FIRMASTIC

System offering greater absorption of the movements of expansion joints in bridges and panels without losing structural capacity.

High-performance joint system

Firmastic is a high-performance hot bituminous mix specially formulated to withstand the stresses of expansion joints on bridges and panels subject to heavy traffic.

The Firmastic mix has been specially designed over a period of more than ten years to prioritise the structural reinforcement required for expansion joints, without losing the balance with the correct level of flexibility to absorb movement from the stresses and strains inherent in these structures.

Main features

- Greater structural capacity (T00 traffic)
- Good flexibility at low temperatures
- Resistance to plastic deformation at high temperatures
- Good adherence
- Fast application and opening to traffic
- Greater durability with improved performance
- Does not cause noise disturbance when vehicles pass
- Maintenance-free

Application criteria

The Firmastic system has been developed with the need to solve the serious structural problems in joints derived from the existing systems, without losing the capacity to absorb movement in the structures already consolidated in their first years of commissioning.

Experience of more than 11,000 ml applied on joints (module, flexible and metallic) over ten years on high-capacity T00 heavy traffic roads with extreme stresses, such as motorways, dual carriageways and expressways.

The system can be adapted and formulated according to the deformations produced to offer a wide range of permissible movements.

It is necessary to know the movements of the panel joints to be restored in order to be able to
adapt the formula, adjusting the mixture with an adequate absorption capacity.

TYPE	Width (mm)		Thickness (mm)*		Heavy traffic	Noise level
	min.	max.	min.	max.		
Firmastic 12	500	800	50	80	✓	Low
Firmastic 18	500	800	80	140	✓	Low

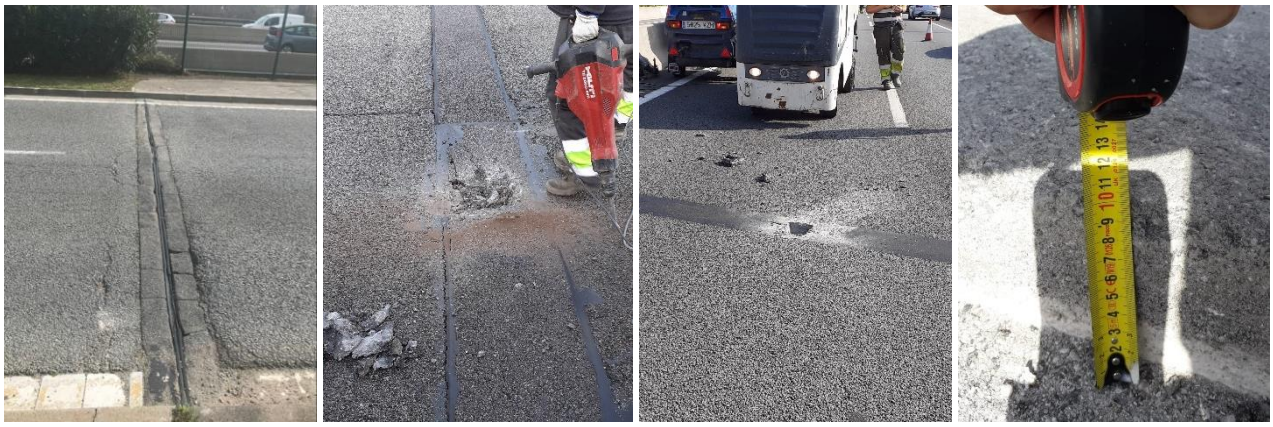
*greater thickness to be studied

Application process

The needs and conditions for the application of each expansion joint are individually analysed before the system is applied.

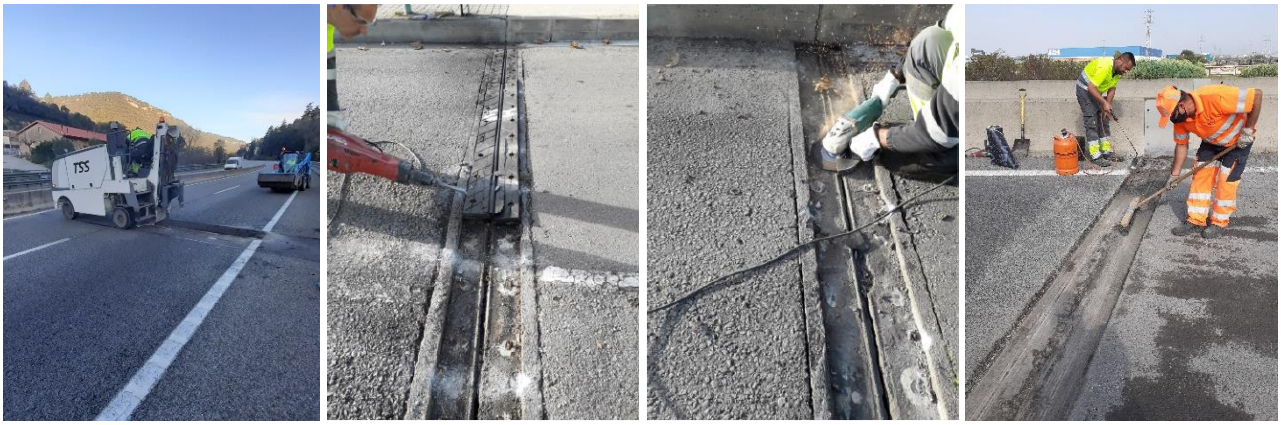
Phase 1

Visual inspection and probing down to the concrete abutment/plinth to check the depth.



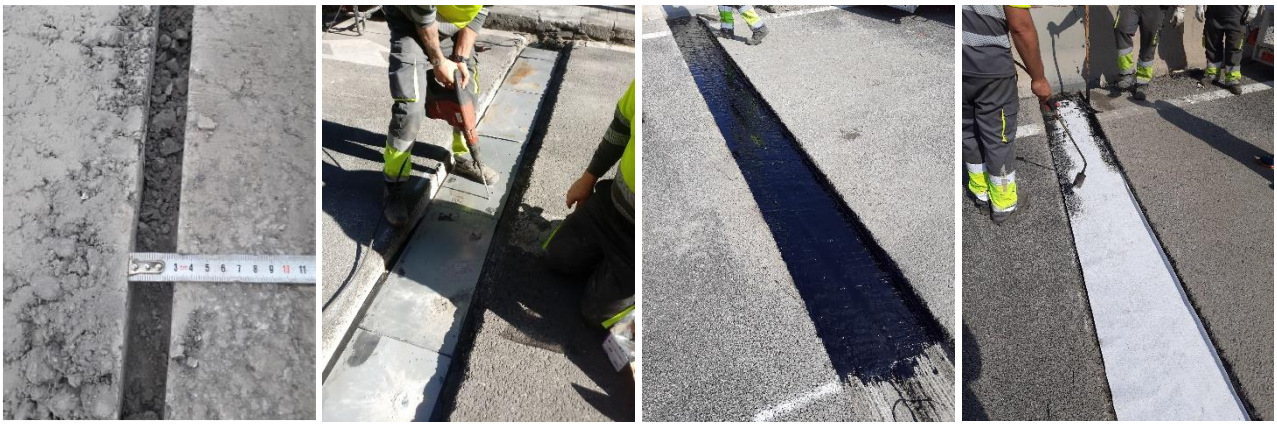
Phase 2

Milling of the existing joint with the thicknesses obtained in the tests, cleaning of the area and drying of the bottom of the joint with heat.



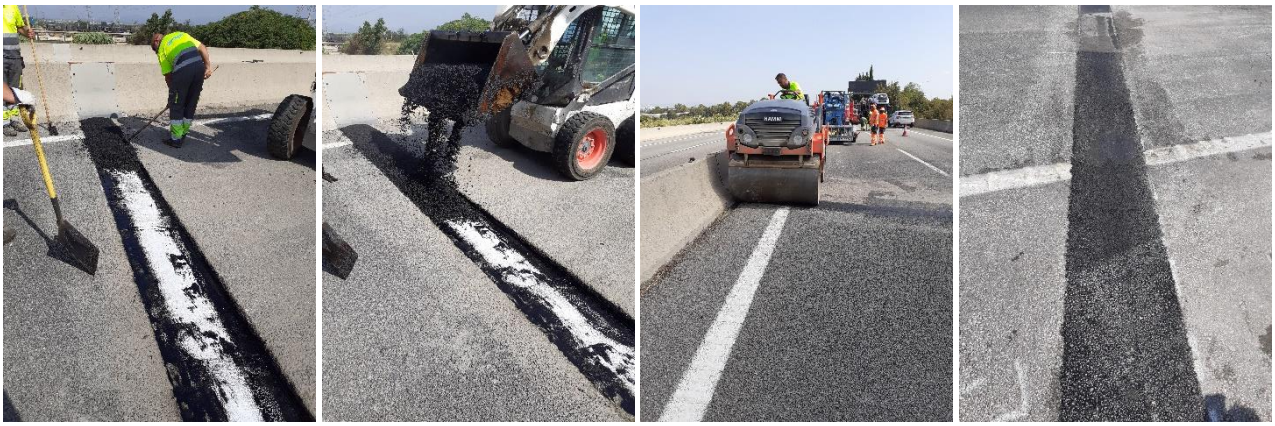
Phase 3

Placement of the optimal solution for sealing and adhesion (if the gap between the lips is >4 cm, this will be done with a galvanised layer and, if it is <4 cm, this will be done with a geogrid).



Phase 4

Adhesion spraying, supply, spreading and compaction of Firmastic high-performance MBC.



Phase 5

Next day: cutting and sealing the joint on both sides.