International Longshore & Warehouse Union Canada

B.C. Maritime Employers Association

Safety Regulations

Governing Vessels at British Columbia Ports
As approved by Joint Industry Labour Relations Committee on March 21, 1997

These Safety Regulations shall apply in addition to all requirements of The Canada Shipping Act and the applicable Tackle Regulations.

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Rule 1

SECTION 1 DUTIES AND RESPONSIBILITIES

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THINK AND PRACTICE SAFETY

These Safety Regulations have been prepared to govern Waterfront Operations at British Columbia Ports. All those engaged in Stevedoring and/or Dock work shall thoroughly familiarize themselves with ALL the Rules and Regulations contained herein.

Co-operation is recognized by the BCMEA and the ILWU - Canadian Area as a key element in all accident prevention activity and the parties are committed to work together to ensure that hazards are identified and controlled, to promote safe working conditions, safe work practices and positive attitudes toward health and safety on the job.

SAFETY REGULATIONS

RULE 1. These regulations are to provide requirements for safety of life, limb and health. In case of practical difficulty or unnecessary hardship an employer or vessel may make exceptions from the literal requirements of this Code and permit the use of other devices or methods but ONLY when it is clearly evident that equivalent protection, as mutually agreed by the Parties, is provided.

In circumstances where these regulations are deficient with respect to government Acts, Regulations, Codes or Standards, such will prevail to the extent of the deficiences.

SECTION 1 DUTIES AND RESPONSIBILITIES

Vessel

RULE 101. The Vessel, its Owner, Master and officer in charge shall be severally and jointly responsible for the safe condition of the vessel's gear and equipment, and for the competency of any Ship's Officer or member of the crew who may engage in operations covered by this Code. They shall provide, so far as the same shall be under their control, a safe working place on board the vessel from all operations carried on upon it. The crew shall ensure that the ship be securely moored at all times.

Inspection of vessel's cargo gear shall be made by its crew before gear is used for stevedoring operations to ensure it is operational and safe. All original safety equipment, windshield wipers, heaters and seating in crane cabs must be in working order. The crew shall give all assistance possible to properly maintain vessel's cargo gear while in use. It is recommended that an entry be made in the Ship's Gear Register of any findings relative to safety made by a Port Warden.

The vessel shall ensure that all work by ship's crews and others shall be conducted in a safe manner not to interfere with cargo operations and be in compliance with the "Code of Safe Practices to Ship's Crews and Others Working in the Vicinity of Cargo Operations".

Stevedoring Companies

RULE 102. The Stevedoring Companies shall be responsible for the proper and safe condition of all stevedoring gear supplied by them, and for the competency of Foremen and other persons employed by them in charge of operations. Stevedoring gear shall be carefully inspected in accordance with the appropriate regulations by a designated and competent employee before being issued for use. Any unsafe or doubtful gear shall be discarded or marked, and so placed that it cannot be used by employees.

Stevedoring Superintendent and Foreman

RULE 103. The duties of the Superintendent and/or Foreman in connection with safety are:

- (a) Ensure that all gear is in good safe working condition during the operations.
- (b) Ensure that all operations are carried on in a safe manner and instruct employees in safe working practices as necessary.
- (c) Where conditions warrant, and when such person is not in immediate touch with a superior officer, such person shall stop the work if necessary to avoid accidents.
- (d) Immediately report all accidents to superiors and the Ship's Officer.
- (e) Inspect and sign the pages of the First Aid Accident Record Book at the completion of each shift.

(f) Ensure that personal protective equipment is worn and used as required in accordance with Rule 406.

Foreman

RULE 104. The duties of the Foreman in connection with safety are:

- (a) Be in direct charge of employees, and supervise all the operations in connection therewith.
- (b) Ensure that all work is performed in a safe manner.
- (c) Report promptly to the Superintendent or Ship's Officer any apparent defect in the gear or any unsafe working condition.
- (d) Upon discovery of defective gear, in the event that the Foreman should find it impossible to get in touch immediately with the Superintendent or Ship's Officer or Regulatory Authority, the Foreman shall stop the work, if necessary, until the Superintendent or Ship's Officer or Regulatory Authority shall have had an opportunity to survey the situation.
- (e) Ensure that life lines, life rings and/or a suitable boat are available when required in accordance with Rules 221(b), 261(c), 351(b) and 352(c).
- (f) Instruct employees in safe working practices and immediately correct unsafe working practices.
- (g) Immediately investigate or assist in the investigation of accidents as required.
- (h) Ensure that personal protective equipment is worn and used as required in accordance with Rule 406.
- (i) Prior to testing the emergency stop button function on gantry crane vessels, advise the Ship's Officer as many gantries cannot be restarted without being reset from the engine room.

Hatchtender

RULE 105. The duties of the Hatchtender in connection with safety are:

- (a) Be familiar with all stevedoring operations and be capable of rigging derricks and other deck gear for the proper hoisting or moving of cargo.
- (b) Before commencing to hoist cargo, in conjunction with the Foreman or Ship's Officer in charge, see that the derrick topping lifts and derrick guys are properly secured.
- (c) Ensure that the space from the hatch coamings to the vessel's side is clear for working cargo and that the hatch beams, strongbacks, fore and afters and hatch covers are stowed on deck in a safe, orderly manner.
- (d) Inspect generally, as far as possible, all running gear for any defect or unsafe working condition.
- (e) Ensure that the cargo is properly slung before being hoisted, and shall control the movements of slingloads by positive signals to the Winchdrivers/Crane Operators when the load is out of sight. (f) Keep the slingload in sight when it is being moved, and warn all persons in danger of being injured.
- (g) Be familiar with the location of the First Aid Room.

Winchdriver and/or Crane Driver

RULE 106(1). The duties of the Winchdriver and/or Crane Driver in connection with safety are:

(a) Examine the winches and/or cranes before hoisting cargo to be sure they are in good order; if they are not in good order, report it to the Foreman.

- (b) In the event winches are steam powered, ensure they are free from water prior to commencing hoisting operations.
- (c) Examine cargo runners. If cargo runners are frayed or worn, report it to the Foreman or the Hatchtender.
- (d) Ensure that the cargo runners are properly secured to the winch drum by the securing device provided. Where there is no securing device, the runner shall be positively secured, for example, by a method such as a round turn and a half hitch around the shaft with the half hitch secured by clamp or seizing wire.
- (e) Ensure that extension levers, when used, are securely fastened.
- (f) If winches are not properly oiled, report it to the Foreman or the Hatchtender.
- (g) When leaving winches or cranes, even temporarily, turn off power and lock levers in neutral.
- (h) Obey signals from only the Hatchtender on duty.
- (i) Not hoist or lower cargo or gear when a person is ascending or descending a hatch ladder.
- (j) Not permit anyone to stand between strongbacks being handled and open hatches. A person standing in such place shall be warned away and the Winchdriver shall wait until the person is out of danger before lifting the strongback.
- (k) Ensure the bypass key is not in the cab of the ship crane while longshore employees are operating such crane.
- (l) Ensure that on vessels equipped with limit switches and/or bells, such switches and/or bells are operational and in good working order (refer also to Rule 322).

Ship Gantry Crane Driver

RULE 106(2). The duties of the Ship Gantry Crane Driver in connection with safety are to make the following safety checks at the commencement of each shift:

- (a) Check to ensure that vessel's list or trim is within the Gantry Crane operating certification.
- (b) Check Gantry head "up" limit switch by slowly raising the Gantry head until the limit switch cuts off vertical motion.
- (c) Check "outboard" limit switch by slowly moving athwartship until limit switch cuts off athwartship motion.
- (d) Check braking action for fore and aft travel.
- (e) At the start of the first shift and on subsequent shifts if considered necessary have someone on the deck at the base of the crane activate emergency stop button while crane is in slow athwartship motion and observe what automatic braking action takes place. Advise the Foreman prior to the test as many gantries cannot be restarted without being reset from the engine room. (f) Report any deficiencies to the Foreman.

Side Runner

RULE 107. The Side Runner shall see that the employees working in the hold use the safety devices provided and carry out the safety methods and regulations prescribed herein, at all times acting in conjunction with the Hatchtender.

Employees

RULE 108. The duties of the employees in connection with safety, in addition to those presented elsewhere in these regulations, shall be to use the safety devices provided, to practise the safety methods prescribed, and to co-operate in all matters that promote safe working conditions.

First Aid Attendant

RULE 109. The duties of the First Aid Attendant in connection with safety are:

- (a) Know and understand the appropriate First Aid Regulations. Certificates of competency shall be produced to the despatcher when requested.
- (b) Keep First Aid kit in possession at all times while employed as First Aid Attendant and replenish its supplies as usage may require, obtaining such supplies from the central depot of the B.C. Maritime Employers Association.
- (c) Know the location of: Dock First Aid Room, splint box, basket type stretcher, working telephone, life saving apparatus (i.e. life buoys or rings with life line attached), and ladders at various docks.
- (d) Know all ambulance telephone numbers.
- (e) Post directional signs showing the location of the First Aid Room.
- (f) Keep a record of the circumstances respecting an accident as described by the injured person, the time of its occurrence, the names of the witnesses, the nature and the exact location of the injuries on the body, and the time and nature of each First Aid treatment given, and shall carry out all duties according to the Regulations. All records are to be maintained on the form provided by the BCMEA, a copy of which is to be given to the employer's representative at the earliest opportunity but not later than the completion of each shift as well as a copy to the local Union office.
- (g) The First Aid Attendant shall notify the Foreman immediately, unless the nature of the injury precludes such report, when in receipt of a report from an employee or rendering treatment to an injured person.
- (h) The First Aid Attendant shall be in complete charge of all First Aid treatment required and no one shall interfere during the performance of First Aid duties.
- (i) Where it is necessary for the injured person to leave the work site to see a physician, the First Aid Attendant shall notify the Foreman and a Union representative immediately.
- (j) To be informed of all hazardous cargo of which the employer is aware in the workplace.
- (k) Ship First Aid Attendants shall have access to an effective communication device.

GENERAL

Reporting Defects

RULE 110. If tools, materials, appliances, or any gear are at any time found to be out of repair, defective, or in any way unsafe, employees shall immediately report the same to the person in charge of the work.

Reporting Injuries

RULE 111. Immediately upon boarding a vessel, each employee shall become familiarized with the location of the First Aid Attendant. Every injured worker shall:

- (a) Obtain First Aid treatment at once, in order to prevent infection from setting in.
- (b) Notify the employer immediately, through the First Aid Attendant, of HOW, WHEN, and WHERE the accident occurred, furnishing the names of witnesses.
- (c) Obtain proper medical attention if needed and see a doctor immediately if it is required. Prior to leaving the work site employees are required to report same to the Foreman unless the nature of the injury precludes such report.
- (d) A "Worker's Application for Compensation" form (W.C.B. Form 6) will be mailed to an injured worker by the W.C.B. if such is required to facilitate a claim. ALL questions on the form must be answered and such form mailed to the Workers' Compensation Board promptly. Notify the First Aid Attendant that you are going, or have been, to see a Doctor. The employer may require you to complete a WCB Form 6A. All questions on the form must be answered and the form forwarded to the employer.
- (e) Notify the Despatch Office as soon as possible, and report progress. If the injured person is physically unable to seek First Aid or report the accident, the Foreman and/or Hatchtender shall inform the First Aid Attendant so that the proper procedures will be attended to.
- (f) When no First Aid Attendant is on duty, report all injuries to the Foreman and see that they are recorded.

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Access to Vessels and Holds

Shore Based Equipment

RULE 201.

- (a) When a vessel is lying at a dock, there shall be provided at all times a safe means of going to and from the vessel, consisting of a gangway, accommodation ladder or other equally adequate method.
- (b) Safety nets shall be fitted under an access ladder and/or gangway in accordance with the Tackle Regulations.
- (c) All persons going to or from the vessel shall use this equipment. Shortcuts over side via cargo slings, save-alls, conveyors, etc., are prohibited.
- (d) When a portable gangway is used it shall be secured properly with angles no less than 35" from the vertical. When attached to a ship's rail, properly aligned steps, inboard, must be provided on deck.

Vessel Alongside

RULE 202. If a vessel is alongside any other vessel, and employees are required to pass from one to the other, a safe means of access shall be provided by the vessel which has the higher freeboard.

Scows, Booms, etc., Alongside

RULE 203. When working a barge, scow, raft, or log boom alongside a vessel, a Jacob's ladder with flat pilot ladder treads or its equivalent, properly secured, shall be provided and when practicable said ladder shall lay against the side of the vessel.

Hold Ladders

RULE 204. Ladders shall be provided in all holds where employees are required to work. Where it is impracticable to use the hold ladder, an equivalent safe means of escape shall be provided. Vessel's ladders providing entrance to and exit from holds shall be kept in safe condition.

Railway Car and Container Ladders

RULE 205. Ladders will be supplied by the Stevedoring Company concerned for access to railway cars and containers where necessary.

Portable Ladders

RULE 206. All portable ladders should extend over the upper landing by approximately one meter and should be secured.

Web Slings

RULE 207. Web Slings shall comply with the Web Sling Standard.

Air Bottle Protection

RULE 208. Head frames using air bottles must have a protective shroud over the valve.

Radar

RULE 209. Vessel's radar shall not transmit during cargo operations utilizing dock gantry cranes or shiploaders. During these operations vessel's radar scanners may rotate with the radar in standby mode.

DECK OPENINGS

Manholes, etc.

RULE 211. Manholes and other deck openings shall be protected in a safe manner (refer to Rule 411). No employee is to walk or work around an unprotected hatch where there is a possibility of falling into the hold below unless a guard rail is erected.

Hatches

RULE 212. When a vessel has a hatch not supplied with a permanent raised hatch coaming, a temporary structure in accordance with the appropriate regulations shall be supplied for the protection of the Hatchtender.

Hatch Covers

RULE 213.

- (a) When covering up at night all beams should be put into place on hatches where the hatch covers measure 10 feet or more in length.
- (b) Adequate hand grips shall be provided on all hatch covers, having regard to their size and weight. Broken, split, or ill-fitting hatch covers shall at once be discarded or repaired. All hatch covers and fore and aft and athwartship beams, shall, insofar as they are not interchangeable, be kept plainly marked to indicate the deck and hatch to which they belong and their position therein, and a Ship's Officer shall be present and responsible for the proper covering and uncovering of all hatches.

Hatch Rollers

RULE 214. Hatch rollers shall be so constructed that they can be firmly attached or secured to hatch coamings.

SAFETY BOAT

RULE 221.

- (a) At Fraser River Ports when employees working on log booms, scows, or stowing a deck load (when such deck load extends above the vessel's bulwarks), a suitable boat properly manned and equipped shall be provided, moored by means of a slip line in the most accessible place to best assure the safety of life and property.
- (b) Where a ship is loading from a boom, raft or crib, the employer of the employees engaged in loading the ship shall keep in the water and as near as practicable to the place where the ship is loading, a life saving boat equipped with oars, a boat hook and a serviceable lifebuoy having ninety feet of heaving line attached thereto.
- (c) Where the speed of the current in the water where a ship is loading is of three knots or more, the life saving boat maintained by the employer shall, in addition to the equipment mentioned in sub section (b) be manned and fitted with a motor.

MACHINERY

Guards

RULE 241. All gears and friction drives wherever located, shall if at all possible be completely encased. Where, in the case of gears this is impracticable, a band guard shall be provided with side flanges extending inward beyond the root of the teeth. Removal of existing protective appliances during operations is strictly prohibited.

Lubricating

RULE 242. Machines, conveyors, belts, etc., and all driving gear shall not be lubricated while in motion, except when this can be done by means of suitable contrivances without danger.

Cleaning

RULE 243. Cleaning of machine parts shall not be done while the machine is in motion.

WINCHES, CRANES AND SWINGING BOOMS

Place for Driver

RULE 251. The place for drivers to stand or sit shall be kept in good order and all means shall be taken to prevent slipping or falling. Where shelters for drivers are not available during inclement weather, the employer will provide sufficient material to allow for a temporary shelter to be built.

Gear

RULE 252. The vessel's gear shall be rigged so as to protect the driver against swinging loads. When winch controls are located so as to expose the driver to a bight of the cargo runner, an additional preventer shall be placed on the lead blocks at the heel of the derrick. When the winch controls place the driver in such close proximity to the heel blocks that could cause clothing to become entangled or the driver's body to come into contact with the heel blocks, the controls must either be moved or other satisfactory safe arrangements must be made.

Lever Extensions

RULE 253. Extensions on operating levers of winches, of substantial materials, shall, where necessary, be furnished by the employer and securely attached to the regular lever.

Steam

RULE 254. Measures shall be taken to prevent steam from or to, any crane, winch or other appliance from obscuring any part of the decks, gangways, stages, wharf or other place, or otherwise hindering or injuring any persons employed in the operation.

Clutch

RULE 255. All winches shall be equipped with proper gear for keeping clutch engaged, and winches shall be used in single gear or double gear, as necessary.

Cargo Runners

RULE 256. All cargo runners used for loading or unloading shall be in one continuous piece. There shall be three complete turns of wire left on an ungrooved drum and two complete turns of wire left on a groove drum when handling cargo unless otherwise specified in the requirements of the manufacturer.

Stop Button

RULE 257. All hoisting motors must have a stop button at the operator's position for emergency shutdown unless other means are provided to ensure effective emergency shutdown, e.g.

- (a) Extension cord to operator's position with stop button.
- (b) Signal horn to alert for immediate deactivation of motor.

Coupled Gear

RULE 258. Ship's cranes or single stick derricks (such as Velly or Thompson Gear, i.e., only one derrick at the hatch) are not to be coupled together in any combination unless there is a certification in the rigging plan for that vessel. Exception: Union purchase gear.

Lubrication

RULE 259. Winches shall not be lubricated while in motion.

DERRICKS, CRANES AND HOISTING GEAR

Guys and Preventers

RULE 261.

(a) The amidship derrick guys and preventers shall be kept as far away from the heel of the derrick as

possible, but not past the line of the cargo runner. In the case of the yard arm derrick, the foregoing shall not apply. The yard arm derrick guy and preventer shall be made fast at a convenient position, but not to interfere with other set of gear, they shall be made fast so as to take the strain on the preventer. Preventers shall be made fast around the head of the derrick independent of all other fastenings except when the head is designed with cap or spider band of strength sufficient to accommodate guy and preventer. When operating gear in the certified U.P. arrangement, the gear must be rigged in accordance with the applicable general arrangement drawings for the vessel.

- (b) Preventers shall be of wire and/or chain and when in more than one piece shall be joined by eye splice and shackle or by some other equally suitable arrangement. Tails, when used, shall be of wire or chain, and shall be in good condition. (See also Rule 1).
- (c) When deck loads extend above the bulwarks and sufficient clearance to enable employees to go overside to secure or release a derrick guy, preventer or chain lashing is not provided between outboard edge of deck load and bulwarks, a suitable life line shall be provided.

Setting up Preventer Guy

RULE 262.

- (a) Use of spotwelded fittings to equalize the gear is prohibited.
- (b) When cable clamps are used to secure a wire preventer to a derrick head, a round turn and half hitch shall be taken with the wire and not less than 3 cable clamps shall be used. They shall be placed not less than 4 inches apart and in every case with the "U" bolt on the lazy end. "Never saddle a dead horse!"

Derrick Guys and Gin Blocks

RULE 263. All derrick guys and gin blocks shall be secured by shackles or fittings and all overhead shackles, pins or nuts and bolts shall be suitably secured by securing devices.

Topping Lift Stoppers

RULE 264. A sufficient number of approved topping lift stoppers where necessary for safely shifting derrick topping lifts shall be provided.

Bridles for Strongbacks

RULE 265. All bridles for removing strongbacks or beams from hatch coamings shall be of sufficient length so that the strongbacks can be slung without necessitating climbing out on them to do so; shackles or toggles are recommended for handling strongbacks - cargo slings or lumber slings shall not be used. (See also Rule 1.).

Clam Shells and Gantry Heads

RULE 266.

- (a) When clam shells are being used shackle pins shall be made tight and secured by seizing wire.
- (b) All other connecting pins for clams and Gantry heads must have effective keeper devices.
- (c) When clam shells are being serviced or repaired the power is to be shut off unless otherwise directed by the servicing personnel.

Safety Straps for Spreaders

RULE 267. Where safety straps are fitted on spreaders a breakaway device shall be fitted to prevent a load being lifted on the safety strap.

SWL Single Stick Gear

RULE 268. Single stick gear that can be arranged to have the SWL reduced in accordance with the rigging plan must have the SWL for all conditions clearly marked on the boom.

USE OF HOISTING APPARATUS AND GEAR

Changing Gear

RULE 271. Employees shall not be hoisted aloft; derricks shall be lowered to deck for changing gear, or making necessary repairs.

Raising and Lowering Derricks

RULE 272. In this rule a single span means one part of wire, a double span means two parts of wire, a multiple purchase means three or more parts of wire between the derrick head and cross trees or between the lower part of the topping lift span and the deck.

When derricks equipped with single or double span wire topping lifts are being raised or lowered, such wire topping lift or bull wire provided shall be secured by a connecting device, i.e. shackle, clamp, hook, or half hitch, but not by seizing wire alone, to the winch drum or drum end. If the drum end has no positive securing point, the topping lift or bullwire must be secured by at least one round turn prior to being secured to the standing part.

Before working cargo, the topping lift wire shall be secured by sufficient turns around the bitts or cleats or other securing arrangements provided.

On derricks fitted with topping lift securing chains, the chain shall be shackled at the desired length

before commencing to lower the derrick.

In vessels fitted with a multiple purchase, because of its length and all of the topping lift cannot fit on the drum end sufficient turns shall be taken on the drum end to raise the derrick safely. When it is necessary to lower derricks fitted with a multiple purchase topping lift, sufficient turns shall be kept on the bitts and cleats provided, or, the wire put on the drum end with sufficient turns to ensure control of the derrick while it is lowered (which must be by surging only) to the desired angle, when it shall be secured safely.

- Power shall not be used to lower derricks fitted with multiple purchases.
- The topping lift wire shall be ranged on the deck and kinks or turns kept clear while the wire is being handled.
- The above rule does not apply to vessels fitted with single, double or multiple topping lifts permanently attached to a topping lift winch operated by power or a bull wire.
- In these vessels the bull wire, if fitted, is always to be secured to the winch drum or drum end by a connected device before raising or lowering a derrick.
- Only one derrick shall be raised or lowered at a hatch at a time, except when certain electrical or hydraulic controls are fitted and it is practicable and safe to handle more than one at a time.
- Sufficient employees are to be employed to carry out these operations safely and efficiently.

Automatic Topping Motors

RULE 273. In Union purchase type derricks that are automatic for topping and lowering, no cargo weight is to be suspended on the gear while raised or lowered unless the gear is equipped to handle such cargo weight as specified in ship's rigging plan.

Rigging Above Employees

RULE 274. No block or shackle shall be rigged directly over the head of an employee if it can possibly be avoided.

Moving Cars or Scows

RULE 275. Cargo runners or vessel's hoisting gear shall not be used to move railroad cars or scows.

Winches

RULE 276. Winches operated together shall be in the same gear and the levers shall operate uniformly in the direction of the load.

Slew Controls

RULE 277. On single stick controls for slew that are in a fore and aft line the boom must move to the right when the lever is pulled towards the operator, and must move to the left when the lever is pushed away from the operator unless specified otherwise in the ship's rigging plan.

Wire Watcher

RULE 278. On jumbo gear in which there are two winch drums each serving one end of a continuous runner (apart from the topping and slew drums) that are mechanically and/or electrically independent of each other and have one continuous cargo runner and under circumstances where neither the winch driver nor the hatchtender can see both drums in their line of vision, a wire watcher must be employed to watch the winch drums to ensure they do not go out of sequence, i.e. one drum allowing more wire out than the other drum.

HANDLING OF EQUIPMENT

Throwing

RULE 281. Blocks, crowbars, peavies, chain slings, or other heavy equipment shall not be thrown from deck to vessel's hold or from deck to dock.

Dollies

RULE 282. Slings shall be used when cargo dollies or hand trucks are to be moved by vessel's gear.

DECK STAGES

RULE 291. Where a temporary deck stage is used for the purpose of loading or unloading a vessel, such stage shall be strongly built and securely fastened.

DRINKING WATER

RULE 292. At all places where operations are being carried on, good drinking water in clean covered utensils or devices shall be conveniently available.

When raising or lowering a water can from or to a hold by means of the vessel's gear, such water can and shall be firmly secured.

No water is to be provided by the ship's supply for drinking purposes or the making of coffee.

PORTABLE BLOWERS

RULE 293. Canvas pipes for blowers should be marked and placed in such a manner to easily distinguish them from permanent ship's structure.

Blowers on Ro-Ro's

RULE 294. Blowers on ro-ro type working vessels are to be operating and provide adequate ventilation in enclosed work areas.

Shore Based Equipment

RULE 295. When operating shore based equipment, the operator is not to drive in the vessel's exhaust unless appropriate measures are taken to ensure air quality.

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Beams - Hatch Covers

RULE 301.

- (a) No cargo shall be hoisted from a hatch until hatch covers and strongbacks are off and stowed clear of working gear, except such cargo that must be removed to clear beams.
- (b) Strongbacks and hatch covers shall be stowed so as not to interfere with a safe walkway for Hatchtenders from rail of hatch coaming to the vessel's side and so that loads or gear cannot tip same into hatches or overside.
- (c) Foremen or Hatchtenders shall personally supervise the removal and replacement of hatch covers, strongbacks and beams.
- (d) Idle open foc'scle hatches should be either closed, covered, fenced or their approaches locked. A "foc'scle hatch" is one on the same level as the main deck but enclosed in a compartment with a main hatch opening one deck above.
- (e) Folding type hatch lids must be secured when left in partially or fully opened position.

Employees - Standing Clear

RULE 302. When employees are below, they must stand in the clear while strongbacks, hatch beams and hatch covers are being removed or put in place.

Strongbacks - Securing

RULE 303. No cargo shall be worked through a section of hatch unless the strongbacks of the sections adjacent to the uncovered portion of hatch are bolted to the hatch coamings, or otherwise secured or removed.

Working In Two Decks - Safety Nets

RULE 304. At any hatch, if work is to be carried on simultaneously in the upper and lower holds, the open end of the hatch in the higher deck shall be protected by nets or by some other equally suitable means to prevent the fall of persons or cargo.

When working half a hatch a safety net shall be provided where necessary to prevent cargo or employees falling from a height. (See also Rule 318).

When a fork lift is operating in the tween deck with part of the tween deck hatch off, a tight wire, chain or suitable obstruction shall be placed alongside the open portion of such hatch.

Dunnage

RULE 305. Dunnage shall not be handled over the heads of employees.

Skeleton Deck

RULE 306. When it is necessary to work cargo on a skeleton deck, safe decking shall be provided unless the employees can work safely from the cargo stowed below such skeleton deck.

Intermediate Deck

RULE 307. No cargo shall be loaded or unloaded at any intermediate deck unless either the hatch at that deck is safely covered, or a secure landing platform of a width not less than that of one section of hatch covering, has been placed across the hatch.

Cargo Hatch Tents

RULE 308. When cargo hatch tents are being rigged or removed over a hatch, the hatch shall be completely covered, whenever practicable.

During high winds, tents must be lowered prior to releasing the tent lines.

RAISING AND LOWERING OF CARGO AND CARGO HANDLING GEAR

Cargo Gear to be Secured

RULE 311. All cargo and cargo handling gear raised by hoisting gear shall always be carefully secured against falling or spreading.

Special care shall be exercised at all times when handling empty pallet boards, having regard for the safety of the slingmen, the dock employees, and employees on board the vessel.

Bulk Cargo - Basket, Tubs

RULE 312. In hoisting bulk cargo in baskets, tubs, etc., containers shall not be filled above the rim.

Suspended Loads

RULE 313. Sling loads shall not be held suspended over employees' heads, either on the dock or on the vessel; standing or working under a hanging load is prohibited.

Load Handling

RULE 314. When assisting to steady or land a load, employees shall not stand between the load and any fixed object and shall ALWAYS FACE THE LOAD.

A load shall not be lifted from a railcar or from the dock when anyone is standing between the load and the vessel.

Bull Line - Bulling

RULE 315.

- (a) When using a bull line to move cargo, the employees shall stand out of the bight, and clear of the throw of the lead and the hook.
- (b) When bulling heavy articles into place in such a manner that it necessitates the bull line or wire passing around a sharp corner or the hatch coaming, lead blocks shall be used.

Absolutely NO bulling of any cargo from the derrick head block.

Chain - Shortened

RULE 316. A sling load shall not be lifted with a chain having a kink in it. A chain shall not be shortened by wiring or tying.

Certified Gear

RULE 317. Appropriate certified gear must be used when cargo is being hoisted to or from a vessel. All main accessory gear must have the SWL and tare weight marking identified. Main accessory gear is defined as devices designed to be used in conjunction with a related lifting appliance, and includes spreaders, container frames, ganging heads, probes, grabs, vacuum discs, friction clamps, heavy duty hooks and similar gear.

Cargo Worked in Two Decks

RULE 318. Employees shall not be required to work in a hold with the hatches open while other work or loading or unloading is proceeding above them unless conditions are such as to preclude anything falling from an upper deck and injuring those who are working below (See also Rule 304).

Hatchtender - Signalperson

RULE 319. If the Hatchtender is for any reason not in clear view of the Winchdriver or Winchdrivers on the hatch being tended, an extra Signalperson shall be provided.

Cargo to be Secure

RULE 321. When cargo is to be hoisted it shall be secure in order to prevent it from falling.

Warning Devices

RULE 322. Warning devices, visual or mechanical, or limit switches must be installed on all single stick gear for down maximum.

Single stick gear does not include standing gear and jumbo gear being used as a swinging boom.

All ships fitted with limit switches or warning devices must ensure such devices are in working order before commencing operation.

STOWAGE OF CARGO

Hold Ladders

RULE 331. Hold ladders shall be kept clear when they are to be used for entering or leaving the hold and no cargo shall be stowed within six inches of the backs of the rungs in order to provide a safe foothold. If cargo is so stowed that it is not possible to use permanent hold ladders, portable ladders shall be provided by the vessel and they shall be properly secured.

Cargo to be Secured

RULE 332. While working cargo which may shift or roll on employees, the cargo shall be secured or blocked.

'Tween Deck Cargo

RULE 333. When cargo is stowed on or in any deck above the lower hold, such cargo shall be adequately secured to prevent it from falling on employees working below the deck on which such cargo is stowed.

Clearance Around Hatch Opening

RULE 334. In order to furnish a clear space for handling beams and hatch covers during cargo handling operations, the cargo shall be stowed so as to provide a clear space of 36 inches around the hatch opening. When cargo is stowed on a section of hatch a space of 36 inches shall be left from the open section. In applying this rule, Rule 1 shall also apply.

Deck Loads

RULE 335. Deck loads shall be stowed so as not to interfere with the safe operation of the winches and so as not to permit loose material from falling into the hatches or overside.

Dunnage - Stowage

RULE 336. Dunnage should not be stowed in a way that it could fall on employees working below.

Checking Trimmers

RULE 337.

- (a) Employees trimming bulk cargo shall be checked in and out of the hold.
- (b) Ore concentrate hatches must be tested for oxygen level and ventilated if necessary prior to ILWU personnel entering.

Trunkways

RULE 338. Where employees are required to work in, or as part of their work to pass through a vessel's trunkway and such trunkway is not fitted with "handholds" a safety rope of approved specifications (not less than 2" diameter wire rope securely rigged) must be provided.

Forming Key

RULE 339. Adequate provision must be taken so that employees are not required to remain in the key under a load being lowered into the hatch.

PERFORMANCE OF OTHER WORK WHILE CARGO BEING HANDLED

Chipping Noise

RULE 341. Under no circumstances shall chipping be allowed when the noise interferes with the safe loading or discharging of cargo.

Work Aloft

RULE 342. The Ship's Officers shall be requested to stop work overhead (masts, etc.) when such work endangers or dirties those employed below.

Welding - Burning

RULE 343. No welding or burning shall be permitted if there is danger of sparks from torches entering open hatches when employees are working below.

HANDLING LOGS

RULE 351.

- (a) All employees actively engaged in the loading and/or discharging of slippery logs, shall wear caulks.
- (b) Not less than two employees shall be required on a log boom and life lines shall be furnished hanging overside to water's edge.
- (c) Logs or timbers shall not be loaded from the water or from booms or cribs in the water after dark unless approved by the Joint Industry Safety Committee.

LUMBER DECK LOADS

RULE 352.

- (a) There shall be a clearance of approximately 8 inches from the ship's side, as standing and working room for handling and setting up chain lashings (it is not necessary to carry the 8 inch clearance all the way up the deck load); similarly there shall be a clearance of approximately 1 foot for the safe handling of guys and preventers, by bridging or other suitable means; subject in both of the foregoing, to any particular circumstances of the case.
- (b) Where employees are working in an open hold, deck cargoes shall not be worked in areas between the open part of the coaming and the bulwark on either side of the hatch nor shall employees working on deck be permitted to carry cargo across such areas. The '3 foot rule' around the coaming shall apply to all deck cargo while employees are working in an open hatch.
- (c) Package lumber deck loads will have at least one life ring with attached life line between every two working hatches.
- (d) Slings on the outside wall of timberdeck cargo are not to create tripping hazards or interfere with the movement of the gantry crane.

LOADING OVER A DECK LOAD, TO THE LOWER HOLD OR 'TWEEN DECKS

RULE 353.

- (a) The deck load shall be stowed to a reasonably safe height having regard to the individual ship.
- (b) When the deck load is stowed above the height of the hatch coaming, the deck load shall be lashed so as to prevent pieces of packages of lumber from working loose and falling down the open hatch.
- (c) Around the hatch coaming there shall be a walking space or step of the deck cargo, of reasonable width having regard to the individual ship.
- (d) Where on account of the deck load, the Hatchtender's signals cannot be seen by the Winchdriver or where the Hatchtender cannot carry out all duties in a safe manner, an experienced signalperson shall be used.
- (e) Due regard shall be given to short drift and, if considered advisable sling shall be shortened and if necessary, loads shall be split

TWO STATION OPERATIONS

Station Spacing

RULE 354. When working a two station athwartship operation on a gantry vessel, the spacing between

the stations should be a minimum of twenty feet. The spacing may be reduced for specific operations to a minimum of sixteen feet.

HANDLING EXPLOSIVES AND INFLAMMABLES

RULE 361.

- (a) The handling of all explosive cargoes or merchandise shall be done in accordance with the established codes and rules of the Federal, Provincial, and local Governing Boards and Underwriters.
- (b) All employees engaged in the handling, hoisting, stowing and supervision of explosives, combustible, or inflammable merchandise shall be PROHIBITED FROM SMOKING. Before commencing work they shall rid their persons of all matches or other flame-producing equipment.
- (c) No steel-plated, hob-nailed, nailed or caulked boots shall be worn when handling explosives or inflammables.
- (d) In all instances where explosives or combustible merchandise or cargo is being handled in any way, open lights shall be prohibited on or about the vessel or wharf, and only approved lights and equipment of explosion-proof design shall be used.
- (e) In the loading of explosive merchandise in package form, when chutes are used, the chutes shall be constructed, whenever possible, of wood. All fastenings thereon shall be of wooden pins, dowellings, or pegs. If metal fastenings are used, they shall be countersunk.
- (f) The bottoms of the chutes shall be provided with a stuffed mattress 4 feet wide, 6 feet long and not less than 4 inches thick.
- (g) In chuting packaged explosives, care shall be exercised to see that the angle of descent of the chute is such as to prevent excessive shock or bumping of packages. Employees shall be warned not to allow cases or packages to be bumped or shaken.
- (h) In the tiering of packaged explosives, every possible care shall be taken to prevent the dropping of cases and packages. All shocks shall be prevented.
- (i) Where during handling of explosives or inflammable cargoes, the cargo runner may come in contact with metal hatch coamings, guide rollers shall be used.

HANDLING STEEL PRODUCTS AND LOOSE SCRAP METALS

Steel Rails

RULE 371.

(a) All rails (other than scrap) loaded on to barges or lighters shall be stowed, not dumped. Scantlings shall be placed between each tier.

Steel Plates - Gondola Cars

(b) When steel plates are to be placed in gondola type railway cars and employees are required to work in such cars, there shall be not less than six (6) feet clearance inside each end of the cars and not less than one and one-half (12) feet clearance inside each side of the cars.

Handling Steel and/or Loose Scrap Metal at Night

RULE 372. The above may be loaded or discharged at night provided:

- (a) There is adequate lighting;
- (b) The loads shall be lifted by two slings of similar length;
- (c) The loads shall be raised or lowered approximately horizontally through the hatch;
- (d) The loads shall be handled to or from scows, on the dock or on rail cars.

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RULE 401. Employees shall do everything possible to prevent fires. SMOKING IS PROHIBITED.

Alcohol and Drugs

RULE 402. No employee or employer or representative of a vessel or employing Stevedore who has any contact with operations shall be allowed to go to work, or continue to work, UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.

First Aid

RULE 403.

- (a) First Aid equipment in conformance with Industry agreements shall be made available to each First Aid Attendant employed, and that person shall be in charge of same. It shall be the First Aid Attendant's duty to keep possession of such kit at all times while so employed and to replenish it from time to time, as usage may require, from the central depot of the B.C. Maritime Employers Association, or as otherwise directed by the employer.
- (b) The employer shall see that all basket type stretchers are equipped with regulation type mattresses, and shall have such stretchers always available on vessels being loaded or unloaded where stretchers are not immediately available on shore. Such basket type stretchers, and not cargo boards, shall be used for moving injured employees. Stretcher slings shall be shackled to cargo runners on standing gear. The stretcher slings must have a large eye to enable them to be placed over large cargo hooks on cranes etc. when slings cannot be shackled.
- (c) The employer shall arrange to have blankets and a covering sheet available with all stretchers in case

of emergency.

- (d) The First Aid Attendant shall immediately notify the employer and the Despatch Office of any accident.
- (e) When a vessel is working at anchorage, a boat as means of evacuating injured employees shall be available.

IMPROPER USE AND PILFERAGE OF FIRST AID EQUIPMENT, FIRE EQUIPMENT, SAFETY EQUIPMENT, OR TAMPERING WITH SAFETY WARNING DEVICES IS PROHIBITED AND PUNISHABLE BY DISMISSAL FROM THE WATERFRONT.

Passageways on Docks

RULE 404. Passageways on the dock shall be kept clear to give ample room for hooking on to or landing loads, except when working rail cars direct to or from a vessel.

Personal Protective Equipment

RULE 405. Employees shall wear personal protective equipment provided and maintained by the Employer as follows:

- (a) Approved goggles when handling cargo that is liable to injure or irritate the eyes.
- (b) Respirators of an approved type when handling cargo liable to injure or irritate the respiratory passages and lungs.
- (c) Protective hoods in a sanitary condition for grain employees.
- (d) When employees are employed under conditions which expose them to a risk of drowning, they shall wear a device having buoyant effect sufficient to maintain their head above water without any effort on their part. The device provided shall not be dependent upon manual manipulation to produce the buoyant effect. Such devices will be available to employees working on scows.
- (e) In the event it becomes necessary to work on the tops of slippery containers, appropriate safety measure(s) shall be taken.

Appropriate Clothing

RULE 406.

- (a) All workers shall wear appropriate clothing including high viz vests as required and adequate footwear (work boots) to afford support and protection where required (Joint Industry Labour Relations Committee Document re: Personal Protective Equipment).
- (b) All workers shall use safety materials, equipment, devices and/or protective clothing as either instructed by the employer or prescribed by regulation.

Treated Lumber

RULE 407.

(a) Lumber which has been treated with liquid preservative chemicals shall not be handled aboard a

vessel less than 24 hours after treatment.

(b) Lumber treated with NP-17 sapstain control chemical shall not normally be handled aboard a vessel less than 12 hours after treatment.

If it is necessary to handle lumber prior to 12 hours after treatment, the employees shall be advised and appropriate personal protective equipment shall be provided to those handling the lumber.

No lumber shall be loaded aboard a vessel less than 4 hours after dipping.

Radioactive Cargo

RULE 408. Employees are to be informed ahead of time prior to handling radioactive cargo and such cargo unit is to be tested and checked for leaks and damage.

Hazardous Cargo

RULE 409. All employees assigned to handle hazardous cargoes are to be informed of:

- (a) The hazards involved and the appropriate actions to taken in the event of a leak or spill.
- (b) The required personal protective equipment for the job.

Riding Dock Gantry Heads

RULE 410.

- (a) Emergency stop button on head frame must be tested before commencement of operation to ensure all control functions can be deactivated.
- (b) Stop button must be in the hand of one of the employees during transportation.
- (c) All employees must be properly seated while crane is in operation.
- (d) There must be a radio with the employees on the head frame that is in contact with the crane operator.
- (e) The crane shall only be operated at a moderate speed.

LIGHTING

Dark Holds - Compartments

RULE 411. ENTERING DARK HOLDS, DECKS OR COMPARTMENTS WITHOUT A LIGHT IS PROHIBITED.

Gangway Lighting

RULE 412. One or more lights shall be kept burning on the deck near the gangway or other means of access to the vessel after dark when the vessel is working.

Adequate Lighting

RULE 413. Superintendents or Foremen shall not permit operations on or in vessel's decks, holds, escape hatches or other places unless adequately lighted.

Naked Lights

RULE 414. Naked lights are prohibited in stevedoring operations aboard a vessel, and all portable light clusters shall be removed from the hold when work ceases. A naked light is one with no surrounding canopy protection.

WORKING ALONE

Employee Working Alone

RULE 415. No hold employee shall work alone in any operation unobserved.

Operating Equipment Alone

RULE 416. No ILWU personnel shall operate equipment in a hold unobserved.

IMPROPER USE OF EQUIPMENT

Strongbacks - Riding

RULE 421. Employees shall never ride strongbacks or beams, nor shall they unnecessarily walk or climb upon them while in place.

Cargo Hook or Load - Riding

RULE 422. Riding the cargo hook or load is prohibited.

Moving Conveyors - Riding

RULE 423. The riding on moving conveyors, other than of mechanical stevedores, escalators, or other devices, especially designed for transportation of people, is strictly prohibited. Such special devices as are permissible for transporting employees in and out of vessels, may be ridden only when the driver is at the controls and can stop the device.

FORK LIFT TRUCKS OR OTHER MOBILE EQUIPMENT

Fork Lift Trucks or Other Mobile Equipment

RULE 424.

- (a) Fork lift trucks used in confined spaces shall have removable extensions for the exhaust pipes to direct exhaust gas from the motor away from the operator when and where required.
- (b) Fork lift trucks used in freezer hatches or chambers shall be electric.
- (c) Where practicable, all hatch covers shall be opened to dispel gases and fumes except those required to protect cargo from inclement weather and only when extra precautions have been taken.
- (d) At least one properly operating blower shall be used for each machine operating in the hold.
- (e) Vertical exhaust pipes are to be fitted on all machines.
- (f) Where tents are required over a hatch there should be a reasonable space between the bottom of the tent and the coaming in order to let the fumes escape.
- (g) Overhead guards must be fitted and secured on all fork lift trucks used by Employers. When working cargo the lift truck will be fitted with an extension or load rest at the top of the forks if necessary to prevent such cargo from falling back onto the operator.
- (h) Propane powered fork lift trucks shall have the propane tank removed before being lifted into or out of a hold or onto or off a vessel.
- (i) Fire extinguishers with a heaving line should be available on deck when internal combustion machines are employed in the hold.
- (j) Mobile Equipment shall have the gross weight stencilled on the machines and on the attachments (detachable counter weight, clamps, forks, etc.)
- (k) Fork Lift Trucks shall have the lifting capacity stamped and modified machines shall be recertified and stamped.
- (l) Regulations on mobile equipment exhaust emission exposure limits shall be observed in all operations.

Forklift Trucks on Scows

RULE 425. When discharging scows in excess of 6 bundles high alongside a vessel, the following 3 conditions must be met otherwise the top layers above 6 bundles will be skimmed off prior to using fork lift trucks.

- (a) Package lumber must be stowed on scows in accordance with accepted scow loading plans.
- (b) Loaded scows must be stable.
- (c) Lift trucks must be of adequate size to reach the top layer of stow.

A load of package lumber is defined as 2 packages or bundles; one package or bundle is defined as 2 a load.

FUELING MOBILE EQUIPMENT ABOARD VESSELS

Fueling

RULE 426. The following are to be observed when fueling aboard vessels:

- No smoking

- A fire extinguisher with a minimum 5 B rating must be present when fueling

Liquid Fuel

- No storage of fuel at the hatch
- Engine to be shut off during fueling
- Clean up of spilled fuel
- Storage of fuel to be in a safe area away from the working area of the vessel

Propane

- Cylinders are to be stored at a designated storage area
- Cylinder to be hoisted to and from vessel in a safe manner. The neck valve assembly and shroud are not to be used for lifting.

GRAINLINING OPERATIONS

Uprights

RULE 432. All uprights shall be of sound materials and properly braced and secured to prevent swaying or shifting.

Handling of Materials

RULE 433. All materials regardless of size or weight must at all times be lowered into holds by handlines or with equipment, when employees are working below. Under no circumstances will materials or objects be thrown or dropped into holds where employees are working. Handlines shall be supplied at each hold of a vessel, for the purpose of lowering tools into the ship's hold.

Working Off Ladders

RULE 434. When employees are required to work off ladders, a second employee shall be stationed at foot of ladder to prevent slipping.

When extension ladders are used, a minimum of three rungs overlap shall be required for safe working conditions.

Strongbacks - Riding

RULE 435. Employees shall never ride strongbacks or beams, nor shall they unnecessarily walk or climb upon them while in place.

FUMIGATION

Vessel Under Fumigation

RULE 440. No ILWU personnel are to board a vessel under fumigation until an appropriate clearance certificate issued in accordance with the Ship Fumigation Regulations is provided.

CLOSED HATCHES

Entering Closed Hatches

RULE 441. No ILWU personnel are to enter a fully closed hatch unless satisfied that air quality and lighting levels are adequate and immediate access and egress to evacuate sick or injured personnel is available.

General Information

MEASUREMENT OF SLING ANGLE

LOAD

HOW TO MEASURE SLING ANGLE

The increased angle of sling leg reduces its capacity. See chart for loss factor. Determine the angle between the sling leg and the vertical plane. Then multiply the sling rating by the appropriate loss factor from the chart. This will determine sling's reduced rating.

Example:

Assume sling capacity = 2,000 lbs.

If angle = 60' then loss factor =.7660 Multiply: 2,000 lbs.x .7660 = 1,532 lbs. (rated capacity of sling at 40')

ANGLE STRENGTH LOSS FROM RATED CAPACITY OF ALL SLINGS

Angle	Factor	60.	65	Factor	Angle
60.	.5000	50.	55	.4226	65
50	.6428	///	1011	.5736	55
40	.7660	40'	45'	.7071	45
30"	.8660	30'	25	.8192	35
20	.9397		11	.9063	25
10	.9848	10°	15	.9659	15
0.	1.0000	0.	5'	.9962	5

Angle = Bridle Angle measured from vertical

PULP UNITS BAND INFORMATION

The minimum strength of banding shall be:

Safety Factor x 2 weight of units x secant of bridle angle.

Secant of bridle angle of 40 degrees is 1.3.

Total wire strength (answer from above) divided by strength provided by a single wire = required wires.

Example:

Unit weight 4,000 lbs.

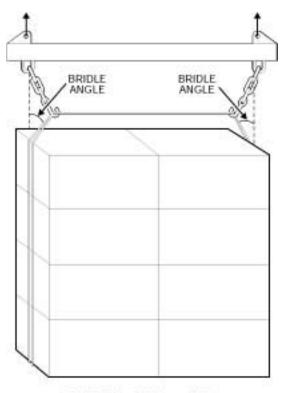
Individual wire strength = 1,758 lbs.

Safety factor = 4

Equation:

 $2,000 \times 4 \times 1.3$) 1,758 = 5.9 wires, i.e. 6 wires.

EXAMPLE OF BRIDLE ANGLE



The Bridle Angle is the angle between the lifting band and the vertical.

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