

Letters to the Editor

**LNG shipping**

The paper by Pitblado et al. [1] on the shipping of liquefied natural gas contains interesting background material. I should like to add the following points to it. First, to the very favourable account given of LNG shipping over nearly half a century might have been added the fact that there is no record of a death or serious injury during LNG shipment. The total distance covered by LNG-bearing vessels since shipping of the substance began is of the order of 100 million km. Secondly, the reference to LNG vessels of the membrane type might have been extended to membrane storage of LNG within a motor vehicle. Vehicular use of LNG is increasing in countries including the US and the UK. Fuel tanks having a membrane structure to reduce evaporative losses are installed in vehicles designed to run on LNG. Let it be noted that methane has a better octane rating even than expensive grades of gasoline. Finally, the mention in the paper under discussion [1] of the use of 'dense gas models' for LNG dispersion needs qualification as methane is of course much less dense than air. A dense gas approach can therefore only apply at stages where evaporation is significantly incomplete.

**Reference**

- [1] R. Pitblado, J. Baik, V. Raghunathan, LNG decision making approaches compared, *J. Hazard. Mater.* 130 (2006) 148–154.

J.C. Jones  
*University of Aberdeen, Department of Engineering,  
Aberdeen AB24 3UE, United Kingdom  
E-mail address: [j.c.jones@eng.abdn.ac.uk](mailto:j.c.jones@eng.abdn.ac.uk)*

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**Two dust explosions in the Gulf Coast states in 1977**

To the interesting catalogue of dust explosions over the decades given in the review by T. Abbasi and S.A. Abbasi [1] with this journal and available via Science Direct, I should like to add the following. In 1977 there was a dust explosion at a grain handling facility in Galveston Texas, which caused 18 deaths. Less than a week earlier there had been a dust explosion at such a facility in Louisiana which caused 36 deaths. The fact that two dust fatal explosions from the same sort of facility in the same region of the US occurred so close together in time is perhaps worth noting in a review such as that under discussion.

**Reference**

- [1] T. Abbasi, S.A. Abbasi, Dust explosions – cases, causes, consequences, and control, *J. Hazard. Mater.* 140 (2007) 7–44.

J.C. Jones  
*Department of Engineering, University of Aberdeen,  
Aberdeen AB24 3UE, United Kingdom*

*E-mail address: [j.c.jones@eng.abdn.ac.uk](mailto:j.c.jones@eng.abdn.ac.uk)*

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