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Eurotunnel defends freight safety system as blaze turns spotlight on lattice enclosures

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Eurotunnel has been forced to defend its lattice-style freight carriages after a senior fire engineer called for them to be replaced with full enclosures in the wake of the recent Channel Tunnel fire.

Fire safety consultant Mosen managing director Fathi Tarada told NCE that a stronger barrier was needed between the lorries carried by the trains and power cables in the tunnel.

He claimed fully enclosed shuttles would give trains more chance of reaching the tunnel's sprinkler systems, so reducing the risk of a major incident.

But Eurotunnel, which operates the infrastructure, insisted its lattice system had proved its worth by allowing firefighters to tackle the recent blaze from the tunnel floor.

The latest row was sparked when fresh details of January's fire emerged, showing the incident was more serious than initially thought.

An initial statement by the Rail Accident Investigation Branch (RAIB), which is helping its French counterpart with a probe into the fire, revealed the blaze raged for at least four hours. It added that power was lost to an overhead line.

Eurotunnel, which originally cited "smouldering cargo" and smoke, conceded that there had in fact been flames.

"We were first informed of smoke and smouldering," said a spokesman. "The word fire was not used by emergency services until a long way in to the incident.

"Yes there was fire, yes there was some damage but it did not take us out of service for very long."

The incident occurred at 11.25am on Saturday 17 January in the north running tunnel, between a third and half the way from the French tunnel entrance to the English exit.

Trains were running again in one direction at a time by the early hours of Sunday, although a full service did not resume until Friday 23 January. Eurotunnel said the delay was compunded by two unrelated infrastructure problems, which are being investigated.

Tarada, managing director of fire safety in tunnels consultancy Mosem, said the usefulness of the fire suppression system installed after the major fire in 2008 would be seriously impaired if trains could not reach its sprinkler stations. These are sited about 17km apart through the tunnel.

He suggested the loss of power identified in last month's fire could have been caused by flames escaping through a lattice enclosure and touching the overhead catenary. This could have forced the train to stop sooner than planned, he added.

"The lattice system is not sustainable," said Tarada. "If you do not have any physical barrier between burning heavy goods vehicles and the tunnel wall, you have a lot of potential problems, including loss of power supply.

"What is needed is a very lightweight structure in the shuttle just to keep a fire inside long enough to stop flames licking the overhead wires."

He added: "If a train is stopped a long way from a cross passage and the smoke is blowing towards the escaping passengers, there could be a disaster. I expect pressure now for measures to contain the flames.

"It could just be eight minutes of fire resistance, but the products would have to be designed and tested, and they would add fuel requirements and slow trains down. It would be expensive."

Eurotunnel said it would await the outcome of the RAIB and Bureau d'Enquetes sur les Accidents de Transport Terrestre (BEATT) investigation before drawing any conclusions.

"The RAIB has not yet looked into the facts," said a spokesman. "The power did get cut but we are not sure why, so we are not going to react to a theory before the investigation has revealed the facts.

"The fire suppression system (FSS) was put in after a lengthy investigation in 2008 and validated by the independent safety authority (ISA) of the Inter-Governmental Commission (IGC) that regulates the Channel Tunnel. Any modifications to the system need to be approved by the IGC.

"Arguments have been put forward for some time for enclosures. The safety regime is amended by the IGC and its ISA when appropriate. The current system has shown its value in this incident because firefighters could attack the fire directly. That is why it's there."

The spokesman added that Eurotunnel remained happy with its response to the blaze.

"We are still satisfied with how we handled it but have our own investigation alongside the RAIB/BEATT investigation and the routine judicial investigation by the French authorities.

"A train was on fire. In the past that's caused significant damage. This was brought under control and managed extremely well. There was full service six days later."