

WEST AUSSIES FIND SOLUTION FOR GLOBAL SAFETY PROBLEM

November 7, 2022

A wireless axle-fire prevention warning system for the transport industry

FOR IMMEDIATE RELEASE

In late October, a truck carrying explosive materials in trailers for the mining industry caught fire whilst in transit on Great Central Road near Cosmo Newbery, located between Laverton & Warburton in Western Australia (The West Australian newspaper, November 4, 2022). The fire produced a massive explosion and toxic cloud of smoke, visible from distant parts. For safety reasons, motorists were warned to stay clear of the hazard.

Whilst the cause of fire in this case is under investigation, it is known that many fires in the global transport industry, including in the transport of explosives for mining, are the result of an axle on a trailer overheating. Both axle bearing failure and brake problems on trailers can contribute to such fires by the generation of heat through friction. A couple of years ago, a boat trailer with a similar problem travelling along the freeway near Perth caused a grass and bush fire after stopping.

Roleystone resident and experienced truck driver David Larsen put his thinking cap on a few years ago, and with the help of two collaborators and an overseas tech company, worked at finding a solution. The result is that Mr Larsen, and his co-inventors, Professional Engineer Helmut Schroedel from Karrinyup, and Kelmscott Clinical Psychologist Mercurio Cicchini have several individual patents pending in countries worldwide, with one patent already granted in South Africa for their Axle Fire Warning System (AFWS).

The invention provides live monitoring of transport trailers' individual axle temperature and tyre pressure readings, updated every minute. An automated wireless transmission system warns the driver through an audio alarm as soon the axle temperature or the tyre pressure moves outside safe operating parameters. A cabin display indicates to the driver which wheel is causing the alarm. Critical changes in temperature or pressure are therefore detected early and the driver is able to take corrective action long before a fire danger is created.

A unique advantage of this "Plug & Play" system is that the monitoring devices are instantly transferable from one rig to another without tools. It enables trailers to be exchanged randomly, and also suits vehicles

loading or unloading in Explosive Zone 1, as no electrical power-carrying components remain on the wheels when entering that Zone.

The system was tested by Mr Larsen on many long trips from Perth to the mining areas up north and back. It was demonstrated to industry representatives in Germany, who viewed live individual axle temperatures on multiple trailers travelling in North-Western Australia in real time via the internet.

During another test run in 2018, during the early stages of development, a disastrous axle fire was averted in the Perth metropolitan area when the system warned of an overheating trailer brake. The warning enabled corrective action by the driver to avert a possible axle fire and subsequent explosion in a built-up area. (Photo attached of cabin display showing detection of overheating on trailer carrying explosive materials).

A short video of the warning system can be viewed by requesting the details from the contacts listed below.

Negotiations for the manufacture of this automated system are currently open and interested manufacturers or investors are encouraged to contact Helmut Schroedel, who is currently in Germany, by email: hschroedel@3v-design.com

Attached are:

- (1) A photo of the inventors (Mr Schroedel, via the Internet, Mr Larsen, centre with a patent certificate from South Africa, & Mr Cicchini);
- (2) A photo of the high temperature warning to the driver that averted an axle-fire and possible explosion near Perth in 2018).

Contacts:

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