



COURTESY OF ALERT! - The International Maritime Human Element Bulletin.

Mitigating slip, trip and fall hazards Hazards

Falls

- Corroded ladders
- Deck Openings and Edges
- Improperly secured gangways
- Inadequate guardrails in confined spaces, tanks & voids
- Inadequate scaffolding
- Inattention
- Lack of guardrails, chain or man ropes at hatch openings
- Loss of balance
- Poor illumination
- Poor ladder or handrail design
- Removed engine room plates
- Shaky ladder or a ladder with slippery or broken rungs
- Slippery surfaces
- Striking by moving equipment
- Uneven surfaces
- Unguarded openings
- Unguarded ladders or platforms
- Unstable work surfaces
- Vertical unprotected ladders
- Working over the side or aloft

Slips

- Inappropriate footwear
- Inattention
- Loose/unanchored/unattached rugs & mats
- Oil & grease
- Polished deck surfaces
- Wet or slippery decks
- Worn non skid areas

Trips

- Loose fittings on stairs
- Carrying of stores/equipment obscuring view
- Changes of deck level
- Cleats, bitts, pad eyes and other fittings at deck level
- Door sills
- Frayed rugs/carpets
- Inadequate handholds
- Inadequate slip resistance
- Inappropriate footwear
- Inattention
- Insufficient illumination,
- Loose or no handrails or stair rails
- Miscellaneous rubbish around decks, eg plastic bags
- Sloping decks
- Smoke/steam obscuring view
- Trailing wires and cables and hoses
- Uneven surface or steps
- Unmarked deck fittings

Build

- Employ the operational experience of seafarers
- Seek advice from Human Factors specialist
- Ensure unguarded openings are properly guarded
- Ensure gangways are properly secured
- Ensure all handrails are secure
- Ensure ladders (portable or fixed) are properly secured
- Ensure scaffolding is properly secured and guardrails fitted
- Post safety & warning notices
- Mark all tripping hazards
- Conduct regular safety inspections
- Wear correct personal protective equipment (PPE)

In service

- Clean up spills
- Comply with Codes of safe working practices
- Conduct regular safety briefings
- Conduct regular safety inspections
- Conduct regular safety training
- Conduct table top exercises of lessons learned
- Do not leave equipment, stores lying around the decks
- Ensure proper stowage of stores & equipment
- Erect safety rails
- Follow safety procedures
- Follow the principle of 'one hand for the ship and one for yourself'
- Mark unavoidable tripping hazards
- Post safety notices
- Provide extra lighting when needed
- Rig upper deck safety lines in rough weather
- Use personal fall arrester systems
- Wear correct personal protective equipment (PPE)
- Wear lifejackets when working in the vicinity of ship's side
- Wear safety harness when aloft

Maintain

- Retrofit fall arrest systems, climber safety rails etc
- Review adequacy of lighting
- Renew anti slip deck surfaces
- Repair deck and other edge protection
- Renew friction treads for ladders
- Replace corroded/broken ladders & handrails
- Retrofit bolt down guards for unguarded openings
- Ensure unguarded openings are properly guarded
- Ensure gangways are properly secured
- Ensure all handrails are secure
- Ensure ladders (portable or fixed) are properly secured
- Ensure scaffolding is properly secured and guardrails fitted
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Bad practices



Open manhole not protected by guardrails, barriers or safety nets



Rubbish and equipment left around are trip hazards and can cause serious injury

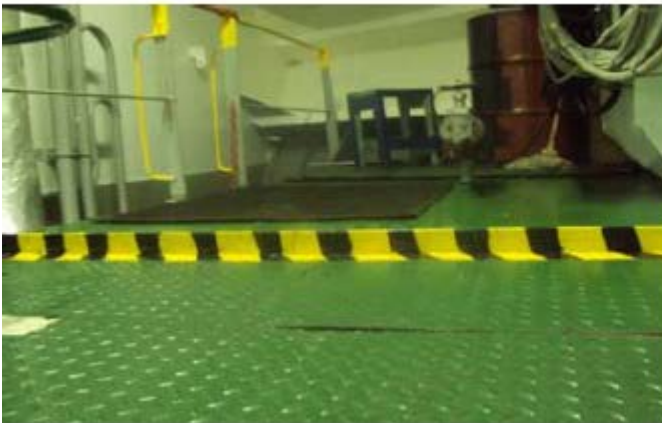


Steps not clearly marked by painting top and bottom treads in bright colors



Unmarked obstructions in direct line where somebody needs to walk

Good practices





Preventing slips, trips and falls



Just walking around the ship with a sharp eye and an open mind can help to identify features which might, in an unguarded moment, hurt people.

Try to firstly identify the hazards and secondly devise the appropriate controls

Note: A simple trip can become life changing and even life threatening