



## Steamexfire was tested in Hubertustunnel The Hague

### *Innovative fire suppression system draws attention from Rijkswaterstaat (RWS) and ProRail*

**On Saturday 19<sup>th</sup> and Sunday 20<sup>th</sup> of January, a new innovative fire extinguishing system for tunnel fires, has been successfully tested, in the new Hubertustunnel in The Hague, Holland. Because of the large number of tunnels, and the increasing economic value of tunnels, the Dutch organisations ProRail and RWS, (rail and road tunnel responsible) show interest in innovations in the spectrum of fire suppression methods for large tunnel fires (200 MW plus).**

The Steamexfire is driven by a turbo-jet gasturbine engine. The principle of the machine is that it produces an inert gas. Reduction of oxygen (inertisation) in a tunnel as a method of suppressing fires has never been done before. Besides performing inertisation, the Steamexfire creates a strong cooling effect because of the production of water vapour and steam, which takes the energy out of the fire. The Steamexfire can be started after evacuation of the people in the tunnel.

The Steamexfire is a Dutch invention of Liberty Gasturbine Holland from Putten. The inventor, Michel Kooij, investigated the possibilities of applying this system in tunnels, in close cooperation with engineering experts of Movares Holland. The outcome of all the studies were positive. Based on the positive conclusions, RWS and ProRail decided to cooperate in an inertisation test in a real tunnel, which took place last Saturday and Sunday. Without the support of the Hubertustunnel consortium, BAM Civiël, Van Hattum en Blankevoort en Wayss & Freytag Ingenieurbau, and the City of The Hague, this test would not have been possible.

The test in practise was done by placing a mobile Steamexfire system on a trailer just in front of the tunnel entrance, and was connected with the tunnel plug by using some pipes. After this, the tunnel, with a length of 1500 meters, was inertised in various conditions and various performances. RWS and ProRail asked TNO to measure and data log all test results. Based on these results the preconditions of usability of the system can be determined.

## Press release

# Steamexfire getest in Hubertunnel Den Haag

Besides the Steamexfire system, Liberty Gasturbine Holland and Movares introduced a new method to seal off or close a tunnel in a matter of minutes. This is done by using an inflatable plug. This plug avoids fresh air (oxygen) flowing into the tunnel during the process of inertisation or in practise; during the process of extinguishing a fire. There is a significant interest from all over the world for this new way of extinguishing large fires in tunnels, mainly because the Steamexfire has killed some major large coal mine fires, all over the world.

Liberty Gasturbine Holland

Movares

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*Attached photo can be used free of charge and free of rights by adding the name of Annemieke Meyer van Luminous Photos, Putten Holland*