Floating Pile Driving Rig Safety Stats and Facts



FACTS

Potential dangers associated with floating pile driving rigs include:

1. There is a risk of accidents and injuries, such as entrapment, falls, or struck by falling objects.
2. Unpredictable weather conditions, rough seas, strong currents, and tidal variations can create hazardous working conditions.
3. Exposure to loud noise can lead to hearing loss, while excessive vibrations can cause musculoskeletal disorders.
4. Improper handling, storage, or disposal of hazardous materials can lead to spills, or fires.
5. Equipment malfunctions, mechanical failures, or operator errors can lead to accidents, delays, or damage to the rig or other equipment.
6. Floating pile driving rigs may involve working at heights or in confined spaces, such as within the rig’s superstructure or on elevated platforms. Falls, slips, or getting trapped in confined spaces can result in serious injuries.
7. Pile driving operations can have environmental consequences if not properly managed. The noise and vibrations generated during pile driving can affect marine life.

STATS

- Pile driving accidents that occurred in 2018 were selected from the Occupational Safety and Health Administration database with 84 cases. Among fatal accidents, unsafe site conditions had the highest frequency of 26.9%. Among nonfatal accidents, both poor attitudes towards safety, and unsafe methods had the highest frequency of 28.1%.
- Musculoskeletal injuries of Pile Drivers in the Greater Boston area. A hierarchical taxonomy for pile driving work was developed with tasks and activities defined within each of 7 main pile driving operations. Exposures were characterized for the pile driving work with the PATH (Posture, Activity, Tools, and Handling) method. Data on working posture were collected for 3 main body parts: legs, arm, and trunk. Results: A total of

8,301 observations were made on 29 Pile Drivers, on a total of 6 work sites. The lagging operation had the highest percentage of observations with non-neutral trunk (46.8%), and leg (41.0%) postures, as well as one of the lowest percentages for working on stable ground (9.0%) as observed during the lagging operation. The bracing operation had the lowest percentage for working on stable ground (0.3%). The slurry wall operation also had a low percentage of work on stable ground (6.0%).