

# Prevention or cure

Independent surveyors say that accident prevention needs better guidelines. Dr Tom Shelley reports from INITA, the Independent National Inspection and Testing Association

Inadequately designed and/or poorly maintained car transporters and tipping trailers are presenting increasing and potentially serious risks to drivers and operators. And they're not alone: there also remain worries with lifts and escalators.

These were among matters aired at a recent meeting of INITA, the Independent National Inspection and Testing Association, to which SOE was invited. The incidents described indicate a need for engineers to think even further beyond 'fit for purpose'. Recent concerns over lift safety, for example, put a sharp focus on the extent to which engineers should consider the potential for accidents when designing, maintaining or certifying equipment for operation.

INITA members were shocked at the revelation by HM specialist inspector of Health and Safety Anthony Thompson that Otis was fined more than £500,000 because two brawling men had managed to smash in a lift door and fallen down the shaft.

While engineers agree they should not be held responsible for events arising from what amounts to deliberate misuse of equipment, in this case the shoe on the bottom of the door was mounted on a bracket that was too easy to bend into a recess that also should not have been permitted.

## Think the unthinkable

In fact, the meeting heard that there had been 21 occurrences of lift doors coming adrift from their lower runners in the building complex in question – Shirley Towers in Southampton – each with potentially disastrous consequences.

It's a similar tale elsewhere: video clips of accidents resulting from horseplay on store escalators reveal just how wide engineers need to be thinking in terms of design, maintenance and certification to reduce the risk of accidents.

Indeed, industry guidance on the safe use of escalators is having to be revised, due primarily to moving walkways that carry shoppers with heavily laden trolleys up and down inclines. Incidents leading to injury mean that the guidelines are not now likely to be issued before 2008.

Returning to car transporter risks, Ian Chisholm, head of technical services at the SOE, said: "They have a tendency to fall over." Serious accidents arise, he revealed, partly because of the designs of modern cars, which make it difficult for transporter drivers to get into vehicles on the top deck while


remaining inside the guide rails. The result has been drivers falling off, with serious consequences.

Unfortunately, the walkways cannot be widened without exceeding the 2.5m maximum width allowed for these vehicles. The obvious solution, Chisholm suggested, is walkways designed to extend sideways when the vehicle is stationary, but retract before the vehicle is driven on the highway.

Chisholm described current transporter handrails as "poorly designed and poorly maintained, with increased harm potential". That point was echoed by INITA, whose members report finding many transporters with serious defects.

There's a similar situation with some tipping trailers, which have been found to tip over sideways when starting to discharge. Problems arise particularly on sloping ground: because they are now much longer than older tipping lorries, yet much the same width, the risk of tipping over when the trailer body is raised is effectively tripled.

Reports indicate that this hazard is also being exacerbated by factors such as gusts of wind, soft ground, flexing telescopic lifting rams and cargo unevenly placed. The SOE and the IRTE are currently finding solutions, beginning with the development of a new 'Tipper Drivers' Pack'.

Meanwhile, for engineers concerned with truck tail lift operation and safety, the SOE's 'Tail Lift – Specification Guide for Road Vehicles' is already on sale, and the 'Simple guide for Tail Lift Operators' is now at draft stage. Chisholm says the SOE is now looking at similar problem areas related to plant engineering. Those wishing to get involved should email him at: [ian.chisholm@soe.org.uk](mailto:ian.chisholm@soe.org.uk) 

## Technical pointers

- Industry guidance on the design and installation of lifts and escalators is being revised to take account of public misuse

- SOE and IRTE are due to publish a 'Tipper Drivers' Pack', while engineers concerned with truck tail lift operation and safety should see SOE's 'Tail Lift – Specification Guide for Road Vehicles' and 'Simple guide for Tail Lift Operators', due out soon.

Ian Chisholm, head of technical services, SOE

