



### INTRODUCTION

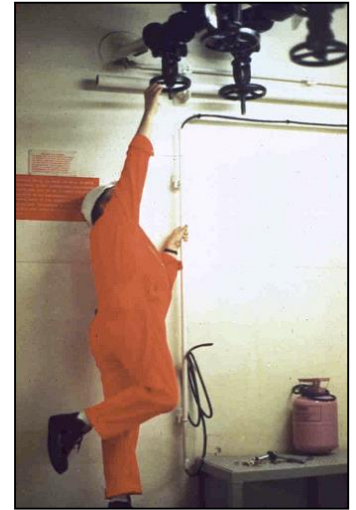
Falls are the leading cause of injury and death on commercial ships and offshore installations, and are common in other workplaces, including offices. Recorded fall accidents range from slips and trips while walking on even surfaces to falls from ladders and on stairs.

The most frequent types of falls are associated with stairs. In 1988, a major study was completed of approximately 602 significant accidents (i.e., those resulting in major physical injuries such as broken limbs, severe lacerations, concussions, burns or any injury requiring hospitalization). Falls down stairs were the most frequent and most costly accidents in terms of mariner lost time days and total accident costs (Templer, 1992; Templer 1985). Accident data obtained from vessels and offshore installations reveals that a cause for slips, trips and falls is a lack of adequate design for means of access.

Design or construction practices which were utilized in the past often presented situations where-in persons had to stand on pipes, cable trays, and/or wire-ways to gain eye or hand access, in-creasing the possibility of a fall.

Implementing suitable design of access aids will result in fewer near misses and injuries. A number of access aids and their safety concerns will be discussed in detail in the following sections. These include:

- Inclined stairs
- Vertical ladders
- Handrails
- Walkways and passageways



### TERMS/DEFINITIONS

**Access/Access Aids:** Any item used to safely and efficiently assist movement of personnel, materials or supplies, for operation or maintenance purposes in normal and emergency conditions, or provide working surfaces (e.g., doors, stairs, vertical ladders, ramps, walkways, passageways, hatches, manholes, lightening holes, handrails, railings, and work platforms, and landings).

**Accessibility:** The ability for personnel to easily access equipment that requires maintenance, inspection, removal, or replacement while wearing the appropriate clothing, including personal protective equipment, and using all necessary tools and test equipment.

**Anthropometry:** Data relating to physical body dimensions. It includes body characteristics, such as size and breadth; the distances between anatomical landmarks, such as elbow to finger-tip; and height measured from the bottom of the feet to the top of the head.

**International Maritime Organization (IMO):** The arm of the United Nations (UN) that establishes policies, crew training requirements/skill levels, and ship design standards for maritime vessels to protect seafarers and the environment.