

PROJECT

Tunnelsafe2020

Road and rail tunnel fire protection

Funding: European (Horizon 2020)

Duration: Mar 2015 - Jun 2015

Status: Complete

Total project cost: €71,429

EU contribution: €50,000



Call for proposal: H2020-SMEINST-1-2014

[CORDIS RCN : 196191](#)

Objectives:

Fire in tunnels is a worldwide problem that leads to disasters with infrastructural challenges and huge economic and human losses as a result. In spite of all efforts to control and prevent human errors, and to detect technical problems, accidents will occur, and without efficient fire extinguishing capability, some of these accidents will develop into catastrophes. The amount of smoke and the extreme temperatures developed in tunnel fires prohibits fire fighters and rescue workers to reach the burning objects to save the trapped people. Damage to the structure with subsequent closure of the tunnel often leads to challenges for infrastructure and societal costs.

Fireproofing of tunnels has been discussed for years, but a method that effectively extinguishes any fire, reduces smoke to secure safe evacuation and reduce the damage on the structure, has to this date not been applied.

Fire Eater is a specialist in a fire extinguishing solution that can extinguish fire anywhere inside an enclosure. It has proven safe and efficient in applications as airports, Off-Shore, power generation and distribution, datacentres, warehouses with mixed goods and chemicals, cable tunnels and much more. Fire Eater has developed the basic engineering solution to apply our method to tunnels. Only recently it has been possible to locate a full size tunnel available to do the required testing and demonstration.

The highly innovative element in the application is the transfer of a proven technology to an entirely new area of use: rail and road tunnels. When proven successful in full scale it will not only represent an interesting business opportunity, but also enable the creation of new standards for tunnel fire safety.

The purpose of the project is a detailed feasibility study, to plan and engineer the test programme, to define acceptance criteria with the customer, and to search for consortium partners needed to supply the complete system package needed in this market.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Fire Eater As

Address:

VOLUNDSVEJ 17
3400 HILLEROD
Denmark

Organisation Website:

<http://www.fire-eater.com>

EU Contribution: €50,000

Technologies:

Infrastructure management
Fireproofing of tunnels

Development phase: Validation

STRIA Roadmaps: Infrastructure

Transport mode: Multimodal transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Safety/Security

Geo-spatial type: Infrastructure Node