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Fire in road tunnels and life safety : lessons to be learnt from minor accidents

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Abstract : In the aftermath of the accidental fire disasters in several road tunnels at the turn of the century, fire safety in road tunnels was largely addressed through analysis of information drawn from major accidents ; i. e. those resulting in significant casualties. This paper demonstrates that minor fire accidents in road tunnels, that is those resulting in no casualties, are also able to provide substantial and useful information relating to fire safety in tunnels. Many of these, fairly frequent, minor incidents had the potential to become major incidents, but a mixture of luck and appropriate actions, taken both by tunnel users and professional rescuers, helped prevent tragedy. Generally, information on minor incidents is limited to short dispatches or small 'news' articles issued for the wider public. This often scarce and scattered material is also marked by a cultural imprint which reveals the courage and initiative of people involved in the incidents, but also blurs and sometimes hides some aspects of the incidents which, perhaps, should have been highlighted. Through an analysis of a few recent examples of minor accidents, from all over the world, this paper shows why such information, despite often being of limited quality, should be systematically collected, integrated into existing databases and processed in order to better understand these incidents and, ultimately, prevent minor tunnelfire incidents escalating into major disasters.

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high uncertainty and high-stakes decisions. Thus, a wider group of stakeholders and different types of knowledge should be included in the fire that is required by technical risk analyses. It is argued that the decision process should not be separated from the design and safety evaluation as they are strongly dependent and iterative processes. Decision theory can guide the design and decision process in negotiation with stakeholders. A Norwegian risk analysis estimated the expected loss of life from dangerous goods accidents to be less than 2% of the expected loss of life from normal traffic accidents (Lille and Andersen 1996). Accidents involving cuts, burns, dropped objects, falling from height, and collisions are also common but often avoidable. The main preventable measure is safety training. All employees in the oil and gas industry go through regular safety training courses to encourage a strong safety culture. For hazardous areas, employees will be issued with Personal Protective Equipment (PPE) which must be worn in signed areas. Safety boots, hard hats, overalls, gloves, and safety glasses are usually a standard issue. In addition, ear protectors and special trades' equipment such as welding shi

Relevance of road safety in today's world. A lot of human lives are lost in road related accidents nationwide every year. Road safety is hence important for every student who is planning to drive a vehicle. In 2013, it was reported that 1,37,000 people got killed. As a parent, you can easily persuade them to be a responsible road user. Road safety campaigns and its effects. Road safety campaigns are useful as it helps to influence behaviours and attitudes of people. A road safety education program is a learning program on road safety, which is organized for all citizens of the nation. Every driving school organizes theoretical and practical training for young drivers to enrich them with road safety measures. Accident, unexpected event, typically sudden in nature and associated with injury, loss, or harm. Accidents are a common feature of the human experience and result in injury or permanent disability to large numbers of people worldwide every year. Many accidents also involve damage to or loss of. With appropriate safety precautions and awareness of one's actions and environment, many accidents can be avoided or prevented. Road-traffic mishaps account for nearly half of the accidental deaths usually the child involved being a pedestrian or cyclist. Accidents in the home, by way of burns; automobile: Safety systems.

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