinces were forced to deposit

exposed to the territorially competent authorities in which they detailed the conditions of crisis on the territories and the risks for the safety of citizens.

"This is why Variati underlined" as soon as the new government took office, we asked for a meeting with Minister Toninelli, to take stock of the situation and reiterate the urgency of a national fund that allows to secure the provincial roads, the network that holds together the country".

surely the most important Italian road arteries without maintenance are collapsing.

The new Government is asked to do soon, to ensure the safety of Italians and not to get lost in unnecessary chatter and insults that distance the resolution of problems.

Responsibilities for tragedies like the one in Genoa will come out.

We do not wait for other tragedies!