SAFETY SPOTLIGHT

MARINER SAFETY RESEARCH INITIATIVE

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Arm and Hand Injuries

INTRODUCTION

Workers in Offshore and Shipping industries experience many different types of hazards in the work environment, which lead to an increased chance of injury. Some of the contributing factors to injuries include; lack of situational awareness, poor equipment design, organizational factors, and misuse/absence of PPE. In order to prevent injuries it is important to understand how and why they happened in the first place. The Mariner Safety Research Initiative (MSRI) injury database categorizes injuries based on; body part injured, task being performed, type of injury, area of the vessel during injury, and the type of vessel. It is important to understand the circumstances under which the hazards are present to be able to prevent an unwanted outcome, such as an injury.

Approximately 50% of all injuries within the MSRI database affected the arm, hand, and fingers or leg, foot and ankle. Hand, arm, and finger injuries account for just over a quarter (28%) of all of these injuries within the MSRI database.

ARM INJURIES

Arm injuries are broken down within MSRI into three smaller categories: arm, hand and finger. Each of these injuries show specific and similar patterns on the location and circumstances during which they occur.

Arm injuries – any injury that occurs between the shoulder and the hand. Within MSRI the hand and fingers are also included in some of the analyses.

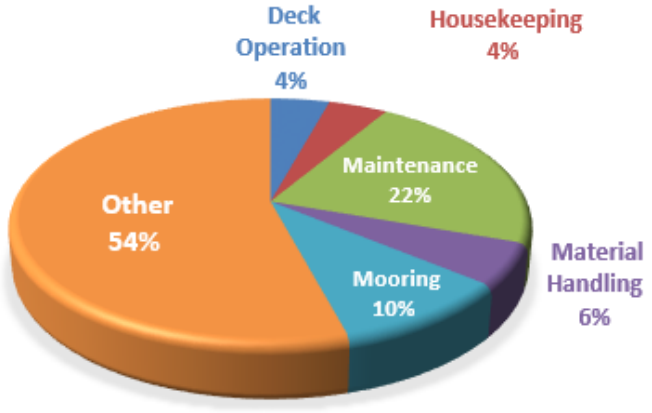

Figure 1. Arm Injuries Based on the Task Performed

MSRI injury data revealed that outside of the "Other" category which represents approximately 50% of the data, arm injuries most often occur during maintenance (22%), and mooring (10%) tasks (Figure 1). Figure 2 represents the areas on the vessel where the most arm injuries occurred, the deck area (37%), and the engine room (28%) as areas with the most injuries.

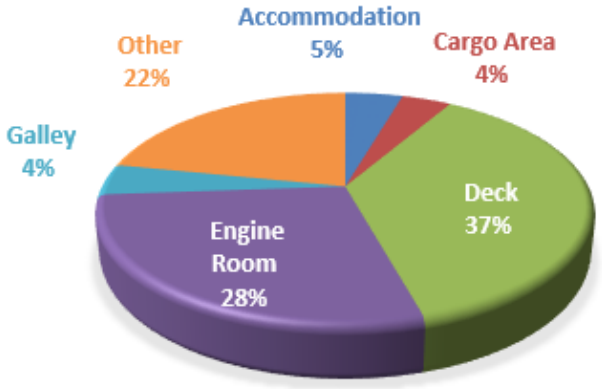

Figure 2. Arm Injuries Based on Location on the Vessel

HAND AND FINGER INJURIES

The hand and finger consist of 27 bones, ligaments, muscles, nerves, tendons, blood vessels, skin and nails. The analyses of MSRI hand and finger injuries yielded very similar results and therefore will be presented as "Hand and Finger Injuries".

Figure 3 presents a breakdown of the task being performed during hand and finger injuries. Almost 50% of the injuries fall under the "Other" category which includes the following tasks; cargo operations, crane operations, gangway/pilot operations, towing, anchor handling and safety drills. The next most hazardous task is Maintenance tasks (20%), followed by Material Handling (9%), and Mooring (8%).

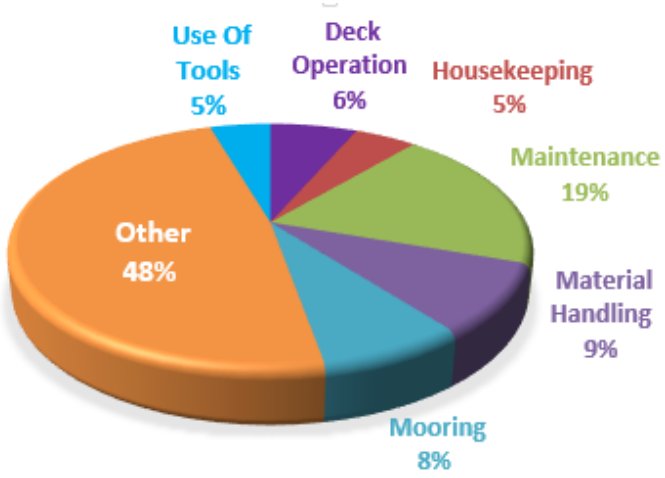

Figure 3. Hand and Finger Injuries based on the Task Performed.

There was a discrepancy in the area on the vessel where the hand/finger injury occurred. Figure 4 demonstrates hand injuries based on location on the vessel. It is clear that the deck (40%) and engine room (25%) are the most hazardous locations on the vessel for hand injuries.

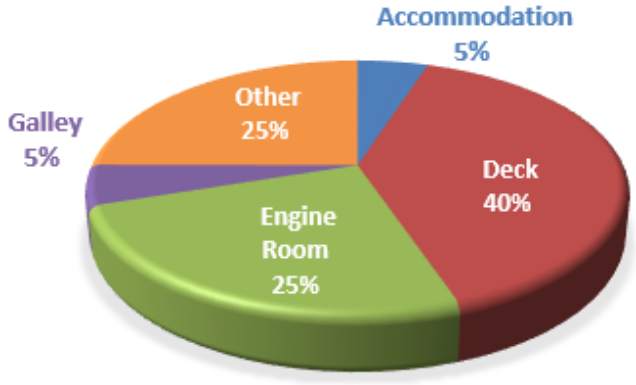

Figure 4. Hand Injuries based on the Location on the Vessel

Finger injuries showed an even split between injuries occurring on the deck (32%) and engine room (33%) as shown in Figure 5.

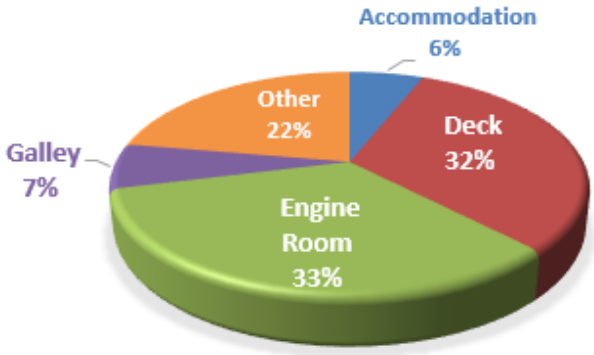

Figure 5. Finger Injuries based on Location on the Vessel