



# 6 things to know about incidents



## 1. Safety is key

A worker died every 111 minutes from a work-related injury in 2020, according to the Bureau of Labor Statistics. The same report showed that fatalities rose from 81 to 94 from 2017-2018 in the oil and gas extraction industry. Exposure to harmful substances or environments resulted in 672 worker fatalities in 2020, the highest figure since the report began in 2011.<sup>1</sup>



## 2. Human error is leading

"In the early days of flight, approximately 80% of accidents were caused by the machine and 20% were caused by human error. Today that statistic has reversed. Approximately 80% of airplane accidents are due to human error (pilots, air traffic controllers, mechanics, etc.) and 20% percent are due to machine (equipment) failures."<sup>2</sup>



## 3. Incidents are costly

In a process safety performance measurement report, it was identified that out of the 246 facilities that participated, the estimated incident costs totally nearly \$44 million. The average cost per incident at this time (2007) was US\$629,710, which now equates to over US\$840,000 with inflation.<sup>3</sup>



## 4. Where to improve

Of 55 chemical accidents that occurred in South Korea between 2010-2017, 41 were classified as "human failure related" according to the HSE guideline. Some "human-related" incidents led to poisoning, fire, explosions and leaks. Eliminating Human Error is the key to having safer, more efficient operations.



## 5. Lead your team to safety

In research by HSL U.K., it was identified that the most important factors of effective leadership include a high degree of enthusiasm, clarity in how health and safety is discussed in the business, demonstrable knowledge of good practice within operations, visiting worksite, work group participation, and communicating the importance of safety.<sup>5</sup>



## 6. Don't blame workers

"Dismissing human failure as careless or blameworthy behavior is futile. Evidence of human error in accident investigation should lead to future preventive actions in the same way that evidence of mechanical failure would do. More pro-actively, the possibility and consequences of human error should form an important part of job safety analysis and risk assessment."<sup>6</sup>

[Read More](#)

<sup>1</sup> Bureau of Labor Statistics' National Census of Fatal Occupational Injuries 2021

<sup>2</sup> Aero Magazine QTR, 2:07 - The Boeing Company

<sup>3</sup> 2007 Process Safety Performance Measurement Report - American Petroleum Institute, 2008

<sup>4</sup> Classification of Human Failure in Chemical Plants: Case Study of Various Types of Chemical Accidents in South Korea from 2010 to 2017

<sup>5</sup> The Causes of Major Hazard Incidents and How to Improve Risk Control and Health and Safety Management - Bell & Healey, 2006

<sup>6</sup> Accident and Incident Root Cause Analysis - Terry ap Hywel, 2018