



Railway industry

FINDING A SOLUTION

tallano
technologies

THE CHALLENGE

Rail activity is accompanied by air pollution with fine particles, more than 70% of which come from the braking system*.

These fine dusts are harmful, especially in the confined environment of underground stations.

In most underground rail networks, fine particles are 10 times higher than the outdoor air quality standards.**

We created Tallano Technologies to help the rail industry reduce this source of pollution, which poses serious health and environmental problems, and beyond that, to help meet three major challenges.

A technological challenge:

how to significantly improve the air quality in stations?

A health challenge:

how to contribute to reducing the number of premature deaths due to air pollution?

A sustainable mobility challenge:

how to make stations cleaner and the air in them more breathable?

* Study on the Swiss Federal Railways (SBB CFF).

** Study carried out by the Anses in May 2022.



THE SOLUTION

In response, we have designed TAMIC®, a breakthrough innovation consisting of specific brake linings and an electronic control, suction and filtration system that captures fine particles at source, thus preventing their dispersion in the air, particularly in railway stations.

Our product is distinguished by its universal character

It is available for urban and suburban trains, metros and trams, both as a retrofit and as original equipment.

The World Health Organisation has adopted new air quality guidelines for 2021. The recommended 24-hour thresholds are now set at 15 µg/m³ for fine particles (PM 2.5, less than or equal to 2.5 µm in size) compared with 25 µg/m³ previously.

THE RESULTS AND REFERENCES OBTAINED

Co-developed with the SNCF teams, our TAMIC® product has been tested on test benches in all the conditions of life of a vehicle.

It is currently being tested on the C regional express railway line in commercial service. Similarly, **tests are currently being carried out with various metro operators to improve ambient air quality. We are starting industrialisation testing.**

We were awarded a prize at the Seoul Global Challenge 2021, an international competition to promote innovative technologies to address urban challenges.

We were awarded the First Prize in the technology category for our solution to capture at source the fine particles generated by the braking of vehicles on the road.