WORLD DAY FOR SAFETY AND HEALTH AT WORK

· APRIL 28, 2026 ·

A look at

THE DAILY OCCUPATIONAL RISKS FOR DOCKWORKERS ABOARD VESSELS

EDC

All together as one

EVERY DAY, DOCKWORKERS FACE REAL RISKS FOR THEIR HEALTH AND SAFETY, SOME ARE PREDICTABLE AND PREVENTABLE RISKS, WHILE OTHERS REMAIN UNPREDICTABLE.

The work of loading and unloading cargo aboard vessels is essential to global commerce. Thousands of European Dockworkers and millions globally perform these operations daily.

However, this essential work exposes workers to significant occupational risks. These risks are not theoretical; they occur with predictable regularity during standard cargo operations.

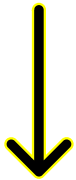
The difference between a safe workday and a tragedy often lies in whether risks awareness, proper procedures, and preventive controls are in place.

Key message

“Risk awareness is the first step toward prevention. Informed workers make safer decisions."

MOST FREQUENT RISKS FOR DOCKWORKERS ABOARD VESSELS

FALLS



EXTREME HEIGHTS

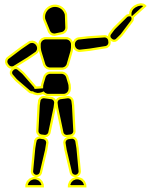
LETHAL ATMOSPHERES

TIME/COMMERCIAL PRESSURE

CARGO/VESSEL IN MOTION

EXTREME HEATS

CHEMICAL HAZARDS



MANUAL HANDLING

INVISIBLE RISKS

WINTER COLD CONDITIONS

FALLS: WHY VESSEL DECKS PRESENT UNIQUE FALL RISKS

Vessel decks are fundamentally different from standard work platforms. Multiple levels exist at heights of 30-130 feet. Workers move constantly between levels using stairs, ladders, and ramps. The vessel environment creates specific risk factors that accumulate: the environmental factors—wet surfaces, inadequate railings, and poor illumination—create high-risk conditions.

Water & Moisture

Wet decks, ice in cold climates, and mold/algae growth create invisible slip hazards.

Inadequate railings

Older vessels have low railings, obstructed by equipment, or damaged and poorly repaired.

Hatchways

Openings in the deck of a vessel that provide access to lower levels, can pose significant risks of falls for workers.

Poor illumination

Inadequate deck lighting and shadows cast by cargo create areas of near-total darkness.

Cargo obstruction

Unpredictable obstacles and weakened boxes create depressions where workers can trip.

FALLS: PREVENTIVE MEASURES

EFFECTIVE FALL PREVENTION REQUIRES RISK ELIMINATION (GUARDRAILS, VISIBLE SIGNALING), RISK REDUCTION (ELIMINATING SLIP SURFACES), AND PPE (HARNESSES).

Water & Moisture	PPE anti-slip footwear, Request water, oil, ice and algae to be removed, Warn others and move with precaution, Avoid unsafe areas and ensure temporary protection if needed.
Hatchways	Mark and ensure open hatchways, Ensure covers are closed after use.
Poor illumination	Request additional lighting from the crew where needed, Use a personal flashlight if necessary, Do not work in insufficient visibility.
Cargo obstruction	Keep walkways clear and organized, Store cargo and gears properly, Report unsafe or obstructed work areas.
Inadequate railings	Report to the crew and externally (Port Operations Manager, Terminal supervisor, etc.), Do not work in unsafe conditions.

FALLS FROM HEIGHTS

Falls from height are the leading cause of fatal and permanent disabling injuries in Dockworker populations. Dockworkers work at multiple deck levels aboard vessels, frequently at heights of 30-130 feet above water.

Leading cause

Falls are the leading cause of fatal injuries in port work.

Anatomical sites

Trunk, spine, and hands are the most affected anatomical sites.

Serious incidents

Falls account for a disproportionately high percentage of serious incidents.

Cargo holds are large openings (65 x 50 feet or larger) through which cargo descends 60-100 feet below. Dockworkers position cargo, inspect descending loads, and coordinate with crane operators. The risk of falling into the hold is present throughout these operations.

Exposed edges

Hold edges are true drop-offs. Losing balance often leads to fatal falls into the compartment.

Limited visibility

Hold edges become obscured by equipment placement, accumulated cargo, or darkness.

Uncoordinated work

Deck workers may not know where colleagues are working within the hold compartment.

Temporary barriers

Temporary railings or warning tape are frequently removed or become ineffective during active operations.

FALLS FROM HEIGHTS: PREVENTIVE MEASURES

EFFECTIVE FALL PREVENTION REQUIRES RISK ELIMINATION (GUARDRAILS, VISIBLE SIGNALING), RISK REDUCTION (ELIMINATING SLIP SURFACES), AND PPE (HARNESSES).

Exposed edges

Limited visibility

Uncoordinated work

Temporary barriers

Maintain a safe distance from unprotected edges.
Use appropriate personal protective equipment PPE.
Install physical fall protection (e.g., guardrails or barriers).

CARGO COMPARTMENTS: CONFINED SPACES WITH POTENTIALLY LETHAL ATMOSPHERES

Cargo compartments (130 x 65 x 65 feet) are fundamentally confined spaces with serious atmospheric hazards. They have restricted entry/exit, limited ventilation, and atmospheres that may contain or develop hazards.

Oxygen deficiency

Metals inside compartments oxidize, consuming oxygen. A worker can lose consciousness within seconds.

Toxic gases

Residues from prior cargo (grain decomposition, chemicals, fumigants) can release toxic gases.

Heavy gas accumulation

Gases like carbon dioxide are heavier than air and accumulate in compartment bottoms.

Invisible hazards

Workers cannot see oxygen deficiency or smell carbon dioxide at dangerous levels.

CARGO COMPARTMENTS WITH POTENTIALLY LETHAL ATMOSPHERES: PREVENTIVE MEASURES

INTERNATIONAL STANDARDS REQUIRE ATMOSPHERIC TESTING (OXYGEN, H2S, CO) BEFORE WORKER ENTRY.

- **Oxygen deficiency**
- **Toxic gases**
- **Heavy gas accumulation**
- **Invisible hazards**

Use personal gas detectors (dosimeters).
Perform atmospheric testing before entry into enclosed spaces.
Ensure proper ventilation of confined spaces prior to and during work.
Continuously monitor for visible hazards and changes in atmosphere.
Follow enclosed space entry procedures.

BALLAST TANKS: CONFINED SPACES WHERE WORKERS DIE FROM INVISIBLE RISKS

Ballast tanks are compartments filled with seawater to maintain vessel stability. They share confined space characteristics with cargo compartments. They require entry for cleaning, maintenance, or inspection, but present potentially hazardous atmospheres.

Invisible hazards

Workers cannot see oxygen deficiency or smell carbon dioxide at dangerous levels. Consciousness is lost before danger is recognized.

Uncoordinated rescue

Colleagues attempting rescue without proper equipment often collapse and die alongside the first victim.

BALLAST TANKS WHERE WORKERS DIE FROM INVISIBLE RISKS: PREVENTIVE MEASURES

INTERNATIONAL STANDARDS REQUIRE ATMOSPHERIC TESTING (OXYGEN, H2S, CO) BEFORE WORKER ENTRY.

Invisible hazards

Uncoordinated rescue

Use personal gas detectors and atmospheric monitoring devices.
Conduct atmospheric testing before entry.
Ensure proper ventilation of the tank prior to and during work.
Follow enclosed space entry procedures.
Maintain continuous communication with standby personnel.

UNPREDICTABLE VESSEL AND CARGO MOTION

A moored vessel continues to move. Waves, tides, wind, and other vessels cause the vessel to heel, rise and fall, or move laterally. This movement is often unpredictable, and a dockworker cannot always predict when the next sudden movement will occur.

Fall from sudden movement

Sudden lateral movement causes workers to lose balance and fall from decks or stairs.

Cargo displacement

Cargo believed to be secured shifts when the vessel moves. Stacked containers slide across decks.

Equipment movement

Stairs, platforms, and portable equipment can shift, causing workers to lose balance.

Loads are continuously lifted by vessel or shore-based cranes. These operations are coordinated but remain inherently risky. The potential for load failure exists throughout.

Cable & sling failures

Corrosion and fatigue weaken cables.

Improperly secured cargo

Cargo can shift during lifting, causing load imbalance, tilting, or release from equipment.

Slide during vessel motion

A wave causes the vessel to heel. Cargo stacked on deck slides across the wet surface and strikes workers.

Lateral crushing

During container discharge, internal cargo shifts. The container tilts, crushing workers near the landing zone.

Pile collapse

An existing cargo pile, stable an hour earlier, suddenly collapses onto a worker placing new cargo.

Positioning errors

Time pressure or communication breakdowns result in workers remaining in drop zones.

Drop zone risks

A falling load strikes the worker. These incidents are often fatal or result in permanent disability.

UNPREDICTABLE VESSEL AND CARGO MOTION: PREVENTIVE MEASURES

EFFECTIVE PREVENTION OF THE UNPREDCITABLE RISKS REQUIRES ANTICIPATION

- Fall from sudden movement
- Cable & sling failures
- Slide during vessel motion
- Positioning errors
- Pile collapse
- Cargo displacement
- Improperly secured cargo
- Lateral crushing
- Drop zone risks
- Equipment Movement

Use appropriate PPE (e.g., safety harness when required).
Follow established operational procedures during cargo handling.
Ensure cargo is properly secured and monitored for movement.
Keep a safe distance from moving or unsecured cargo.
Avoid confined or pinch-point areas where crushing may occur.

CHEMICAL HAZARDS: PRIOR CARGO RESIDUES, FUMIGANT GASES, UNDECLARED HAZARDOUS CONTENTS

A vessel that transported chemicals on a previous voyage may have significant residues from the prior cargo. These residues may be solids, liquid residues in pipes, or vapors from evaporating residual liquids.

Compartment entry

Workers entering compartments to clean or prepare them can be exposed to residual chemicals, causing poisoning or burns.

Dermal contact

Workers touching contaminated surfaces can absorb hazardous substances through the skin.

Inhalation

Workers breathing air containing chemical vapors or dust can inhale hazardous substances.

Many cargo types (grains, dried fruits, lumber) are fumigated with poisonous gases like phosphine and methyl bromide. Opening cargo compartments exposes workers to lethal concentrations of these intentionally toxic gases.

Cargo still under fumigation

When a vessel arrives, cargo may still be under active fumigation. Fumigation pipes may still be active or gas still releasing.

Residual fumigation gas

Even after treatment, residues can remain in the compartment, on deck surfaces, or saturated into the cargo itself.

Commercial pressure to maintain cargo flow often leads to workers being exposed before cargo is inspected and hazards are identified.

Accurate documentation

Inspection procedures

Worker training

Emergency protocols

CHEMICAL HAZARDS: PRIOR CARGO RESIDUES, FUMIGANT GASES, UNDECLARED HAZARDOUS CONTENTS

VESSELS MUST DISPLAY WARNING MARKS AND PROVIDE DOCUMENTATION OF GASES USED AND HAZARDOUS CARGO. PROCEDURES FOR SAFE VENTILATION ARE MANDATORY.

Compartment entry

Dermal contact

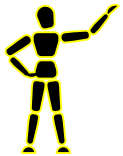
Inhalation

Cargo still under fumigation

Residual fumigation gas

Wear appropriate (PPE), including respiratory protection when required.
Consult and follow Safety Data Sheets (SDS) for all hazardous substances.
Use gas detectors and personal dosimeters to monitor atmospheric conditions.
Conduct atmospheric testing and ensure adequate ventilation before entry.
Report any suspicious odors, residues, or unsafe conditions immediately.

MANUAL HANDLING: ACCUMULATED DAMAGE FROM REPETITIVE HEAVY LIFTING



Although mechanization has reduced manual lifting, dockworkers still perform manual material handling. Each lift adds stress to the spine. Repetitive heavy lifting results in long-term back, neck, and shoulder injuries, which are extremely prevalent in dockworker populations.

Forced postures

The vessel environment requires unnatural postures—reaching, twisting, or lifting above shoulder level.

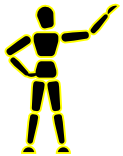
Unstable surfaces

The vessel deck moves constantly. Maintaining balance while lifting heavy cargo increases injury risk.

Repetitive heavy lifting

Dockworkers perform hundreds of lifts during a shift. Cumulative damage occurs over years of exposure.

MANUAL HANDLING DAMAGE: PREVENTIVE MEASURES



WORKERS SHOULD IMPLEMENT PROPER LIFTING TECHNIQUES AND ERGONOMIC PRACTICES TO PREVENT INJURIES FROM MANUAL HANDLING.

Forced postures

Unstable surfaces

Repetitive heavy lifting

Follow established operational procedures and work instructions.
Use appropriate equipment and mechanical aids where possible.
Apply correct lifting and handling techniques.
Avoid excessive or repetitive strain; rotate tasks if feasible.
Perform stretching and warm-up exercises before work.
Ensure proper training in safe lifting and handling practices.

CLIMATE CHANGE: WORKING IN EXTREME HEAT CREATES MEDICAL EMERGENCIES

Climate change exposes Dockworkers to extreme temperatures. Vessel decks can reach 120-140°F (50-60°C) under direct sunlight. Poorly ventilated cargo compartments can be even hotter, creating a high risk for medical emergencies.

Heat stroke

A medical emergency where the body cannot regulate temperature. It can be fatal without immediate intervention.

Dehydration

Workers lose fluids through sweat, affecting coordination, decision-making, and physical endurance.

Performance reduction

Extreme heat reduces cognitive and physical performance, significantly increasing accident risk.

EXTREME HEAT: PREVENTIVE MEASURES

WORKERS SHOULD PRIORIZE THEIR PHYSICAL NEEDS AND LIMITS TO HEAT STRESS.

Heat stroke

Dehydration

Performance reduction

Schedule regular breaks in shaded or cooled areas.
Ensure access to adequate hydration at all times.
Adjust work schedules and operational procedures to reduce heat exposure.
Monitor workers for signs of heat stress or heat-related illness.
Avoid work during peak heat hours where possible.

WINTER COLD CONDITIONS: FREEZING AND HYPOTHERMIA RISKS

Northern European ports experience winters with temperatures well below freezing. Dockworkers working in these conditions face extreme cold risks that can lead to severe injury or death.

Frostbite

Exposed tissue (fingers, ears, nose) can freeze within minutes of exposure to sub-zero temperatures.

Hypothermia

Core body temperature drops dangerously, causing loss of coordination, clear thinking, and consciousness.

Slipping surfaces

In freezing conditions, vessel surfaces become ice. Stairs freeze and decks become ice rinks, increasing fall risk.

WINTER COLD CONDITIONS: PREVENTIVE MEASURES

WORKERS SHOULD PRIORIZE THEIR PHYSICAL NEEDS AND LIMITS TO COLD WEATHER CONDITIONS.

Frostbite

Hypothermia

Slipping surfaces

Wear appropriate PPE to protect against cold and antislip footwear.
Limit exposure time and schedule regular breaks in warm, sheltered areas.
Provide training on cold-weather risks and emergency response.
Ensure availability of warm shelters.

TIME / COMMERCIAL PRESSURE: COMPROMISED SAFETY

Vessels are under intense time pressure to complete operations rapidly. High port costs create commercial incentives to accelerate work. This time pressure transfers directly to Dockworkers, often leading to compromised safety standards.

Skipped safety procedures

Workers feel pressured to skip safety checks, inspections, or communication procedures to accelerate work.

Acceptance of unsafe conditions

Workers may accept unsecured cargo or defective equipment because refusing would delay operations.

Reduced teamwork

Communication and coordination between dockworkers suffer under time pressure, increasing misunderstanding and accident risk.

Dockworkers work long shifts, frequently in adverse weather conditions, under time pressure to complete vessel operations rapidly. Operations are often scheduled outside normal business hours (nights, weekends, holidays) to minimize vessel waiting times and reduce costs.

Reduced coordination

A fatigued worker has slower reaction time, decreased coordination, and compromised risk judgment.

Communication failures

Fatigue affects the ability to hear instructions clearly and communicate positioning, causing coordination failures.

Increased accident risk

Fatigue is a significant factor in accidents, particularly when workers depend on heavy manual labor.

TIME / COMMERCIAL PRESSURE: COMPROMISED SAFETY

WORKERS SHOULD PRIORITIZE SAFETY PROCEDURES, RESIST PRESSURE THAT AFFECTS FOCUS, MANAGE FATIGUE, AND STOP WORK IF CONDITIONS BECOME UNSAFE.

- **Skipped safety procedures**
- **Reduced coordination**
- **Acceptance of unsafe conditions**
- **Communication failures**
- **Reduced teamwork**
- **Increased accident risk**

Always follow safety procedures and work instructions.
Do not take shortcuts that may compromise safety.
Resist pressure that may negatively affect coordination and concentration.
Manage fatigue and ensure adequate rest periods.
Stop work if conditions become unsafe due to time or commercial pressure.
Promote a safety-first culture over productivity demands.

STANDARDS EXIST: SOLAS, MARITIME LABOUR CONVENTION, ILO GUIDANCE.

BUT DON'T ALWAYS PROTECT DOCKWORKERS.

International maritime safety standards establish clear requirements meant to protect Dockworkers. These regulations cover vessel construction, equipment, worker rights, and specific risk control procedures.

SOLAS (IMO)

Establishes minimum standards for vessel construction, equipment, and operation, including fall protection.

MLC 2006 (ILO)

Establishes rights of maritime workers to safe workplaces, risk assessments, and training.

ILO Code of Practice

Detailed guidance on identifying and controlling risks in port operations and cargo handling.

EU OSH Directives

Framework Directive 89/391/EEC establishes employer obligations to assess risks and provide safety.

Although international standards establish clear safety requirements, significant gaps exist between regulatory requirements and actual practice. These implementation gaps are often the result of commercial pressures, inconsistent inspections, and generic safety procedures.

Inconsistent Compliance

Vessels registered under convenience flags may have inconsistent safety inspections and compliance verification.

Limited Port Inspections

Port inspections are frequently limited in scope and depth, often lasting only 2-4 hours.

Generic Risk Procedures

Procedures are frequently generic and not tailored to specific vessels, ports, or operations.

Insufficient Training

Workers may lack specific training about particular vessel risks they will encounter.

DOCKWORKERS SAFETY AND SECURITY DEPEND ON KNOWLEDGE, COMMUNICATION, AND ADVOCACY

For Workers

Know the risks | **Report conditions** | **Safety training** | **Use all PPE**

Learn these risks. Speak up when you see unsafe conditions. Know your rights. Use the protections equipment available.

For Employers

Risk Assessments | **Maintain PPE** | **Regular Training** | **Communication**

Invest in safety as seriously as you invest in efficiency. Your workers' lives depend on your commitment.

For Authorities

Robust Inspections | **Investigate Incidents** | **Worker Participation** | **Train Inspectors** | **Data Transparency**

Inspect rigorously. Enforce standards consistently. Listen to workers' concerns. Hold vessels and port operators accountable.

For Industry

Recognize that **safety and efficiency are not in conflict—they work together**. Safer operations are more efficient operations.

Fulfilling **the right to work in a safe environment requires a teamwork between workers, operators, employers and authorities**.

THE GOAL IS CLEAR

NO EXCEPTIONS! ALL DOCKWORKERS GO HOME TO THEIR FAMILY SAFELY EVERY DAY: A COMMITMENT TO SAFETY.

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