Drilling accidents fall 19% in ’98

ACCIDENT FREQUENCY in the global drilling industry declined in 1998, continuing a longtime downward trend. Industrywide, accident frequency fell to 1.04 lost-time incidents/200,000 man-hours, a 19% decline from the 1997 value of 1.29 LTI/200,000 manhours, according to the “1998 IADC Summary of Occupational Injuries”.

The SOI is the annual compilation of data obtained from the IADC Accident Statistics Program, through which drilling contractors worldwide volunteer accident information. During 1998, 132 drilling contractors participated in the ASP, representing a total of 223.3 million man-hours worked, 1,141 LTIs and 25 fatalities.

The data is compiled separately for land and offshore operations in 3 geographic regions—US, Europe and international, defined as everything outside the US and Europe. This year, for the first time, the SOI includes summaries of total recordable incidence and frequency rates.


SHARP DECLINES IN ’98

European offshore drillers enjoyed the largest percentage decline, a whopping 35.1% drop in accident incidents, to 0.98 in 1998 from 1.51 the previous year. The 19 reporting companies represented 25.8 million manhours. There was one drilling fatality reported in European waters.

Close behind in terms of percentage decline were US land contractors. This segment achieved an accident frequency rate of 2.35 in 1998, down an impressive 31.1% from 1997’s 3.42. Participating firms comprised 82 contractors and 39.5 million manhours. 6 fatalities occurred among US land contractors during the year.

US offshore contractors also fared well, improving their accident rate by 13.9%. US offshore accident incidence fell to 0.68 from 0.79 in 1997. 22 US offshore contractors participated in the study, representing 43.4 million manhours, 6 fatalities occurred among US offshore contractors during 1998.

Despite these impressive performances, both international sectors suffered increases in accident frequency. The international land segment fared the worst,
registering a 14.7% increase in accident incidence, from 0.88 in '97 to 0.78 in '98. Also, international offshore contractors saw their accident incidence increase 9.1%, from 0.55 in 1997 to 0.60 in 1998. Internationally, 28 land and 31 offshore contractors participated in the program during 1998, representing 58.7 million manhours and 51.6 million manhours, respectively. International land contractors suffered 9 fatalities during '98, while their offshore counterparts had 3.

It’s important to note that these contractors have steadily maintained accident rates below 1.0, an impressive achievement in itself.

Finally, accident frequency for European land contractors increased from 1.81 in 1997 to 2.21 in '98, a 22% increase. The European land sector is the smallest category and thus the most susceptible to statistical anomaly. A relatively small market, just 9 companies representing only 4.2 million manhours, contributed data to the report. European land contractors reported zero fatalities during '98.

INJURY BREAKDOWNS

The most likely scenario for rigsite injury, according to the SOI's detailed breakdown of the data, is a floorman catching his fingers between or in pipes, tongs or tubulars during tripping operations on the rig floor. Those items ranked highest among analyses of injury data by occupation, body part, accident type, equipment type, operation and location.

At 36.6%, floorman suffered the most rig-floor injuries during 1998. The second most hazardous occupation was roustabout (16.0%), followed by derrickman (13.5%), driller and assistant driller (7.7%), motorman (5.7%), mechanic (3.5%), electrician (1.4%), toolpusher (1.3%), crane operator (1.1%) and welder (1%). Other occupations reported included truck driver (0.9%), rig helper (0.4%), truck helper (0.4%), superintendent (0.3%) and barge engineer (0.2%).

Just about every part of the body was reported as having been injured, though frequency varied widely. Most commonly injured were fingers (18.8%), followed by back (13.7%), legs (12.0%), feet or ankles (11.7%), hands and wrists (9.0%), torso (7.0%), arms (6.8%), head or neck (6.7%), eyes (1.6%) and toes (1.1%).

Analyzing by accident type revealed a diverse set of dangers, led by the category “caught between/in” (26.2%), with “struck by” a close runner up at 26.0%. "Strain/overexertion" accounted for 13.0%; “slip/fall, different levels” for 12.2%; “slip/fall same level”, 6.7%; “struck against”, 3.3%; “flame, heat, steam”, 1.7%; cut, 1.2% and chemicals or fluids, 1.0%. Less frequently occurring hazards included weather (0.5%), vehicles (0.4%), jump (0.3%), debris (0.2%), gas (0.1%).

Equipment type is similarly diverse. “Other” is at 42.8% in fact the largest category. Tripping (13.1%) posed the largest single chance of injury, followed closely by rig repairs and maintenance (12.3%). Third was rigging up/down (10.5%). Other major contributors were “laying down, picking up” (8.1%), routine drilling operations (7.7%), making connection (7.0%), mat handling (manual) (5.5%), and, believe it or not, walking (5.0%). Some of the less frequently cited operations included material handling (4.6%), BOP installation and maintenance (3.5%), running casing (2.4%), mud mixing/pumping (1.7%), special operations (1.0%), cemen
ting (0.7%), and, yes, even training (0.2%).

Location of injuries is another diverse category. While the rig floor, at 35.2% of injuries, was far and away the most common site of rig-site pain, hardly any part of a rig is blameless—rig pads and rig decks (8.3%), derrick (5.7%), pipe rack (5.7%), substructure (4.9%), mud pump and mixing room (4.8%), catwalk and v-door (3.3%). Smaller categories are legion: living areas (2.6%), BOP (2.5%), pits/tanks (2.3%), stairs/ladders (2.3%), motor room/machinery (2.2%), crew boats or workboats (1.6%), trucks (1.5%), work rooms (1.3%), shale shaker (0.8%), and the SCR/electrical room (0.3%).

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