Accident Case Studies

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Fatal Accident Statistics (L&T)

- **Num of Fatalities**
- **Fatality Rate**
- **National Fatality Rate**

Yearly breakdown:
- 2010: 1
- 2011: 11
- 2012: 3
- 2013: 3
- 2014: 6

Projected for 2014: 6

Legend:
- Blue bar: Num of Fatalities
- Red line: Fatality Rate
- Green line: National Fatality Rate

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Case Study 1 - Brief

Sep 2010: The deceased had parked his prime mover at the truck parking area. He was walking towards the security office to exchange a security pass when he was fatally knocked down by another prime mover.
Hypothesis (Was he unlucky?)

- Gate C
- Gate D
- Temporary ISO tank storage area
- Temporary container storage area
- Pedestrian Walkway
- Temporary visitor carpark
- Weight bridge / Traffic Office
- Security Office

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Case Study 1 - Findings

- Prime mover driver (D1) was driving the prime mover at 15km/h, which was within the site’s speed limit of 25km/h.

- D1 drove through Gate D instead of Gate C as the area was congested. He claimed that he and other drivers had done the same in the past.

- No management and control at the truck parking area; drivers were not penalised despite not following in-house traffic rules.

- Ineffective system of traffic management and control at the occupier’s vehicle holding area.
Case Study 2 - Brief

Jan 2011 : The deceased was found trapped between a pallet of hydrogen gas cylinders and the rear of a trailer. Attending paramedics pronounced the deceased dead on scene.
Driver’s account

- Prime Mover Driver
- Deceased
- Hydrogen Gas Cylinders
- Permanent Wheel Stoppers

Production Plant

Trailer Parking Driveway

Trailer 1

Trailer 2

Trailer 3

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Movement of pallet
Pallet drag marks
Landing jack drag marks
Case Study 2 - Findings

- Deceased was tasked to carry out gas analysis on trailer 2 at the trailer parking driveway.
- At the same time, prime mover driver (D1) was attempting to couple trailer 1, which was parked in a location without permanent wheel stoppers.
- Occupier failed to address the hazards involved when two incompatible work activities i.e. gas analysis and trailer movement, were being carried out concurrently at close proximity.
Case Study 3 - Brief

May 2012 : The deceased was tasked to hoist a damaged boomlift onto his lorry loader, to be sent back to the employer’s workshop for repairs.

He was found an hour later, trapped between his lorry loader and the cradle of the damaged boomlift.

The deceased was sent to NUH but passed away on the same day.
Incorrect rigging method
Centre of gravity (CG)

Figure 4-4. Lifting and Tie Down Chart
Case Study 3 - Findings

- Employer had carried out risk assessment on Lorry Loader operations, however, none of the recommended control measures were implemented at the time of accident. Lifting plan had not been developed and no briefing had been carried out prior to the lifting operation.

- The Deceased had more than 20 years of experience in operating a lorry loader. However, he was not a trained rigger/signalman nor a lifting supervisor. He had been tasked to carry out lifting operations alone for such a complex lift.
Case Study 3 - Findings

- The nature of the load was not assessed. Employer did not have a copy of the operation manual, which indicates the CG of the boomlift.

- All lifting chains used during the lifting operation were of equal length.
Available resources

Code of Practice on
Safe Lifting Operations in the Workplaces

Workplace Safety and Health Guidelines
Workplace Traffic Safety Management

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Further Information

✓ Workplace Safety and Health Act (Chapter 354A)
✓ Workplace Safety and Health (Risk Management) Regulations
✓ Workplace Safety and Health (General Provisions) Regulations
✓ Approved Code of Practice on Workplace Safety and Health Risk Management
✓ Workplace Safety and Health Guidelines on Workplace Traffic Safety Management
✓ Land Transport Authority (LTA) Code of Practice for Traffic Control at Work Zone
✓ UK Health and Safety Executive (HSE) – A Brief Guide to Workplace Transport Safety
✓ UK Institute of Road Transport Engineers (IRTE) – Code of Practice on Coupling or Uncoupling and Parking of Large Goods Vehicle Trailers
✓ European Agency for Safety and Health at Work (EU-OSHA) – A Review of Accidents and Injuries to Road Transport Drivers
Thank You!