



**ASSOCIATED TERMINALS, LLC**

**PERSONNEL SAFETY  
HANDBOOK**

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This handbook has been prepared with your personal safety and well being in mind. It contains good, sound information, which you should be familiar with. You are expected to read it in entirety and follow it as you perform your daily work assignments. By doing so, you will be fulfilling your responsibility to your family and your company.

I have received the SAFETY HANDBOOK and hereby agree to read the information contained in the book before reporting to work. I acknowledge that I will get answers to all of my questions by asking my supervisors and that I will be prepared to answer questions about general safety practices.

I hereby agree to abide by the information contained in this handbook.

SIGNED: \_\_\_\_\_

DATE: \_\_\_\_\_

A copy of this page will be filed as part of your employee file.



## LETTER FROM THE DIRECTOR

DEAR NEW EMPLOYEE:

I want to personally welcome you into our company. If you have worked for us before, we are glad to have you back. If not, we hope your stay with us will be long, pleasant and SAFE.

Our company now has and expects to maintain a safety record of which we can be justly proud. This did not come without a lot of dedication and hard work. You are therefore expected to do your part by working safely and helping others do the same.

This letter is part of a Safety Kit you will receive your first day at work. Read all of it carefully as you will be expected to understand it and abide by it. Your immediate Supervisor will be glad to answer any questions you may have.

Finally, we always welcome your suggestions for improving safety in our operations.

Good luck! Make safety a habit!

Sincerely,



DAVID FENNELLY

## HS&E POLICY STATEMENT

It is the policy of Associated Terminals, LLC and its Subsidiaries (the “Company”) to conduct their activities to:

- Consider first the health, safety, and security of employees, contractors, and third parties who may be affected.
- Protect the environment, prevent pollution, and seek improvements in the efficient use of natural resources.
- Ensure that health, safety, environment, and security (HSES) matters have priority among business objectives.
- Protect the security of employees, facilities, and assets.
- Comply with all applicable laws under which the Company is operating.
- Maintain the ability of the Company to continuously improve HSES performance through regular review of procedures and practices.

The Company will carry out this policy through corporate and operational activities that are supported by management and shall require the commitment of each individual employee to achieve these objectives. The Company is committed to providing continuing education and training to achieve Company goals.

All employees are responsible for the observance of the Company’s HSES policies and procedures and the development of their job skills relating to HSES issues. All employees are directed to consider and help protect the health, safety, and security of those working under their supervision and alongside them and to act to protect the environment within the scope of their work.

The Company’s HSES policies and procedures incorporate guidance from several areas. Furthermore, the policies and procedures should be supplemented by applicable codes and standards recommended by industry classification societies, client safety policies, and sovereign laws. Generally, the most stringent standards shall be followed. The goal is to prevent accidents, injuries, job related illnesses, and environmental degradation.

### HEALTH

- The Company seeks to conduct activities in such a way as to ensure the health of employees, contractors, and third parties.
- The Company will continually update and implement the measures necessary to maintain the health of employees.

- The Company will handle employee medical conditions with the highest degree of confidentiality.

## **SAFETY**

- The Company believes that all injuries are preventable and actively promotes high standards of safety awareness.
- The Company is committed to maintaining safe working methods to reduce the risk of work related injuries. The Company is committed to providing high quality equipment, training, and personal protective equipment.
- The Company encourages employees to evaluate assigned tasks and to resolve problems in a productive and safe manner.
- The Company is committed to improving safety management skills of all personnel. Emergency plans shall be maintained for safety, security, and environmental protection.

## **ENVIRONMENT**

The Company will:

- Endeavor to reduce emissions and discharges of waste, which are known to have a negative effect on the environment.
- Promote procedures designed to ensure safe operations of equipment and to protect the environment in compliance with relevant regulations.
- Provide services, which are not harmful to the environment.

## **SECURITY**

The Company will:

- Promote a secure working environment by establishing and maintaining appropriate security measures.
- Protect the security of company personnel, assets, and installations by preparing for and taking steps to mitigate foreseeable unlawful acts.

# DRUG AND ALCOHOL POLICY

## SCOPE OF POLICY

- This policy applies to all Associate Terminals, LLC locations, hereafter referred to as “the Company or Company”, employees and its sub-contractors.
  - This policy is generally applicable to all operations of the Company but in no way shall limit the rights of the Company to take different or additional steps or actions to facilitate a safe working environment, free of drugs and alcohol and consumption, provided such steps or actions do not violate applicable law.
  - In addition to the stated provisions of this policy, the Company will take all appropriate actions to comply with the drug, and alcohol policies of its customers and all drug and alcohol policies promulgated by regulatory authorities under applicable law. In the event of a conflict between any provision of this policy and applicable law, applicable law shall apply and the affected provision shall have no force and effect.
  - As a condition of employment with the Company, all employees must agree to have released to the Company the results of all substance screens and examinations, including all documents generated.
  - Nothing set forth in this policy constitutes a contract of employment, nor, shall any of it be construed or interpreted in any way to constitute a contract of employment.
  - The policy may be amended or modified by the Company at any time.

## PURPOSE

- The Company has established this drug and alcohol policy for the following reasons:
  - To provide a safe workplace.
  - To ensure a healthy, sober, efficient and productive workforce conducive to the maintenance of the Company’s work standards.
  - To protect Company assets and the reputation of the Company with its customers and the general public. In certain instances to comply with specific laws and regulations and/or the contractual obligations of the Company.
  - This policy shall be enforced by such testing and other procedures as are set forth below. The Company shall utilize safeguards both to reasonably protect the privacy of persons and to ensure accuracy of test results.
  - This policy shall be administered and enforced in accordance with applicable law.

# PROHIBITIONS

## VIOLATIONS OF DRUGS, ALCOHOL AND WEAPONS POLICY

All applicants and employees are reminded that the following actions are included as violations of this policy.

- Use, possession, sale or distribution of drugs or alcohol on Company premises or while conducting Company business.
- Employee operation of Company vehicles or equipment while using drugs or alcohol.
- Possession of prescribed drugs that are not in the correct container or are not prescribed for such employee.
- Possession of any correctly prescribed drug which is unsafe to use while on an industrial location or while operating rig and/or vessels or vehicles (employees requiring these types of drugs should contact their safety representative or manager before reporting to work).
- Possession of “look-alike” drugs in any form.
- Possession of paraphernalia and equipment related to illegal or unauthorized drug use.
- The possession or use of MOJO, K2, bath salts or other similar derivatives that are deemed illegal to possess by governmental agency.
- Admission of use at the time of testing, whether or not the test result actually is negative.
- Drivers, and other persons, shall not drive nor operate a Company vehicle or any other vehicle including personally owned vehicles for Company business, or enter onto the Company property, or report to work or work while under the influence of alcohol or while having identifiable traces in the person’s system of any quantity of controlled substance or illegal drugs.

### **THERE ARE LIMITED EXCEPTIONS FOR AUTHORIZED DRUGS, POSSESSION OF ALCOHOLIC BEVERAGES, PRESCRIPTION DRUGS AND WEAPONS AS FOLLOWS:**

- Alcoholic Beverages – As an exception to the alcoholic beverage prohibition as stated above, if approved by the Company, the moderate and responsible use of alcohol at Company, business or social functions is not prohibited by this policy. At such functions the employees are responsible for use of their own prudent judgment. The Company Manager authorizing this exception to the policy is required to take reasonable action to ensure safe transportation for all participants. The occasional receipt of a gift consisting of a small quantity of alcoholic beverage, which must remain unopened while on Company property is also not prohibited by this policy.

- Prescription Drugs – As an exception to the controlled substance prohibitions, such prohibitions do not apply where (1) such drug is being used for its intended purpose and prescribed by a treating physician to the person possessing it and (2) the use of such drug does not adversely affect judgment, coordination or other senses or the ability to perform work in a safe and productive manner. The Company reserves the right to request a physician’s statement confirming that the use of such drugs will not affect the person’s ability to perform his/her duties.

## DEFINITIONS

- “**Drugs**” are defined to include prescription drugs, inhalants, narcotics and other illegal, controlled or unauthorized substances that may feed, promote or cause addiction and/or affect coordination and/or dull senses.
- “**Company business**” is when an employee, at any time or place, is engaged in Company related work. This includes situations where employees are traveling on Company business, whether by Company vehicle, personal vehicle or common carrier, and business-related meetings, conferences, seminars or training sessions. Also included are situations where an employee may be required to work off Company premises with a customer or at another Company’s premises. Also included are breaks or rest periods, since employees will be expected to return to work after such breaks and function safely and productively.
- “**Company premises**” shall include all Company work places, whether occupied or vacant, buildings, structures, installations, barges and/or vessels, automobiles, trucks and other vehicles, vessels and other water craft, platforms, lockers and rooms.
- “**Company property**” means all real or personal property, facilities, land, buildings, equipment, containers, vehicles, vessels and aircraft whether owned, leased or used by the Company and wherever same may be located.
- “**Controlled Substance**” means any substance, drug, chemical or agent, the use or possession of which under United States law requires a personal prescription from a licensed treating physician and any other substance listed in any federal or state controlled substance regulation.
- “**Drug or Alcohol Test**” means a test administered by a certified independent laboratory (alternatively in the case of an alcohol test, a licensed physician may be used instead) or a certified collector where an individual provides a specimen of his or her hair, sweat, urine, blood, plasma, saliva or breath which is then analyzed for evidence of drug or alcohol use.
- “**Illegal Drug**” means any drug, substance, chemical, or agent, the use or possession of which is illegal in the United States.

- **“Possession”** is defined as having any amount of drugs, alcohol or weapons on one’s person, or in one’s belongings, vehicles, quarters or lockers.
- **“Third Party Accident”** means any Company business vehicle accident involving a passenger(s) in one or more vehicles or a pedestrian. Accidents involving animals and parked, unoccupied vehicles are not included under this definition.
- **“Use”** with regard to drugs is defined as having any trace amount of drugs in the applicant’s or employee’s system, or physical consumption of drugs on Company premises or while conducting Company business. “Use” with regard to alcohol is defined as the physical consumption of alcohol on Company premises or while working or conducting Company business.

**EMPLOYEE RESPONSIBILITIES UNDER THIS POLICY INCLUDE:**

- Complying with the Company’s policy on drugs and alcohol.
- Reporting any known use, sale, possession or distribution of drugs, alcohol or weapons on Company premises, in vehicles, or while on Company business.
- Informing the assigned Director of Team Safety (DTS), supervisor or manager if you are using any prescribed medicine that could in any way affect safety in the Company’s workplace.
- Personnel taking prescribed medication must present a statement from their doctor detailing the medication, reason for use, and expected duration of the treatment. This information should be presented to the medic and/or DTS/PIC (Person in Charge) upon arrival at the work site.
- Compliance with this policy is a condition of continued employment.

**SUPERVISOR RESPONSIBILITIES**

- Supervisors and Managers should advise his or her PIC or Operations Manager of any policy violation.
- The PIC or Operations Manager shall immediately notify the Risk Management Department.

**SEARCHES AND TESTS**

- The Company reserves the right, at all times, to have authorized personnel conduct searches or inspection of desks, personal effects, vehicles, lockers, briefcases, baggage and quarters of employees and other personnel for the purpose of determining if any such persons are in possession of any drugs, alcohol or weapons.
- These searches will be conducted from time to time without prior notification.
- The Company reserves the right, at all times, to have authorized personnel conduct rapid tests, breath/saliva scans, hair, sweat, urinalysis, blood or

plasma tests of its applicants, employees and employees of other contractors and companies. For the purpose of determining if any such persons are using drugs or alcohol or when there is REASONABLE SUSPICION to believe that an employee is in violation of Company policy or if the employee's name is identified by the Company's random drug testing program. A hair or sweat test, urinalysis or breath/saliva scan, as well as a blood or plasma test may be used in the following situations:

- Pre-employment testing
- Testing after an employee has been involved in an accident or incident
- Random Drug Testing
- Department of Transportation required testing
- Testing based upon reasonable cause or suspicion. Drug testing may be conducted before or after a job offer has been extended; however, the job offer will be conditioned upon a negative test result on the breath/saliva scan, hair, sweat, urinalysis, blood, or plasma test.

## **DISCIPLINARY ACTION AS A RESULT OF A VIOLATION OF THE DRUG, AND ALCOHOL POLICY**

The following disciplinary action will result when employees or other individuals are found to be in violation of the Company's policy on drugs, alcohol and weapons:

- Any Company employee who refuses to allow a search, hair, sweat, urinalysis, breath/saliva scan, blood, plasma or any other test pursuant to this policy will be discharged immediately.
- Any person having business with the Company who refuses to submit to search, breath/saliva scan, hair, sweat, urinalysis, blood, plasma or any other test, or who is found in possession of any drugs or paraphernalia or equipment related to illegal or unauthorized drug use, will not be allowed on any of the Company's premises or in any of the Company's vehicles.
- Any Company employee found in possession of any drugs or paraphernalia or equipment related to illegal or unauthorized drug use and any employee found distributing any such drugs or paraphernalia or equipment related to illegal or unauthorized drug use, will be immediately discharged.
- Employees who violate this policy by testing positive for any drug listed in Table 2 below, as a result of a breath/saliva scan, hair, sweat, urinalysis, blood or plasma test shall be terminated without eligibility for rehire.
- Refusal to sign the acknowledgment regarding the Company policy on drugs, alcohol and weapons will be deemed to be a voluntary termination initiated by the employee.

## DISCIPLINARY ACTION RELATED TO ALCOHOL USE

The following disciplinary action when employees or other individuals are found to be in violation of the Company's alcohol testing criteria.

EVENT	DISCIPLINARY ACTION
Employee with a Confirmation Test breath alcohol level between .02 and .04 (1 <sup>st</sup> Offense)	Employee sent home without pay for remainder of shift with a receipt of a written counseling and 1 week suspension without pay. Employee allowed to return to work upon demonstrating a breath alcohol level of .00.
Employee with a Confirmation Test breath alcohol level .04 and above.	Employee is terminated without eligibility for rehire.
Employee with a Confirmation Test breath alcohol level between .02 and .04 (2 <sup>nd</sup> Offense)	Employee is terminated with no chance of re-hire.

(Table 1)

## NOTICE OF CHARGE

Any employee who is charged with violating any federal or state criminal drug or alcohol statute must notify the Risk Manager of the Company within five (5) days of such charge with full details of such charge.

## RE-HIRE

Employees terminated as a result of any violation of the Drug and Alcohol Policy shall not be eligible for re-hire.

## TABLE FOR INITIAL AND CONFIRMATION DRUG NON-DOT TESTS

Type of Drug	Initial Test	Confirmation Test
Marijuana	50	15
Cocaine	300	150
Phencyclidine	25	25
Amphetamines	1000	500
Opiate	2000	2000
Barbiturates	300	300
Methadone	300	300
Benzodiazepine	300	300
Propoxyphene	300	300

(Table 2)

## OPERATIONS

- For areas required by regulation drug and alcohol testing shall be conducted to comply with United States Coast Guard and Department of Transportation (DOT) regulations – 46 CFR 4; 5; 16; 49 CFR 40, as well as the Company's Drug and Alcohol program. To meet these requirements, testing will be conducted as noted within this Supplement.
- Rapid tests will be performed in addition to non-DOT drug screens. Employees subjected to Post Job Offer, Random, Post Accident/Serious Incident or Probable Cause testing will also be tested utilizing a Rapid test. Employees testing non-negative on the rapid test for Random, Post-Accident/Serious Illness or Probable Cause tests will be suspended without pay until the results of the actual drug screen are received. Should the actual drug screen result in a negative test, the employee will then be reinstated and compensated for any time he or she would have worked while awaiting the drug screen results.
- The Company has determined the following positions on all locations are to be considered as safety sensitive:
  - Crane Manager
  - Production Managers
  - Crane Operator
  - Maintenance Supervisors
  - Mechanics
  - Electricians
  - Welders
  - Deckhands
  - Oilers
  - Equipment Operators
  - Stevedores

### A. PRE-EMPLOYMENT TESTING

- All new hires will be given a pre-employment drug test and rapid test as noted in the Company Drug and Alcohol Policy. This will consist of non-DOT screens. A non-negative rapid test will terminate the physical and the sample shall be submitted for testing and MRO review. A positive test shall result in the job offer being rescinded. Should the test be ruled negative by the MRO, the applicant will be allowed to return and complete the hiring process, provided that the any prescriptive medication causing the initial positive finding was disclosed on the post job offer medical questionnaire.

- Unless required by regulation, those persons hired to positions as noted above will be given a non-DOT screen and the results of the test must be received before the individual may perform duties in that position. This also applies to current employees who are promoted to these positions. A positive test for an individual who has a United States Coast Guard issued license or document may not be hired to that position and the positive DOT test reported to the nearest United States Coast Guard Officer in Charge, Marine Inspection.

## **B. RANDOM TESTING**

- All personnel at Company locations will be subject to random testing in accordance with the Company Drug and Alcohol Policy. The percentage of random tests to be conducted during the calendar year will be in accordance with that specified by the United States Coast Guard for that year.
- All personnel shall be required to subject to a non-DOT drug screen. A DOT test shall be administered for an individual who holds a United States Coast Guard license or document and any positive test will be reported to the United States Coast Guard.

## **C. POST ACCIDENT / SERIOUS INCIDENT TESTING**

- All persons involved in an accident or serious marine incident will be required to submit to a non-DOT screen. This includes those personnel directly involved and any individual who may have contributed to the incident through their action or non-action (i.e. giving an order or instruction; or allowing an action to happen).
- The United States Coast Guard requires post accident / serious marine incident testing to be conducted within two hours of the incident, once emergent concerns have been addressed. To meet this mandate, locations DTS shall be notified as soon as practical in accordance with Company accident notification procedures. The DTS will determine if the required testing will be conducted by AT personnel as noted below, or if a third party administrator will be dispatched to conduct the testing.

## **D. REASONABLE CAUSE TESTING**

- All AT personnel are subject to reasonable cause testing in accordance with the Company's Drug and Alcohol Policy. A positive test for an individual who holds a United States Coast Guard license or document will be reported to the nearest United States Coast Guard Officer in Charge, Marine Inspection. All personnel shall be tested with a non-DOT standard per the policy.

## **E. EMPLOYEE ASSISTANCE PROGRAM**

- The Employee Assistance Program (EAP) provided as a benefit to all employees is available for those employees wishing to seek confidential

assistance with any personal chemical dependency issues. This service is available 24 hours a day, 7 days a week and can be accessed by any employee. Trained personnel will direct you to a local counselor or other resources in the community. Information will not be shared with Associated Terminals' management.

## **F. COMPANY PROVIDED ASSISTANCE**

- Although not required, employees recognizing the need to seek assistance with dealing with a chemical dependency matter are encouraged to report this issue to your immediate supervisor or directly to the Human Resources Department. Employees requesting assistance will not be disciplined, but will be directed to a structured rehabilitation program.
- Employees reporting substance abuse prior to the discovery of the same via an actual drug screen or notification of a random, post accident or reasonable suspicion will be allowed to continue to work upon receipt of a negative drug screen.
- The employee must also agree to submit to periodic drug screens and participation in the defined outpatient rehabilitation program. Verification of compliance will be received weekly from the program. The employee will be required to attend all scheduled meetings and meet the mandates of the program. Any employee failing to meet any of the requirements of the program shall be disciplined up to and including termination.
- Once an employee reports the abuse to the supervisor, the supervisor will then contact the Director of Human Resources to insure that the employee is added to the Program.
- The Human Resources Director will meet and provide a written counseling to the employee while explaining the requirements of the Company Assisted Program.
- The Human Resources Department will maintain a roster of all employees on the program maintaining records of employee compliance. Note it is not the duty of the Human Resources Department to request documentation supporting the employee's adherence to the program. Rather, that responsibility lies with the employee.
- After receipt of the original negative drug screen and the employee being allowed to return to work, employees are reminded that any subsequent positive drug screen will result in termination with no chance for re-hire.
- Employees seeking assistance for any substance abuse program can do so by contacting any of the resources provided below.

## TREATMENT

Individuals enrolled under the Company's group health plan, local or regional insurance coverage should refer to the plan document for possible coverage of treatment for a chemical dependency. Below are additional sources to assist employees with dealing with substance abuse issues.

### **Townsend Recovery**

Phone: (800) 504-1714

[www.townsendrecovery.com](http://www.townsendrecovery.com)

### **Substance Abuse Treatment Locator**

[www.findtreatment.samhsa.gov](http://www.findtreatment.samhsa.gov)

Phone: 1-800-662-HELP

This Substance Abuse and Mental Health Services Administration (SAMHSA) Web site and toll-free phone line help individuals locate drug and alcohol abuse treatment programs in their communities.

### **AlcoholScreening.org**

[www.alcoholscreening.org](http://www.alcoholscreening.org)

This free, confidential Web site lets individuals privately assess their own drinking habits and receive personalized feedback to help them determine if they need help to change those habits. Individuals can also find out about facilities in their communities that offer drug and alcohol abuse treatment and consultations with qualified health professionals regarding alcohol problems.

### **Al-Anon/Alateen**

Phone: (888) 4AL-ANON

[www.al-anon.alateen.org](http://www.al-anon.alateen.org)

Al-Anon provides information on the effects of alcohol abuse and refers friends and families of alcohol abusers to nearby support groups. Al-Anon's purpose is to help families and friends of alcoholics recover from the effects of living with the problem drinking of a relative or friend. Alateen is the organization's program for young people whose lives have been affected by someone else's drinking.

### **Alcoholics Anonymous (AA)**

Phone: (212) 870-3400

[www.aa.org](http://www.aa.org)

AA offers a way to stop drinking to individuals who feel they have a problem with alcohol. AA groups are located in most cities and rural communities throughout the country. Look up "Alcoholics Anonymous" in a local telephone directory for a contact in your area.

### **Cocaine Anonymous**

Phone: (800) 347-8998

[www.ca.org](http://www.ca.org)

Cocaine Anonymous provides support for people dependent on cocaine and other mind-altering substances. Callers are referred to local help lines.

### **Nar-Anon**

Phone: (800) 477-6291

[www.nar-anon.org](http://www.nar-anon.org)

This worldwide program provides support for friends and families of individuals with substance abuse problems.

# GENERAL SAFETY POLICIES

## P-1 SCOPE

It is the policy of Associated Terminals, LLC (AT) that all employees and contractors comply with all safety policies and rules presented in this manual in all circumstances where the policies or rules apply. AT's main objective is to maintain a safe operation; therefore, the rules in this safety manual define the minimum level for safe working on AT facilities. AT employees' and contractors' first responsibility is to perform their work safely to prevent injury to themselves and others.

## P-2 KNOWLEDGE

Each AT employee should have access to this manual and know and understand the rules and policies that apply to his or her work.

## P-3 SAFETY INDUCTION

All personnel will be accounted for at the pre-assigned muster stations using the personnel roster. Upon arrival and before performing any work, all personnel new to the location, whether AT employees or contractors must attend a safety induction. The safety induction includes the layout of the location, emergency actions, different alarm types, and emergency procedures. All new arrivals must sign the rig logbook. They are also shown the storage location of spare life jackets, and emergency escape routes.

All personnel will receive an explanation of emergency procedures, simultaneous operations if applicable, location of first aid and PPE equipment, injury/illness reporting procedures, safe work practices, personnel floatation and other lifesaving devices, hearing protection requirements, escape routes, evacuation procedures and safe transfer procedures. Refer to the AT Safety Induction Form.

All employees are expected to promote and practice safe operations at all times. All AT employees are required to attend pre-work and pre-job meetings which occur daily.

It is the responsibility of the Person in Charge (PIC) and each supervisor to ensure that all new employees, and all employees given new job assignments for which they have not been trained, are trained and fully understand the hazards unique to the job assignments.

Management believes in a 100% safe operation. Our goal is to prevent all injuries, but only with the help of each employee can this become a reality. These beliefs and goals are communicated most effectively through Safety Meetings. Pre-work shifts safety meetings are held before each scheduled period of work to

familiarize the employee with what he/she will be doing the next 12 hours. Emphasis is placed on 100% attendance at all safety meetings. Also full participation is stressed by supervisors who often have individual employees conduct the meeting that may include gathering of information for the meeting. This makes each employee an active part of the team. Every employee has the right and authority to shut down any job at anytime if he/she feels safety is being compromised or if he/she sees a hazard.

Semi-annual meetings are held with all PICs, Location Managers, Operations Managers, Directors of Team Safety, the Risk Manager, and the Sr. Vice President of Operations. These meetings cover the overall progress of the safety program with special emphasis on the BOOM program.

Safety audits are conducted on a regular basis and results reported directly to the Location Managers, Operations Managers, and Sr. Vice President of Operations.

#### **P-4 ENFORCEMENT**

Employees must understand that failing to observe safety rules can result in serious injury to themselves or to fellow employees. Consequently, unsafe work practices may result in disciplinary action that could ultimately lead to termination of employment.

#### **P-5 INVESTIGATIONS**

All work-related accidents, incidents, illnesses and near misses shall be reported to supervisory personnel immediately. Investigations will be conducted according to AT's established policies as detailed in the Incident Investigation Procedure.

All injuries, no matter how minor, shall be reported to their appropriate supervisor and the PIC immediately. The PIC shall then notify the Safety Training Specialist.

#### **P-6 GOVERNMENTAL SAFETY STANDARDS**

In addition to its own safety standards, rules, and policies, AT and its employees and contractors are subject to regulations of various governmental and jurisdictional agencies in the areas where AT facilities operate. Management and supervisory personnel must make sure that all applicable provisions of the governmental regulations are complied with and that employees are made aware of these requirements where they differ from the requirements identified in this and other AT manuals.

## **P-7 REVISIONS**

Revisions or amendments to these policies and rules shall only be made in accordance with the policies and procedures established by AT and are effective on the date they are issued.

## **P-8 ADDITIONAL INFORMATION**

As necessary, additional information and instructions relating to the safe performance of work may be issued through safety bulletins, operating and maintenance instructions, letters, and other means to supplement the safety/alerts, rules, guides, and procedures identified in this manual.

Supervisory personnel shall make these supplements available to all affected employees.

## **P-9 INTERPRETATION**

The policies, rules, and practices identified in this manual shall be interpreted to bring about maximum compliance and safe work practices and shall take precedence over any conflicting instructions.

## **P-10 EMPLOYEE QUALIFICATIONS AND PERFORMANCE OF DUTIES**

No employee shall attempt work they are not trained to do.

Employees must not operate, repair, or maintain any equipment for which they have not been trained to work on unless they have the permission of their immediate supervisor or are under direction of qualified and competent persons.

Possession or use of alcoholic beverages, illegal drugs, or drug-related paraphernalia or firearms by any employee or contractor while on any AT facility is sufficient cause for termination. Any look-alike or generic drugs found on anyone's person or possession are also grounds for termination.

Employees, contractors, and others who are under the influence of alcohol or drugs shall not be permitted to travel to any job site and are subject to disciplinary action including termination.

When supervisory personnel believe that any employee and/or contractor is not properly trained, qualified, or mentally or physically fit to perform the work assigned, they shall prohibit that employee or contractor from working until satisfactory medical or other evidence indicating fitness is obtained.

All employees shall exercise reasonable care when performing their duties and act in a manner that ensures their own safety and health and that of other personnel with whom they may be working or with whom they come in contact.

Employees shall not engage in practical jokes, scuffling, horseplay, or any other activities that cause them or others to take unnecessary chances.

Scuffling, practical joking or any horseplay is positively prohibited and may result in disciplinary action including immediate termination.

All injuries or illnesses, no matter how slight, must be reported to your supervisor and an incident report must be submitted covering each incident.

All HAZARDS must be reported to your supervisor.

Employees are expected to participate in all phases of safety, and to have a positive safety attitude.

All employees are expected to work as a team. Help prevent your fellow employee from being injured.

Every employee is responsible for helping the new employee until he/she is familiar with his/her job and adequately trained.

All employees will be familiar with fire and abandon vessel stations.

## **P-11 FIRE PROTECTION**

Employees shall be made aware of the procedures, policies, and equipment relating to fire prevention and suppression. They shall also be familiar with the location of and use of all firefighting equipment in the area where they are employed.

All firefighting equipment shall be maintained in a serviceable condition at all times.

A firewatch must be used whenever cutting welding or burning operations are on going

Report all used fire extinguishers and damaged and/or missing equipment to the relevant supervisor immediately.

Smoking is permitted only in authorized smoking areas designated by the PIC.

Welding, cutting, grinding, chipping and/or drilling are permitted only when authorized by supervisors and upon obtaining a "Hot Work" permit.

All employees shall be familiar with locations, classes and operation of all fire extinguishers.

All fire hazards must be reported to the supervisors immediately.

Welding, cutting, grinding, chipping and/or drilling are not permitted on any fuel or chemical tank, drum, pit or compartment without the supervisor's approval and obtaining a "Hot Work" permit.

## **A. FIRE EXTINGUISHERS**

- Fire extinguishers are to be used on small fires to prevent their getting out of control.
- It is necessary that extinguishers are at top efficiency the instant they are needed.
- Fire fighting equipment is for fire use only, including fire hose.
- The PIC should assign a competent person the responsibility for proper inspection and maintenance of all fire fighting equipment. However all employees are obligated to review and report any discrepancies with the inspections.
- A tag, bearing the date of inspection, should be attached to each fire extinguisher. They shall be inspected monthly.
- Fire extinguishers, when used, should be sent in to be refilled. Manufacturers' instructions for refilling and maintaining extinguishers must be followed.
- The instructions on fire extinguishers should be lacquered in order to preserve them.
- All fire extinguisher hoses and nozzles should be kept free of obstruction at all times.
- It is important that people who use fire extinguishers know how to use them properly.
- Supervisors should instruct all employees in the proper use of all available fire fighting equipment.
- Fire drills will be held monthly to familiarize personnel with location and operation of fire extinguishing equipment.
- No repairs shall be made to the outer shells of fire extinguishers.
- Fire extinguishers should be located in approved locations, free from obstructions, where they will be immediately available at all times in the event of a fire.
- The extinguisher should be located as close as possible to the likely fire hazard.

## B. FIRE FIGHTING EQUIPMENT

### Types of Fires

- **CLASS A FIRE**- Paper, wood, cloth, excelsior, rubbish, etc. where quenching and cooling effect of water is required.
- **CLASS B FIRE**- Burning liquids (gasoline, oils, paints, cooking fats, etc.) where smothering action is required.
- **CLASS C FIRE**- Fires in live electrical equipment (motor, switches, appliances, etc.) where a non- conducting extinguisher agent is required.
- **CLASS D FIRE - COMBUSTIBLE METALS OR COMBUSTIBLE METAL ALLOYS** - Fires from magnesium, titanium, zirconium, sodium, and potassium.

### Use Following Extinguisher For:

- **Class A Fire**- Use foam extinguisher, ABC rated dry chemical or water extinguisher.
- **Class B Fire**- Use carbon dioxide extinguisher, dry chemical extinguisher, or foam extinguisher.
- **Class C Fire**-Use carbon dioxide extinguisher or dry chemical extinguisher.
- **Class D Fire** -Specially designated Class “D” dry powder-type extinguishers are required for these materials.

### DO NOT USE WATER OR FOAM ON CLASS C FIRES

Do not use fire fighting and other equipment except for the purpose for which it is intended.

## P-12 USE OF SAFETY DEVICES

Employees shall properly use all AT-furnished safety devices, as their duties require. All safety equipment will be used and maintained in accordance with manufacturers' recommendations and industry guidelines.

## P-13 REPORTING AND CORRECTING HAZARDS

Any defective tool, apparatus, equipment, and/or other hazardous condition or work practice shall be immediately reported to supervisory personnel who must then inform the PIC.

Unsafe or unhealthy conditions and/or work practices shall be corrected immediately.

When an imminent hazard exists that cannot be immediately corrected without endangering personnel, all personnel shall be removed from the area except those necessary to correct the hazardous condition. Employees who remain

must be trained and qualified to perform the necessary tasks and shall be provided necessary safeguards.

Employees are encouraged to make recommendations to improve the overall safety performance of the company and to do so without concern for criticism or reprisal.

## **P-14 HAZARD COMMUNICATION TRAINING**

Prior to starting work, everyone who works with or is potentially exposed to hazardous chemicals will receive training on the hazard communication standard and information regarding the following:

- Chemicals and physical properties of hazardous materials and the methods used to detect the presence or release of such items.
- Physical hazards of chemicals such as potential for fire, explosion, reactivity, corrosiveness etc.
- Health hazards associated with exposure to chemicals and the methods used to treat such.
- Exposure as well as the protective equipment required for any job using hazardous chemicals
- Hazards posed by unlabeled pipes
- How to read and interpret Material Safety Data Sheets (MSDS), understand NFPA labeling and where they are located

As hazards change or new ones enter the work place, retraining will occur with periodic safety meetings to ensure everyone is educated on the procedures regarding the handling of new hazardous materials. In addition, it is essential to keep all channels of communication open to allow feedback and possible improvements of the existing hazard communication program.

### **A. NON-ROUTINE TASKS**

When performing hazardous non-routine tasks such as cleaning tanks, major maintenance and repairs. Etc., a meeting will be conducted with the locations Safety Training Specialist to discuss the hazards pertaining to that particular job and the measures to be taken to reduce or avoid exposure.

## **P-15 WASTE MANAGEMENT**

Unfortunately, operations may generate waste and if mismanaged may threaten human health and the environment.

Some waste that operations may generate:

- Used engine oil
- Used Oil filters

- Oily debris
- Empty paint/thinner containers
- Cooking grease
- Paper products/dry garbage
- General trash
- Scrap metal
- Empty chemical drums
- Spent batteries

The responsibility to identify waste and learn methods of disposal is required. Your supervisor will assist you with proper handling.

### **P-16 SMOKING POLICY**

Smoking is only permitted in those areas specifically designated as smoking areas. The location of approved areas for smoking is determined based on the layout and space limitation of the facility and in consultation with the local workforce. Management shall have the final approval of designating nonsmoking and smoking areas.

### **P-17 EMERGENCY DRILLS AND EXERCISES**

To ensure that all crews are able to use the provided equipment at all times, monthly fire drills shall be conducted. Employees must be aware of the rig safety plan and fully familiarize themselves with the rig emergency systems and their duties in an emergency.

### **P-18 PERSONAL HYGIENE**

All personnel present on all AT locations shall conform to established personal hygiene standards.

### **P-19 HOUSEKEEPING**

Good housekeeping is an essential part of safety awareness and necessary for a safe working environment. Dirty or untidy working space and/or tools, as well as other equipment left lying around and obstructing escape routes are all potentially hazardous. In particular, the following housekeeping rules must be followed:

- Rubbish/waste shall be disposed of into the containers provided and not dumped overboard.
- Combustible materials, such as oil-soaked rags, paint-covered rags, waste shavings, packing, and rubbish, shall not be allowed to accumulate on benches, decks, or other areas and shall be disposed of in drums provided and not thrown overboard.

- Permanent decks and platforms shall be reasonably free of dangerous projections or obstructions and shall be maintained in good repair and reasonably free from oil, grease, and water. Where the type of operation necessitates working on slippery surfaces, such surfaces shall be protected against slipping by the use of mats, grates or other methods that provide equivalent protection.
- Decks and platforms shall be constructed and maintained in accordance with the current applicable standards.
- Guards, rails, gratings, and deck plate openings shall have a fixed barricade installed before removal.
- Flammable or explosive materials shall be stored in the designated safe area.

**In addition, operational housekeeping policies shall apply:**

- Main decks, and other work areas must be kept clean and clear of hand tools, loose boards, hoses etc.
- If after offloading cargo, the barge deck should be cleaned whenever possible to ensure good footing.
- Walkways should be kept clean by removing old rope, rags, and other items as necessary.

## **P-20 EXPLOSIVES AND FIREARMS**

Unauthorized explosives and firearms are absolutely forbidden on all AT worksites. Employees who fail to comply with this policy are subject to disciplinary action including immediate termination.

## **P-21 HOT WORK**

### **Definitions**

**Designated Area:** A safe area where welding and cutting is authorized.

**Fire Watch:** Trained personnel who are in attendance during the entire cutting and welding operation and are immediately available to extinguish a fire or take other effective action if needed.

**Hot Work Permit:** A special permit issued by line management which authorizes specific cutting or welding work at a specific location and time. (See Appendix A.)

**Welder:** Any operator of electric or gas welding or cutting equipment.

Hot Work Permits are to be used for work involving electric/gas welding, cutting, brazing and similar flame or spark producing operations. Fire watch shall be utilized whenever hot work is performed in locations where other than a minor fire might develop or either of the following conditions exists:

- Combustible material closer than 35 feet to the point of operation including wall and floor openings.
- Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings or roof and are likely to be ignited by conduction or radiation.

### **Completion of Permit and Work Planning**

- The scope of the work and any other applicable permit(s) must be identified.
- All known potential hazards must be identified and evaluated.
- The method to control the hazard must be identified.
- Plans should be developed for each item listed on the permit. If the item is not applicable N/A must be documented on the permit.
- Expiration date and time shall be determined by the scope of the work.
- The permit must be approved by the Authorized Company Representative.
- The permit shall be posted on site until completion of designated operations.

### **Responsible Operator** is required to:

- Plan the work and initiate the permit
- Review the permit with the Authorized Company Representative
- Understand the hazards and control methods
- Select the planned safety precautions and comply with provisions stated on the permit.
- Review the hazards and control methods and permit with the Authorized Company Representative
- Notify the Authorized Company Representative when the job is completed
- Return permit to the Authorized Company Representative when the job is completed

### **Authorized Company Representative** is required to:

- Review the permit with the Responsible Operator
- Understand the work to be accomplished
- Ensure the job site is inspected before work begins
- Identify potential hazards or changes in conditions which might impact the Permitted work and ensure hazards are eliminated and controlled.

- Review hazards and precautions with person(s) doing the work
- Approve the permit if the work plans are satisfactory
- Authorize the work to begin by signing and dating the permit when all planned items have been completed
- Ensure the job site is inspected after the work is completed
- Ensure the completed permit is returned to the STS to review and file the permit.

## **Training**

- All existing, new and transferred employees who will be involved with permit work must receive training and information commensurate with their assigned duties. Training will be accomplished prior to employee's participation in permit work
- Additional training and/or retraining shall take place when:
  - A permit has been changed
  - A permit review/audit reveals a deficiency
- Training records must be maintained which document the training content, employees name, trainers name and dates of training

## **P-22 BEHAVIORAL OBSERVATION AND ONSITE MANAGEMENT PROGRAM (BOOM)**

Associated Terminals, LLC has in place on all its facilities and locations the "Behavioral Observation and Onsite Management Program".

**BOOM** stands for Behavioral Observation and Onsite Management Program. The main objectives of the **BOOM** program are to learn how to practice safety awareness and recognize and eliminate **at-risk behaviors**, which are the major cause of workplace injuries.

The program consists of self-study workbooks; group discussion meetings with videotapes, and on-the-job field activities. These components are designed to introduce, teach, and reinforce the basic **BOOM** safety concepts.

### **These concepts are based on the following safety principles:**

- All injuries and occupational illnesses can be prevented.
- Safety is Everyone's responsibility.
- Management as well as all employees are directly accountable for preventing injuries and occupational illnesses.
- Safety is a condition of employment.
- Training is an essential element for safe workplaces.
- Safety Audits must be conducted.

- Safe work practices should be reinforced and all at-risk behaviors and unsafe conditions must be corrected promptly.
- It is essential to investigate injuries and occupational illnesses as well as incidents with the potential for injury.
- Safety off the job is an important element of your overall safety effort.
- Preventing injuries and occupational illnesses is good business.
- People are the most critical element in the success of a safety and health program.
- All operating exposures can be reasonably safeguarded.

## **TARGET AUDIENCE**

The target audience for **BOOM** is all employees, regardless of their background in safety, their job titles, or their positions within the organization. Because **BOOM** builds safety awareness among employees and into every employee's job, it can be applied in virtually any work environment.

## **P-23 RX SAFETY EYEWEAR PROGRAM**

AT has entered into an agreement with Wal Mart Vision Center to provide assistance to employees in the purchase of prescription safety glasses.

### Program Benefits

- Takes you and company out of the RX business.
- Gives employees a professional turnkey program from a local optical house that has numerous locations in AT areas of operation.
- Provides assistance in the purchase of prescription safety glasses while insuring the glasses you receive are ANSI Z87.1 safety frames with side shields.
- A competitive price range.

### **EMPLOYEE GUIDELINES**

#### ACQUISITION OF SAFETY PRESCRIPTION GLASSES

- Employee's guidelines for acquiring safety prescription glasses from approved locations in Louisiana and surrounding areas:
  - If an employee purchases RX safety glasses for the job, he/she may obtain eyeglass authorization forms from the Safety Training Specialist.
  - Have the Safety Training Specialist complete and sign his/her portion of the form. It will be necessary for the employee to furnish his/her name, assigned location/name and social security number on the form. When complete the employee may go to the most convenient location listed on attached list.

- Associated Terminals, LLC will assist the employee in the purchase of a basic set of prescriptive safety eyeglasses providing a voucher for up to \$47.00 for frames and up to \$60.00 for differing types of lenses. Any extras will be the responsibility of the employee.
- Employee must pay for any required eye examination.
- The approved locations will bill AT for the cost of the safety eyewear and AT will pay the invoice.
- Prescription eyeglass forms and the approved locations are located with the Safety Training Specialist.

## **P-24 USE OF POWERED INDUSTRIAL EQUIPMENT**

### **Operator Training**

Only trained and authorized operators shall be permitted to operate powered industrial equipment. All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial equipment operators and evaluate their competence in accordance with this procedure as well as Appendix A. Employees will be trained in accordance with the following guidelines.

- The company employ a competent person who will have the authority to provide training on the operation of powered industrial equipment.
- Employees of AT LLC will not operate powered industrial equipment (PIE) unless they have received training in accordance with this standard practice of instruction
- Personnel rotated within the company will have their training verified prior to being allowed to operate a PIE.
- Employee training files will be annotated with the date, title, and specifics of said training.
- Any employee who refuses such training will not be permitted to operate a PIE.
- Trainees may operate powered industrial equipment only:
  - Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and
  - Where such operation does not endanger the trainee or other employees.
- Retraining shall be provided for all operators:
  - Refresher training in relevant topics shall be provided to the operator when:
    - The operator has been observed to operate the equipment in an unsafe manner;

- The operator has been involved in an accident or near-miss incident;
  - The operator has received an evaluation that reveals that the operator is not operating the equipment safely;
  - The operator is assigned to drive a different type of PIE; or
  - A condition in the workplace changes in a manner that could affect safe operation of the equipment or operator.
  - Every three years
- Avoidance of duplicative training. If an operator has previously received training on and such training is appropriate to the PIE and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the PIE safely.
  - Retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.
  - Certification. This employer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training and any other information as required.

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### ***Operations Program***

- Equipment shall not be driven up to anyone standing in front of a fixed object.
- No person shall be allowed to stand or pass under the elevated portion of any PIE, whether loaded or empty and PIE will not be allowed to pass under crane/excavators buckets/attachments unless for the sole purpose of rigging to transport PIE to designated operations areas and crane/excavator operators will have all brakes and safety devices engaged.
- Unauthorized personnel shall not be permitted to ride on PIE.
- Arms or legs are prohibited from being placed between the moveable of the equipment or outside the running lines of the equipment.
- When the powered industrial equipment is left unattended, load engaging means shall be fully lowered, controls will be neutralized, power shut off, and brakes set. Wheels will be blocked if the equipment is parked on an incline.
- A PIE is unattended when the operator is 25 ft. or more away from the vehicle which remains in his view or whenever the operator leaves the vehicle and it is not in his view.

- When the operator is dismounted and within 25 ft. of the equipment still in his view, the load engaging means will be fully lowered, controls neutralized, and the brakes set to prevent movement.
- A safe distance shall be maintained from the edge of barges or other equipment and structures while PIE is in operations.
- Brakes will be set and wheel blocks in place to prevent movement of trucks, trailers, or railroad cars while loading or unloading. Fixed jacks may be necessary to support a semitrailer during loading or unloading when the trailer is not coupled to a tractor. The flooring of trucks, trailers, and railroad cars will be checked for breaks and weakness before they are driven onto.
- The operator will ensure sufficient headroom under overhead structures, lights, pipes, sprinkler system, etc. before operating the vehicle in these areas.
- An overhead guard will be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of falling material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- Only approved industrial equipment will be used in hazardous locations.
- Fire aisles, access to stairways, and fire equipment will be not be obstructed at any time.

**General requirements. Operators:**

- Will obey Plant/Site speeds and other traffic regulations at all times.
- Will operate loaded equipment with attachments low enough above the floor/ground, as to keep the equipment stable and not tip over.
- Will not carry anything on the overhead guard.
- Will use all plant/Site observation mirrors and adhere to all traffic controls and signals (i.e. traffic, flagman)
- Will ensure vehicle safety devices are operational.
- Will yield right of way to pedestrians, emergency vehicles, and avoid pedestrian lanes.
- Will drive cautiously on uneven or slippery surfaces.
- Will ensure the load is pointed uphill where the gradient is greater than 10 percent.
- Will ensure fire protection equipment is carried with the vehicle and is in proper working order

***Prestart requirements. Operators:***

- Will verify that all brakes, controls, gauges, lights, seat belts, and routine operational features are in proper working order. They shall be examined before and after each shift. Defects when found shall be immediately reported and corrected.
- Will remove the equipment from service any time it is found to be in need of repair, defective, or in any way unsafe, the equipment will be taken out of service until it has been restored to safe operating condition.
- Will check for leaks and perform necessary operator maintenance before starting equipment.
- Will report deficiencies to maintenance.
- Will ensure they know the load capacity and stay within it.
- Will be cognizant of the planned route and aware of areas with inadequate headroom, lighting, obstructions, and floor surface problems.
- Will wear the same level of personal protective equipment as the personnel they are directly working with.
- Will not engage in stunt driving or horseplay.
- Will slow down for wet and slippery floors.
- Will properly secure equipment before they are lifted over to its designated work area. All rigging will be inspected carefully before use and their rated capacity never exceeded.
- While negotiating turns, speed shall be reduced to a safe level by means of utilizing the steering functions in a smooth, sweeping motion. Except when maneuvering at a very low speed, the steering functions shall be utilized at a moderate, even rate.

***Loading/Unloading requirements. Operators:***

- Will ensure load is within the equipments rated capacity.
- Will secure the vehicle when not in use to prevent unauthorized personnel from operating the vehicle.
- Will tilt the buckets/attachment back to lift load.
  - Will ensure if loading onto trucks that the wheels are chocked, brakes are engaged.
  - Will ensure that materials are at proper angle of repose and that they are not working under dangerous embankments.

- Parking requirements. Operators:
  - Must select flat parking surfaces, away from where the vehicle does not block doors, pedestrian routes, exits, fire extinguishers etc.
  - Must not leave a truck unattended or be more than 25 feet from the vehicle without:
    - Fully lowering load-engaging means, neutralizing controls, shutting off power, setting the brakes.
    - Blocking the wheels if parked on an incline.

***Refueling requirements. Operators:***

- Refuel only in assigned, ventilated areas containing no ignition sources.
- Turn off engine.
- Have fire suppression and cleanup equipment available.
- Extinguish smoking materials.
- Use acid-resistant material-handling equipment and wear corrosion-resistant PPE during battery charging/charging.
  - Remove battery cap slowly and leave open.
  - Pour acid into water, not water into acid.
- Follow the vehicle manufacturer's instructions for refueling.
- Never use open flame to check fuel level.
- Try to prevent spills, clean any spills promptly, replace fuel cap before starting or moving vehicle.
- Battery maintenance requirements. Material handling equipment shall be provided for handling batteries. Reinstalled batteries shall be properly positioned and secured in the equipment. A siphon shall be provided for handling electrolyte. When charging batteries, acid shall be poured into water; water shall not be poured into acid. Trucks shall be properly positioned and brake applied before attempting to change or charge batteries. Care shall be taken to assure that vent caps are functioning. The battery (or compartment) cover(s) shall be open to dissipate heat. Smoking shall be prohibited in the charging area. Precautions shall be taken to prevent open flames, sparks, or electric arcs in battery charging areas. Tools and other metallic objects shall be kept away from the top of uncovered batteries.

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### **Configuration Program**

- No modifications or additions which affect capacity and safe operation shall be performed without the manufacturers' prior written approval. Capacity, operation, maintenance instruction plates, tags, or decals shall be changed accordingly.
- If the PIE is equipped with front-end attachments other than factory installed attachments, the PIE will be marked to identify the attachments and show the approximate weight of the PIE and attachment combination at maximum elevation with load laterally centered and outriggers will be utilized if so equipped.
- All nameplates and markings will be verified as being in place and maintained in a legible condition.
- Hazardous atmospheres. Power operated industrial equipment used by this company shall be used only in areas approved for their use. Operating areas shall be evaluated for hazards prior to operations in these areas before being approved.

#### **Equipment Operators shall be trained as follows:**

- Newly hired operators and/or operators in training must show familiarity with equipment operations and /or be supervised as to the functions of said equipment
- Operator must be identified to the STS for control of training and observations
- Operator in training must receive a minimum of 40 hours in field operations involving documented observations of actual run time.
- Operator will be trained in and show proficiency in use of pre-operational equipment inspection checklist.
- Operator will exemplify safe and proper operation of equipment to avoid injury to self and others and to prevent property damage and shall cover the following areas.
- Operator will be trained on the fundamentals of the equipment assigned to operate.
- Operator will be trained on the characteristics of equipment including variations between equipment types in the workplace.
- Operator will be trained on the similarities to and difference from automobiles.
- Operator will be trained on the significance in the nameplate data and load capacity rating.

- Operator will be trained on the operating instruction, warnings and instruction for inspections and maintenance to be performed by the operator.
- Operator will be trained on the type of motive power and its characteristics.
- Operator will be trained on the braking methods and characteristics with and without load.
- Operator will be trained on the visibility, with and without load, forward and reverse
- Operator will be trained on the load handling capacity, weight and load center, stability characteristics with and without load
- Operator will be trained on the controls; location, function, method of operation and identification of symbols
- Operator will be trained on the fueling and battery charging
- Operator will be trained on the guards and protective devices on specific type of equipment
- Operator will be trained on the rigging of equipment for transportation to and from rig, including
  - Proper size and condition of cables, slings, shackles and hooks
  - Proper attachment of rigging to bucket and equipment
  - Proper placement of equipment under the crane bucket to be lifted by the crane

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# GENERAL SAFETY RULES

## R-1 PERSONAL PROTECTIVE EQUIPMENT

### A. APPLICABILITY

- All AT employees and contractors must wear appropriate approved personal protective equipment (PPE) when working. All personnel must wear proper clothing, hard hats, safety footwear, and eye protection while on AT locations. All PPE is to be worn in accordance with the manufacturer's specifications.
- This rule gives the minimum requirements for working gear and eye, head, hand, ear, and foot protection. PPE for specific hazards, including working in hazardous areas, or with hazardous materials and working at heights, are detailed later in this manual. These rules were developed based on a hazard assessment that was conducted in each area of operation. The hazard assessment consisted of a walk through survey to identify sources of hazards to the eye and face, head, hands and feet. The assessment considered the following basic hazard categories: impact, penetration, compression, chemical, heat and harmful dust.
- The required PPE as determined by the results of the hazard assessment, for each job and area of operation, can be found in this manual.
- The employee's immediate supervisor is responsible to ensure that all PPE is in good condition and is worn in accordance with the manufacturer's specifications.
- Personal Protective Equipment that is defective or damaged shall be immediately taken out of service and discarded.
- All PPE with the exception of safety footwear is provided by AT.
- Employees with a minimum of 12 months of employment shall be eligible for the AT Boot Purchase Assistance Program. AT, at its discretion, will pay up to \$90 for a pair of steel toe boots which are purchased through the program and a pre-arranged vendor. Any cost above the \$90 will be at the employee's expense.

### B. WORK CLOTHES AND PERSONAL PROTECTIVE EQUIPMENT

- Wear clothes that fit well (neither too baggy nor too tight) and completely cover your legs and upper arms.

- Minimum requirements for work clothing are sleeved shirts; sleeve must reach mid-upper-arm, and long pants, or coveralls with short sleeves.
- Clothing must be in good repair (no tears, rips, holes, or missing fasteners).
- Launder or properly dispose of clothing contaminated by oil, chemicals, or toxic substances.
- Various types of work gloves are available. Wear the appropriate type when hands may be exposed to hazards such as skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes.
- Personal flotation devices (PFD) are to be worn on all floating barges while outside of handrails and protected areas not within 10 feet from the edge of the barge. PFD's shall also be worn by dockside personnel performing task within 10 feet from the edge of any dock. PFD's shall also be worn while being transported to any offshore location via crew boat.
- Hard hats must be worn in all areas except in offices and break rooms. (ANSI Z89.1) No metal hard hats!
- Steel toe safety boots must be worn at all locations including crew boats. (ANSI Z41.1)
- It is also recommended that each employee obtain a slicker suit for working in the rain.
- Dangling chains, earrings or bracelets will not be worn anytime you are on an AT Facility.
- Rings present a special hazard when working offshore and they shall not be worn while working. (Exception – Medical necklace or bracelet)
- Hearing protection shall be worn in areas noted as high noise areas.
- Safety glasses with fixed side shields shall be worn at all times outside of offices and crew quarters. (ANSI Z87.1)
- Safety goggles and a protective face shield shall be worn when performing certain jobs such as:
  - Grinding

- Buffing
  - Chipping
  - Welding
  - Pressure Washing
  - Operating trimmers
- In addition, when any other type of work which injury to the eyes may exist
    - **OTHER TYPES OF SAFETY EQUIPMENT ARE REQUIRED FOR SPECIFIC JOBS TO PROTECT EARS, HANDS, HEAD, FEET AND RESPIRATORY SYSTEMS. CONSULT YOUR SUPERVISOR ON THIS MATTER.**

### **C. SAFETY GLASSES**

- At a minimum, wear safety glasses with fixed side shields that meet the ANSI Z87.1 standard.
- Safety goggles and full-face shields are required for specific hazards. Be prepared for flying particles, molten metal, liquid chemical, acids or caustic chemicals, chemical gases or vapors, or potentially injurious light radiation.

### **D. HARD HATS (SAFETY HELMETS)**

- Do not wear metal hard hats hard hats must meet the ANSI Z89.1 standard. Only company issued hard hats are allowed. (Cowboy hard hats are not permitted)
- Hard Hats must not be altered or holes drilled in the hard hat.
- Hard hats shall not be worn backwards.
- Ball caps are not to be worn under hardhats, only welding caps and do-rags are permitted.
- Short Service Employees (SSE) must wear yellow hard hats.

### **E. HEARING PROTECTION (EAR PLUGS)**

- This Hearing Conservation Program was developed to provide guidance to prevent noise-induced hearing losses from work place exposures.

- Prolonged employee exposure to high noise levels result in permanent hearing loss. Once a noise-induced loss has been acquired, normal hearing cannot be restored. However noise-induced hearing loss can be prevented for most personnel by an effective hearing conservation program.
- Employees are provided with the opportunity to select their hearing protectors from a variety of types at no cost to the individual. Types of hearing protectors that may be provided include: Disposable plugs, reusable plugs, headband plugs and/or earmuffs.
- An employee's hearing protector should suit the shape of his or her ear, provide the degree of protection needed and be comfortable to wear.
- Hearing protection equipment should also be practical in terms of job requirements, such as hard hats, low overheads and face shields. The best ear protector is the one that is accepted by the employee and worn properly.
- Each type of hearing protector should have a "**Noise Reduction Rating**" (NRR) expressed in decibels (dB) The NRR system tells how much noise each type may attenuate, usually between 15-30 dB, when the protector is fitted properly. Hearing protection equipment should be selected with the goal of attenuating noise levels less than 85dB. The 85 dB goal should be achieved utilizing a 7-dB safety factor as recommended by Occupational Safety and Health Administration (OSHA).
- Effective use of proper hearing protection devices requires training personnel. Employees must understand the importance of ear protection and the benefits to be gained from its consistent use.

Employees should be told the following:

- Good protection depends on a good seal between the surface of the skin and the surface of the ear protector.
- A small leak can destroy the effectiveness of protection.
- Protectors may have a tendency to work loose because of talking, chewing, etc., and they must be resealed from time to time during a workday.
- Skin irritations, injured eardrums or other harmful reactions are exceedingly rare provided earplugs are kept reasonably clean. A

properly designed, well-fitted and clean ear protector will cause no more difficulty than a pair of safety goggles.

- The use of ear protection will not make it more difficult to understand speech or to hear warning signals when worn in a noisy environment.
- Covering the ear with a muff or inserting a plug into the ear canal achieves effective protection. Muffs generally have Noise Reduction Ratings (NRR) between 15 and 20 dB. They are especially useful as extra protection worn over plugs in extremely noisy environments such as turbine generator rooms.
- Earmuffs are not intended for multi-person usage unless provisions are made to clean after each use. One drawback of muffs that should be considered is the use of eyeglasses, which will prevent an effective seal.
- Varieties of earplugs are available such as disposable plugs, reusable plugs and headband plugs. Earplugs have NRR's ranging from 6 dB to 35 dB. Disposable plugs are usually made of low cost foam or silicone materials and are intended for one time use. Reusable plugs come in many sizes, shapes and materials. They may be washed with soap and water and the expandable foam types will fit most ear canals.

## **F. SAFETY BOOTS**

- Protective footwear must meet ANSI Z41
- Footwear must not have exposed steel studs, caps, or plates.
- Footwear must be clean and free of any substances that can cause slipping.
- Footwear must have a defined heel. The heel and the sole must be of single construction.
- Good, steel toe boots **must** be worn in the field, or in any location where the potential for foot injury exists. The wearing of hobnailed shoes or shoes with protruding nails or metal taps is prohibited. Neoprene or non-slip boots that are oil resistant are recommended.

## **G. RESPIRATORY EQUIPMENT**

The purpose of this guide is to describe the use of respiratory protection equipment on AT facilities. Each facility shall implement

the AT Respiratory Protection Program to minimize the exposure of personnel to airborne hazards

AT uses these principal types of respiratory protection:

- Dust Filter Masks
- Disposable and cartridge-type respirators
- Escape units
- Self-contained breathing apparatus (SCBA)

Breathing apparatuses, other than disposable respirators, must only be used by AT personnel and contractors trained to use them and with supervisor approval.

## **CARDINAL RULE**

Respirators used in oxygen-deficient or toxic gas atmospheres must be a positive-pressure (pressurized air supply) type. Do not wear an air-purifying or cartridge-type breathing apparatus when working around toxic gases. AT employees are not to enter any area, which has been deemed oxygen deficient, toxic and/or hazardous without the proper respirators.

## **MASK AND CARTRIDGE-TYPE RESPIRATORS**

Use disposable and cartridge-type respirators only in an otherwise safe atmosphere (normal oxygen content) that contains airborne particulate material. Typically, this material is generated from work activities such as cleaning and grinding. Dust masks filter dust-sized particles only and do not protect against gases, vapors, or solid particles of fumes or smoke; therefore, are not allowed.

## **SELF-CONTAINED BREATHING APPARATUS**

An air cylinder rated for 30 or more minutes is used to enter a hazardous environment for emergencies only, not for routine work. It's the most flexible because it allows you to move from area to area without disconnecting from the airline supply, and it has a device to warn you when approximately 5 minutes of air remain.

## **PROFICIENCY DRILLS AND TRAINING**

Each year, AT trains employees how to use respiratory protection equipment. This training is conducted regularly on the rig and includes fit testing, proficiency drills, and a medical questionnaire.

## **FIT TESTING**

Fit testing makes sure that respiratory equipment is properly adjusted, with a snug seal between the mask and the face. If you wear glasses, get fitted with a face piece spectacle kit that allows you to wear glasses under the face piece.

## **H. ELECTRICAL WORK**

- Employees working in areas where there are potential electrical hazards shall be furnished with, and shall use, electrical protective equipment that is appropriate for the work being performed. Personal protective equipment (PPE) to prevent injury from electrical hazards shall be made available.
- Test equipment for high and low-voltage applications. The equipment shall be inspected regularly for defects and calibrated and serviced annually. Equipment rated for high-voltage applications shall be provided with a certification of calibration to be renewed annually. Do not use damaged or compromised test leads.
- Use Rubber gloves of a suitable and approved type for the voltages being worked on. Gloves are for emergency use only. Follow these guidelines when storing or using rubber gloves designed for protection from electrical hazards.
- Dielectrically test all gloves used to protect against electrical hazards when received from the manufacturer and before they are issued.
- Dielectrically test gloves rated above 600 V once every 6 months.
- Store, maintain, inspect, and use gloves according to the manufacturer's instructions.
- Store gloves unfolded at a temperature between 50°F and 70°F (10°C and 21°C).
- Store and issue gloves so that they remain free from potential mechanical damage and contamination such as oils, grease, paint, thinners, acid, or any other material that would adversely impact their ability to provide the rated protection.
- Before using gloves, carefully inspect them for any defects inside and out and air test for leaks.
- Thoroughly dry gloves that become wet before storage or use.

- Remove worn or damaged gloves from service and cut off the fingers to prevent future use.
- Note the maximum voltage for which a glove can be used marked on the outside of the glove sleeve.
- Use rubber mats when working on or in the presence of live conductors. The mats should be inspected daily before use and discarded if damaged or worn.
- Use insulated tools when working on, or in the presence of, live conductors. The tool insulation must be rated for a voltage higher than the supply voltage to the conductor.
- Keep a “shepherd’s crook” in the work area when working on or near live conductors. A shepherd’s crook is a long handled, hooked, insulating device used to remove a person from live conductors. The shepherd’s crook should be rated for the highest voltage found on the location.

## **I. PPE FOR WELDING, CUTTING, GRINDING AND BURNING**

### **HAZARDS**

#### Fume Risks

- Toxic gases and fumes produced in welding operations create serious hazards.
- Nitrous fumes may be produced if the oxy-acetylene flame is permitted to impinge on a large mass of metal for long periods during gas welding. A deficiency of air during such work may also produce carbon monoxide.
- The arc welding of iron or steel is accompanied by the evolution of considerable quantities of fumes consisting of very fine particles of iron oxide. The welding of brass, bronze and manganese steel generates large quantities of carbon monoxide and carbon dioxide gases which require the provision of adequate ventilation or the wearing of suitable apparatus to give effective nasal / oral protection.
- Harmful fumes may be produced by the action of the arc or flame on certain paints and protective coatings on the metal being welded. The welding and cutting of coated materials should only be carried out when adequate means for removing the fumes are provided or adequate respiratory devices are available.

- Lead based paints and tinsplate emit harmful lead fumes when welded or cut. Inhalation of the fumes produced during the welding and cutting of zinc-galvanized metal may result in an attack of metal fume fever, which is characterized by a raised temperature, aching muscles, shivering and sweating. These symptoms develop in a few hours after exposure to the fumes and disappear after about 24 hours.
- The welding of greasy material can produce fumes; therefore such material should be degreased before welding. Parts, which have been degreased, should be dry before welding.

### **P.P.E. WHILE WELDING**

The following requirements for P.P.E. apply:

- Approved Goggles, screens, helmets and protective clothing shall be used for all welding operations. Personnel nearby whom may be exposed to the radiation and flash from this type of work shall also be protected.
- Leather gauntlet gloves, or some other non-ignitable material, to shield the hands and arms from the radiation of the arc and from sparks. Note that leather gloves and gauntlets give little insulation against electrical hazards.
- A thick apron of leather, or other suitable material, may be needed if the welder is sitting at his work position where molten metal may fall upon his thighs or legs. If the arc is above the level of his shoulders or overhead, complete protection for the head, arms and upper part of the body is necessary.
- A common cause of eye injury is the chipping away of slag, which covers the weld when coated electrodes are used. In these circumstances, goggles and face shield or equivalent eye protection shall be worn.

### **VENTILATION AND RESPIRATORY PROTECTION FOR GAS WELDING**

- When vessels and tanks are being welded or burned on the outside, there is a danger of toxic or flammable gases collecting within. Care shall be taken to ensure adequate ventilation and / or respiratory protection.
- The application of an oxy-acetylene flame to sheet metal, coated with metallic lead, zinc, lead paints or other injurious substances, may give rise to highly toxic vapors, particularly in cutting work where an

excess of oxygen is required. For such work, a suitable breathing protection device shall be worn.

- Compressed oxygen shall never be used for ventilating purposes, or be blown through acetylene piping.
- Cylinders of compressed gas shall always be kept outside any module or enclosed space where welding / cutting is taking place.
- Where metal spraying, a fine metallic dust is produced; breathing apparatus shall always be worn.

## **ELECTRIC ARC WELDING AND BURNING**

### Hazards and Precautions

- The injurious effects of the radiations from a welding arc on the eyes and skin can cause a temporary or permanent eye injury, which may not become apparent until some four to eight hours later.
- Skin should not be exposed to the welding arc as radiation burns may result.
- Work shall be effectively screened from other workers in the vicinity.
- Goggles and full-face shield and visor must be worn when operating or working near a powered grinding or cutting machine. AT issued safety glasses are not to be worn for the above operation.
- Any employee who uses AT issue safety glasses for this procedure will be subject to disciplinary action taken against them.

## **GRINDING**

- Full protective clothing must be worn while carrying out grinding or cutting operations including safety face shield, earmuffs, respirators, goggles etc.
- Earplugs and respiratory protection must be worn while carrying out grinding or cutting operations.

## **R-2 WELDING, CUTTING AND GRINDING**

### **GENERAL REQUIREMENTS**

All welding, cutting, burning, brazing, grinding and soldering operations shall be conducted under the conditions of the Hot Work Permit and all conditions laid down on such permits shall be strictly adhered to, in particular:

- Gas testing shall be carried out before work in any area commences and the area shall be continuously monitored throughout the process.
- All other equipment shall be isolated, drained, gas freed, cleaned and made safe as appropriate.
- All welding, cutting and burning operations shall be carried out by qualified and experienced persons, using equipment of approved type in serviceable condition. Once hot work is complete, the area must be continuously monitored for 30 minutes and checked randomly thereafter.
- Safety equipment and clothing shall be worn according to the work in hand.

#### **FIRE/EXPLOSION**

- A welder and any helper shall be alert to the dangers of fire and explosion. No welding or cutting shall be done without a Hot Work Permit and the conditions laid down on that permit shall be strictly observed.
- Work shall be screened to prevent sparks and hot metal from flying outside the immediate work area. Welding booths and screens shall:
  - Be non-combustible.
  - Have interior surfaces, which minimize the reflection of dangerous radiation.
  - Allow thorough ventilation.
  - All combustible material shall be removed or shielded if it is in danger of ignition.
- When working at a height, precautions shall be taken to prevent welding rods and spent stubs from falling. Spent metal rods should be disposed of in a metal container.
- In all welding operations, a portable fire extinguisher shall be readily accessible near the work. An extinguisher designated for fire watch should be used, NOT one designated for emergency use.
- The welding ground/earth cable should be fixed at the work site or, if this is not practical, within 10 feet of the work site and should always be visible to the fire watch.

- Welders shall never coil hoses or cables around their body when burning or welding.
- Any welding, cutting or heating torch, when not in use, shall be extinguished and only re-lit when next required.
- Torch and hoses shall not be left in vessels or enclosed spaces when they are not in use as gas leaks render the atmosphere in the vessel dangerous.
- If the general requirements of this section cannot be achieved, then welding, cutting, grinding or burning shall not begin.

### **FIRE WATCH**

- Firewatchers must be trained in the use of fire extinguishing equipment and familiar with the facilities for sounding an alarm in the event of a fire.
- A firewatcher shall be present at each site where welding, burning and grinding operations are being carried out.
- When welding is being performed at heights, additional firewatchers should be placed at different levels exposed to ensure no sparks fall to the area and ignite.
- Each firewatcher shall have an extinguisher close at hand. Firewatchers will wear a high visibility yellow vest.
- The firewatchers' duties, as well as checking for outbreaks of fire or smoldering materials, warning passing personnel of spark hazards and stopping the hot work operations should the potential for any incident occur.
- Firewatchers shall periodically check the works area for fire or smoldering materials. They should thoroughly check the work area for fire hazards, e.g. hot slag after work has finished and remain in the area until no ignition source remains, for a minimum of 30 minutes.

### **CYLINDERS, HOSES AND TORCHES**

- Oxygen and acetylene cylinders should be handled carefully even when empty. Rough handling may damage cylinders or cause leakage with consequent danger of fire and explosion.

- Dented cylinders should never be used. Cylinder valves must be closed and safety caps installed before cylinders are returned for refill.
- Safety Caps shall be installed when bottle is not in use.
- Cylinders should be kept upright. Acetylene cylinders must never be placed in a horizontal position.
- Cylinders should be stored with valve ends up in a safe, dry, well-ventilated place not exposed to heat from radiators, and the like, or to the direct rays of the sun.
- Full cylinders of oxygen and acetylene should be securely fastened in racks, conveniently located, so that gauges and hose may remain attached without the necessity of their being moved from place to place. Oil and grease must be kept away from valves, hoses and gauge connections.
- No attempt should be made to transfer any gas from one cylinder to another.
- The valves on cylinders must be closed when the cylinders are not in use and when they are empty.
- Damaged acetylene cylinders should be vented, tagged, and returned to owner.
- Oxygen and acetylene cylinders must not be stored together and should be stored outside.
- The use of oxygen or acetylene cylinders as rollers or as supports for workbenches is prohibited.
- Torches and blowpipes should be examined closely for leaky valves, leaky nozzles, and leaky tips.
- The hose on oxy-acetylene welding units should be racked properly when not in use. Master valves on oxygen and acetylene cylinders should be closed and pressure should be bled from regulators and hoses after use.
- Hoses and valves should be inspected regularly. A few inches of that part of the hose near the torch, which is subjected to the hardest use, should be cut off at intervals and the hose re-attached.
- Leaks and bruises in the oxygen or acetylene hose must be repaired immediately.

- Should hose catch fire, the valve at the drum should be closed. No attempt should be made to extinguish the fire by pinching the hose, as this will cause fire to follow the hand.
- All gauges should be removed, valves closed and safety caps installed when bottles/racks are being moved.

## **GAS WELDING AND CUTTING**

### Equipment

- Only high-pressure torches shall be used with high-pressure equipment.
- All torches shall be dismantled and cleaned internally at regular intervals. Only the manufacturer's recommended tip cleaner, not a hard metal reamer, should be used for cleaning or altering the torch tip, but accumulated slag should be removed frequently during operation. The torch tip shall not be dipped into the molten metal otherwise it will block up.
- Torches shall be connected to the oxygen and acetylene supply by reinforced rubber hose, firmly attached, red hose being for acetylene and other flammable gases and blue or green for oxygen. Hoses and lines should be examined at monthly intervals and damaged hose rejected.
- The supply of both gases shall be shut off before changing the torch or cylinder.
- All equipped with safety check valves at the torch end and at bottles.
- Testing for leaks on cylinders and fittings shall be made by the use of a soap solution or by audible detection.
- Spark igniters shall be of a type, which has an approved device to prevent accidental operation.

### Control of Spark Igniters

- Igniters are not to be carried into hazardous or classified areas.

### Lighting Up

- It is important that an adequate flow of fuel gas is issuing from the nozzle of the torch or other apparatus before lighting up. Personnel shall use the following procedures:
  - Set the regulators to the recommended working pressure.

- Keep the torch nozzle away from any source of ignition until the fuel gas is flowing freely from the nozzle.
- Use an approved spark igniter to light the torch.
- Spark guns should be left at the site in a permit folder and not carried in hazardous areas.
- Flashback arrestors to quench flashback flames and cut off the gas flow automatically are to be fitted.
- If the torch flashes back on lighting up, it is because the regulators are not set to the correct pressures or a light has been applied before the flow of fuel gas is properly established. A flash back must be reported to the supervisor before resuming work.
- If the flame snaps out when the torch is in use, it is because:
  - Regulator pressure and / or gas flow is incorrect, either too high or too low.
  - The nozzle has been obstructed.
  - The nozzle has been held too close to the work.
  - The nozzle has become overheated.
  - In the last case, completely shut both torch valves. Plunge the nozzle and torch head into water. Make sure that the nozzle is tight before re-lighting the torch.
  - Check the regulator and cylinder pressures, and then re-light in accordance with the above procedure.

## **PREPARATION**

The following preparations shall be made as appropriate:

- Check that all tanks, vessels and equipment on which welding, cutting, burning, brazing or soldering work is to be carried out, are free from flammable gases and vapors, oil and sludge. Do not use any naked light before a Hot Work Permit has been issued in accordance with these procedures.
- Do not, under any circumstances, use compressed oxygen for ventilation or to blow through acetylene hoses. Explosions can occur when acetylene gas is present in air in any proportion between 2.5% and 80% by volume.

- Inspect the spaces where flammable material may be found before welding or burning operations begin.
- If necessary, before cutting into tank or line, drill test holes and take gas tests to ensure that conditions are safe under the tank or pipe.
- Inspect both sides of a bulkhead before commencing work to ensure no hazard exists.
- Ensure that welding and burning equipment is properly maintained and well located with proper lighting. Check that ventilation is adequate. Keep the work area tidy throughout the operation.
- Do not use old barrels or drums to support work – they may explode and are unstable.
- Only use the approved flint guns supplied for the purpose to ignite oxy-acetylene or propane flames.

### **R-3 ELECTRICAL TOOLS**

All electric tools must be grounded or double insulated. The user and maintenance personnel must inspect all electrical tools prior to their initial use and periodically thereafter. All electrical tools are to be entered in the power tool register and tagged in accordance with AT Electrical Procedures.

### **R-4 LOCKOUT/TAGOUT SAFETY PROCEDURE**

#### **PURPOSE**

This standard established procedures for the safety of personnel working on equipment that must be locked out to prevent an unexpected release of stored or trapped energy, i.e., electrical, hydraulic, pneumatic or mechanical. Failure to follow this procedure including failure to isolate potential energy sources, failure to properly tag equipment, or ignoring a tag will result in immediate termination.

#### **SCOPE**

The lockout/tag out procedure shall be implemented before commencing any work requiring employees to work on or near de-energized circuit parts or equipment in any situation where there is danger of injury due to unexpected energizing or startup of equipment.

The lockout/tag out procedure shall also be implemented in coordination with appropriate procedures for safely isolating other energy systems

such as process fluids, hydraulic, pneumatic, thermal, chemical and mechanical systems.

The procedure shall also be implemented immediately when equipment becomes unsafe to operate or when maintenance to the equipment is required or scheduled.

## **PROCEDURES**

Perform an initial evaluation to identify potential exposure(s) that must be isolated before safely working on equipment.

Notify affected personnel and shutdown the equipment according to established shutdown procedures with approval of the responsible supervisor or his representative.

## **ELECTRICAL LOCKOUT/TAGOUT**

- The person doing the work shall **LOCK** open the circuit breaker(s) or approved disconnect device using an approved lock.
- **TAG** the lockout with a dated and signed “**DANGER, DO NOT OPERATE**” tag. The reason for the lockout should be written on the tag.
- Any additional personnel doing work on this equipment or desiring it to remain inoperative shall insert a lock and danger tag in the same lockout. They shall also sign, date and write the reason for lockout on their tag. Never install a lock without a tag when implementing the lockout/tag out procedures.
- There must be only one key for a lock, or a set of locks, and the locking party will turn in key(s) to the PIC in accordance with the electrical work procedure.
- If a circuit cannot be locked out, it must be de-energized and tagged. If the circuit requires disconnection or removal of a component to ensure isolation, a qualified person as defined must perform the work.
- The area must be **CLEAR** of personnel and tools prior to attempting to start the equipment.
- Before starting work, **TRY** to energize the piece of equipment locally to ensure that the proper circuit is de-energized and that an override does not exist.

- Only the person(s) originally attaching the lock and tag is authorized to remove the lock and tag unless the person(s) is not available or other circumstances make it impractical for the original party to remove the lock and tag.
- Under these conditions, the PIC and supervisor should diligently try to contact the person(s) who affixed the lock and tag. If contact is not made and after checking the equipment for complete repairs and assuming full responsibility, can remove the tag and lock and place the equipment in service. The area supervisor is responsible for notifying personnel that their lock(s) and tag(s) have been removed in these cases.
- Due to shift or personnel changes, the custody of lock and key is shall be changed to the new PIC. Tags need to reflect the change in responsibility.
- When personnel performing the work prepare to unlock the equipment, it is their responsibility to contact the permit coordinator and the person responsible for the area to determine that no one is working on the equipment and that no hazard to personnel or equipment would be created by energizing an electrical circuit or by placing the equipment in service.

#### **ISOLATION OF OTHER ENERGY SOURCES**

The same basic procedure that is used for electrical lockout must be used for isolating pneumatic, hydraulic and mechanical energy sources. The primary difference will be the means of isolation.

#### **PNEUMATIC AND HYDRAULIC ENERGY SOURCES**

The recommended means of isolation for these energy sources are as follows, in order of preference:

- Blinding- This method is preferred for vessel entry, open flame work or long term maintenance on compressors, pumps, process lines, vessels where leaks or improper openings of the isolation valves employed would re-pressure the equipment being serviced and/or release flammable, toxic or high pressure streams.
- Disconnection-Physically disconnecting, removing part of the system and isolating both open ends.
- Double block and bleed valve configuration (using a chain and lock to secure valves) is the least preferred method of isolation, typically used in all-welded systems. Block valves should seal effectively and

be used only to indicate leakage. Automatic valves should not be used as isolation valves unless they are first rendered inoperable. Bleed valves should be full open type valves. In addition, pressure shall also be released from equipment containing pneumatic or hydraulic pressure.

### **MECHANICAL ENERGY SOURCES**

- The means of isolation can be chains, blocks or disconnection.
- If springs are involved, they shall be released or physically restrained when necessary to immobilized mechanical equipment.
- The use of brakes, for example, on pumping units is not an acceptable means of energy isolation. The use of blocks or chains, in addition to the brake, is required.

### **R-5 HYDRAULIC/AIR HOISTS**

- Only an experienced person should operate the hydraulic/air hoist.
- Hydraulic/Air hoist should be prepared with line guides when mounted on floor.
- Self Retracting Lifelines (SRL), or approved secondary fall protection, must be used when riding man-rider hoist.
- Always check cable for breaks and maintain in a safe working condition.

### **R-6 SLIPS, TRIPS, AND FALLS**

The following situations should be avoided to help prevent slipping:

- Wet floors/decks
- Oily floors/decks
- Remove any spilled liquid from floor immediately.
- Good traction helps prevent slipping. The soles of some boots may increase the chance of slipping; therefore, wear boots that provide good traction. When exerting extreme force on wrenches, make sure that your footing is stable in case the wrench slips or releases quickly.
- Good housekeeping helps prevent tripping.
- Never walk on manhole covers

- **Never** run unless the situation is life threatening.
- Employees **must** wear a safety harness with 100% tie-off when working 6 feet or more above the ground, or when potential for a fall exists below the 6' height, unless other adequate protection against falling is provided.

## **R-7 STAIRS AND WALKWAYS**

- When carrying tools or materials, always keep one hand free to use the handrails as you go up and down stairways.
- All steps, walkways and stairs must be kept free of obstructions and slippery materials such as oil and grease.
- When walkways and steps are provided, they **must** be used. **Do not** take shortcuts.
- Tools, equipment and material must not be left on walkways.
- Use handrails when walking up/down stairways. Keep hands free and out of the pockets while traversing them.

## **R-8 PERSONNEL TRANSFER PROCEDURES**

- Prior to transferring from a vessel to a ship, the gangway must be inspected.
- The number of persons allowed to ascend the gangway **must not** exceed the manufacturer's recommendations.
- PFD's **must** be worn when accessing a ship via gangway.

## **R-9 HOISTING EQUIPMENT**

- Hoisting equipment must not be loaded beyond its safe working load.
- Employees should not position themselves under any suspended load.
- Tag lines must be used to position loads.
- Never reach under a load to get a tag line.
- Never position yourself between a hoisted movable object and other movable or stationary objects.
- Always allow yourself a clear and unobstructed exit.

## R-10 LIFTING

- Employees should use proper lifting techniques and get assistance with heavy loads. Remember: **Do not lift anything you feel you cannot handle.**
- Use hoisting equipment for lifting whenever possible.

## R-11 PERSONAL FLOTATION DEVICES (PFD'S)

- PFD's shall be worn when working over or being transported over water and on the deck of any barge crane. PFD's shall not be required when employees are working within handrails or temporary barricades that are not within 10 feet from the edge of the barge.

## R-12 FALL PROTECTION

- All personnel are required to wear fall protection equipment when working 6 feet or higher off the ground and/or when a potential injury from a fall exists. Harnesses shall only be used in conjunction with approved safety lines or lanyards. Damaged equipment shall be removed from service immediately and the supervisor informed.
- A full body harness **must** be worn at all times while a person is working 6 feet or more above the ground/deck or outside protective handrail. In offshore operations, a harness **must** be worn outside protective handrails and any time a person is 6 feet or more above a floor level, or when a potential injury from a fall exists.
- The harness should fit snugly and comfortably. The wearer should allow no more slack in the line than necessary.
- All safety harnesses should be regularly inspected for excessive wear or damage that could cause them to fail. Harnesses that are worn or damaged to this extent should be destroyed.
- Safety harnesses **must not** be thrown into a toolbox or otherwise subjected to treatment that could damage or weaken them.
- All harnesses and lanyards must be inspected for cuts, abrasions, stretching and damage due to deterioration, prior to use.
- All fall protection system components must be inspected in accordance manufacturer's requirements. Any equipment found to be in questionable condition shall be removed from service.
- Harnesses and lanyards, which have arrested falls, shall be removed from service and destroyed. All other fall protection system

components such as retractable lanyard/cable, lifelines, etc., shall be taken out of service after arresting a fall and recertified prior to returning to service.

- Ladder climbing systems or equipment systems are a mandatory requirement for all derrick ladders.
- Caution tape or rope is not an acceptable barrier for securing an open hole.
- Erect safety barriers around worksites prior to removing grating or creating opening and post warning notices whenever there are safety hazards present.
- An acceptable barrier to secure a hole opening is a fixed or portable barrier that when installed can withstand a side load of at least 250 ft/lbs.

### **R-13 OPERATION OF EQUIPMENT**

- Before operating any piece of machinery, employees must review the operating instructions to familiarize themselves with safe operation of the equipment. Additionally, prior to operating forklifts and other mechanical trucks, employees must receive training on the particular piece of equipment and be observed safely operating it.

### **R-14 STOP WORK AUTHORITY**

- Employees will receive training on Stop Work Authority at the time of hire in the Basic Safety Course. All documentation of training will be reviewed and maintained per AT Training records maintenance practices.
- If an employee feels it is unsafe to conduct a task given to him or her by a supervisor, a procedure for resolving the concern is available.
- The purpose of this procedure is to ensure that the safety concerns and observations of AT employees will be adequately and systematically addressed prior to commencing a job.
- This document applies to all AT employees and its contractors.
- AT requires all line managers and supervisors to ensure that in the execution of their duties, the health and safety of all employees are safeguarded at all times. Furthermore, all employees have a responsibility to prevent injury to themselves and others.

- Employees may refuse to perform any task if they consider that by doing so their actions could cause injury, damage, or render the working environment unsafe. Provided the Refusal to Work procedure is followed, no disciplinary action will be taken against any employee who refuses to perform an instruction where, in his/her reasonable opinion, to do so would constitute an unsafe act or condition.
- The process entails stopping the job, notifying the supervisor, addressing the concerns raised and resuming operations.
- Supervisors are required to address any jobs stopped by employees ensuring that no work will resume until all concerns have been addressed.
- Any work stoppages must be reported to the Safety Department and operations management for review. Any work stoppages will be documented in a Stop Work Database and will be maintained by the Safety group.
- It is imperative that any stoppages be reviewed for additional lessons learned and added to the Safety Action Item List (SAIL) until all corrective actions have been resolved. Once actions items originating from Stop Work events, they will be closed and removed from the Safety Action Item List.

## **R-15 RIGGING/OPERATION OF THIRD-PARTY EQUIPMENT**

- Before installing third-party equipment that can create a hazard when rigged up and/or operated, an authorization to rig-up third-party equipment shall be approved by the PIC.
- Any third-party equipment that is sent to an AT site is to be inspected by the PIC or his/her delegated representative prior to being released for use. .

## **R-16 HOURS OF WORK**

- The PIC is required to maintain an accurate record of the hours worked by each person on AT owned or operated facilities. This record must include all personnel on site including third parties or contractors.
- Before work shifts of more than 16 hours are worked or when the rest period after a 12-hour shift is fewer than 8 hours, approval has to be obtained from the PIC. No extra labor can be performed without the

PIC's approval. A written record of all extra work conducted must be kept, stating the reason and the nature of work performed.

- The PIC may only authorize work to continue over the 16-hour limit in exceptional circumstances (emergency or urgent repairs). The health and safety of personnel must be the main considerations.
- The PIC must ensure that third-party companies plan to have sufficient personnel for the work so that each person is assured (in normal circumstances) of working no longer than 16 hours per work shifts with a minimum of 8 hours of rest between work shifts.

## **R-17 RIVER OPERATIONS**

- No persons under the influence of alcohol or drugs (prescribed or illegal) shall be permitted to travel offshore.
- All persons traveling on the river shall cooperate with and obey the instructions of boat crews and captain.
- No AT employees are allowed to wear any clothing that may be offensive in nature, vulgar language or of sexual nature anytime going to, coming in from, or at work.
- PFD's shall be worn while being transported to a river location. Additionally, PPE including hard hats, glasses and steel toe shoes should be worn.

## **R-18 PERSONAL BEHAVIOR AND DISCIPLINE**

All persons shall behave in a responsible manner at all times. Employees must understand that failing to observe safety rules can result in serious injury to themselves or to fellow employees. Consequently, unsafe work practices may result in disciplinary action that could ultimately lead to termination of employment.

Disciplinary actions are based on the concepts of progressive and cumulative discipline. Progressive discipline is based on the idea that employees have been informed of the performance and behavior expected of them. As offenses occur appropriate discipline will be administered in a progressive manner. Penalties shall be appropriate to the circumstances of the offense. In prescribing disciplinary action, it is recognized that some offenses are so serious that suspension or dismissal may be warranted on the first occurrence even though the employee has no prior record of having been disciplined. All offenses can have a cumulative effect and offenses need not be identical to impose a penalty more severe than prescribed for a similar offense.

## **R-19 RESTRICTIONS/PROHIBITED ARTICLES**

In the interests of safety, personnel shall not have the following items while at work:

- Alcohol
- Drugs, other than those specifically prescribed by a medical practitioner for use by the person carrying them, or medications on open sale from a pharmacist
- Firearms
- Any other offensive weapon
- Non-safety matches, single-+ lighters or pressure lighters
- Pornographic material – video, printed or electronic
- Certain items may only be to AT locations if specific authorization has been given and is required for rig operations. These include, but are not limited to, the following:
  - Gas under pressure
  - Radioactive substances
  - Corrosive substances
  - Toxic substances
  - Poisonous substances

Where prohibited articles are suspected, the person and his/her baggage will be escorted to a designated area for further investigation. Should a person refuse this request, the PIC may require the person to open his/her baggage for inspection of the article. Refusal to identify the article or to permit an inspection may preclude the person from traveling offshore.

Upon discovery of a prohibited article, the prohibited article shall be confiscated. Should a person refuse to allow the prohibited article to be confiscated, the person shall be refused access to the location until the prohibited item is handed over to the PIC. The person may be terminated at the discretion of the company.

## **R-20 CELL AND PDA USE**

The use of personal cellular phones, PDA's, tablets/I-Pads including hand held and head set devices shall not be allowed during company operations. Employees, however, will be allowed to maintain their personal cellular phones and PDA's on their person for personal and company emergency use. Employees will not be allowed to wear head sets or ear mounted cellular devices at any time while working on Company premises or during marine transport to a location. Cellular devices can be used during breaks or as authorized by the employee's supervisor as long as the employee utilizing the device remains under cover and out of an area of field operations.

In no event shall any employee use a personal cell phone, tablet or PDA during the following operations:

- While operating or aboard any piece of mobile equipment including forklifts, cranes, pay loaders, track hoes, utility vehicles and the like. This includes when the equipment is stationary.
- While performing any rigging operations.
- While working as a flagger.
- During safety meetings.
- While ascending or descending gangways.
- While transferring from a vessel to either a dock or other marine location.
- While ascending or descending stairs or ladders.
- While drafting or shifting a barge.
- While stacking or moving barge covers.
- While in a confined space.
- While working at heights.
- While carrying equipment or other items.
- While performing hot work including working as fire watch.
- While working on a rail car.
- While working in the hold of a ship which includes overhead operations.

- When working around explosives or other cargoes which require intrinsically safe devices.
- Any other act deemed unsafe by the supervisor, up to and including not allowing cell phones, PDA's, tablets or similar devices in working areas.

In no instance shall any site specific cell phone policy be less restrictive than the limitations set forth in this policy.

Team members shall not play games, post to social media or utilize personal cell phones, PDA's, computers or tablets for these purposes during the course and scope of their working hours, unless on a designated break or lunch and only in safe areas.

Personal cell phones may be utilized to contact emergency services, the Safety Hotline or Management as directed to report any emergency or unsafe conditions.

Any violation of the above will result in disciplinary action up to and including termination.

## **R-21 MEDICATION CARRIED BY PERSONNEL**

All medication carried by personnel on any AT location must be in its original container. If it is a prescribed medicine, it must be labeled with a pharmacy label bearing the name of the person who is in possession of the medicine, the date of dispensing, type, and dosage.

Upon arrival at the location, any prescribed drug shall be handed over to the STS, or PIC for logging in the medicine register.

AT reserves the right to have a physician determine if the use of a prescribed drug or medication produces effects that may increase the risk of injury to themselves or others. If such a finding is made, AT reserves the right to restrict the work activity of any person, or remove the person from the facility, until such time as AT's choice of physician recommends that the person's ability to perform his/her normal job functions will no longer be affected.

## **R-22 SAFETY INSPECTIONS**

Various routine inspections are conducted to ensure a safe and healthful work environment on the rig.

## **R-23 GROUND FAULT PROTECTION**

Use portable equipment with residual current devices (RCD) in adverse conditions where personnel and equipment can become wet or damp. This includes temporarily installed third-party equipment protected with isolating transformers. This equipment must be fitted with residual current alarms (ground fault alarms) and residual current trips.

The RCD, also known as a ground fault interrupter, limits the magnitude of the fault current and time that the fault current will pass through a person's body. Most RCDs are set to operate when the ground fault current reaches 30 mA. In practice, an RCD will usually trip with less current than its stated rating. The operation is nearly instantaneous, with a typical maximum disconnection time of 0.4 second.

Another method of disconnecting a faulty circuit is over current protection, which uses a fuse or circuit breaker and operates at high line currents above the circuit rating. Over current protection does not provide effective personnel protection because it is designed primarily to protect equipment from overload and line faults. The fault currents necessary to operate the over current device are usually sufficient to produce a fatal electric shock.

## **R-24 CONFINED SPACE**

### **PURPOSE**

To establish guidelines for safe work practices and procedures for entrance into and rescue from permit-required confined spaces that comply with all federal and state laws and regulations.

### **SCOPE**

This standard applies to excavations greater than four feet deep and to any vessel, or confined space that is large enough to be entered bodily and has one or more of the following characteristics: (a) has limited or restricted openings for entry and exit, (b) contains or has potential to contain a hazardous atmosphere, (c) is not intended for continuous occupancy, (d) has insufficient natural ventilation, or (e) may contain known or potential hazards.

### **PRE-JOB/ENTRY SAFETY MEETING**

The entry supervisor shall hold a pre-job/pre-entry safety meeting to identify the role of each participant in the permit-required entry, to ensure that all of the appropriate equipment is available and present,

to review rescue and emergency procedures and JSA to ensure that all participants have been trained.

#### **PREPARATION OF CONFINED SPACE FOR ENTRY**

Permit-required confined space entry requires careful planning and preparation. The entry supervisor responsible for the entry shall ensure that issues are addressed before work begins.

Typical permit required confined spaces include:

- Chemical storage tanks
- Waste or storage pits
- Grain bins
- Underground tunnels
- Railroad cars under construction
- Barge wing tanks or void areas

### **R-25 HEARING CONSERVATION**

#### **PURPOSE**

This Hearing Conservation Program was developed to provide guidance to prevent noise-induced hearing losses from work place exposures.

Prolonged employee exposure to high noise levels result in permanent hearing loss. Once a noise-induced loss has been acquired, normal hearing cannot be restored. However noise-induced hearing loss can be prevented for most personnel by an effective hearing conservation program.

The Hearing Conservation Program will apply to all operating employee job classifications except office clerical staff.

#### **PERSONAL PROTECTIVE EQUIPMENT**

When engineering and administrative controls are being perfected or fail to bring noise levels or duration of exposure to them below permissible levels, the **provision** and **use** of personal protective equipment is **required**.

Employees are provided with the opportunity to select their hearing protectors from a variety of types at no cost to the individual. Types of hearing protectors that may be provided include: **Disposable**

**plugs, reusable plugs, headband plugs** and/or  **earmuffs**. An employee's hearing protector should suit the shape of his or her ear, provide the degree of protection needed and be comfortable to wear. Hearing equipment should also be practical in terms of job requirements, such as hard hats, low overheads and face shields. The best ear protector is the one that is accepted by the employee and worn properly.

Each type of hearing protector should have a "**Noise Reduction Rating**" (NRR) expressed in decibels (dB) The NRR system tells how much noise each type may attenuate, usually between 15-30 dB, when the protector is fitted properly. Hearing protection equipment should be selected with the goal of attenuating noise levels less than or equal to 85dB.

## R-26 INFECTIOUS DISEASES (BLOOD BORNE PATHOGENS)

### PURPOSE

The purpose of this procedure is to provide the necessary precautions to all employees who could be “reasonably anticipated” to come into contact with blood or other potentially infectious materials as the result of performing their “job-related duties”. This standard is specifically designed to reduce the occupational exposure to and transmission of Hepatitis “B” Virus (HBV), Hepatitis “C” Virus (HCV) Human Immunodeficiency Virus (HIV) and other infectious diseases. “**Universal Precautions**”, as advocated by the U.S. Centers for Disease Control will be made an integral part of these exposure control and prevention measures.

### SCOPE

It is impossible to guarantee 100% protection against infectious diseases. Viruses and bacteria are all around us every millisecond of every day. They are a part of human existence. The intent of this procedure is to educate our employees about how diseases are transmitted, “**Universal Precautions**”, the transmission of the more serious types of infectious diseases, and plan for the most common situations where an individual could be exposed to these diseases.

### TRANSMISSION

The term used to describe how individuals come in contact with potentially harmful or even fatal infectious diseases. Exposure to these diseases can occur by one of two ways: Direct contact with bodily fluids such as blood, saliva, excrement, vomit or other types of bodily fluids such as plasma, pus etc. directly from another person. This can be as innocuous as having someone sneeze and another employee inhaling microscopic droplets of saliva or as the result of physical contact with bodily fluids while rendering first aid or cleaning up of bodily fluids such as blood, vomit, etc. or by secondary or indirect contact with bodily fluids. This may be from picking up someone else’s razor, a piece of broken glass, etc. which has been contaminated by another person’s blood, and accidentally cutting or puncturing your own skin thus having blood, bodily fluids, vomit, excrement etc. from another individual enter your body through a break in the skin. The “best” ways to limit the potential transmission of all infectious diseases are to use **Universal Precautions** and avoid direct **skin to skin** contact with anyone who is bleeding, vomiting, etc., and lastly, avoiding contact with contaminated,

potentially injurious items such as used razors, needles (sharps), glass, knives, etc.

## **R-27 WORKING ABOARD SHIPS**

Employees assigned to work aboard ships should pay special attention to ships gear as well as potential trip and slip hazards while aboard.

- Once aboard employees should report to the ships supervisor for instruction.
- Proper PPE for the job to be performed should be worn including but not limited to:

Hard Hats

Protective Clothing

Respirators

Hearing and eye/face protection

- Ships gear including ladders, gangways, walkways, cranes should be inspected and not utilized if found to be below standard. Any items noted should be communicated to the ship Supervisor to address with the ship's personnel. **SUBSTANDARD SHIPS GEAR SHOULD NOT BE UTILIZED.**
- When utilizing equipment to move cargo in the holds of ships, attention should be given to the displacement of manhole covers. Due the possibility that these may shift and be concealed, every effort should be made to locate and insure all manhole covers are in place prior to allowing personnel to work in these areas.

## **R-28 CONVEYOR SAFETY**

Conveyors are useful for transporting bulk cargo and are utilized on several AT locations. Still, the multiple moving parts of this type of machinery can cause serious injury. When utilizing or performing operations with or around conveyors, personnel should follow the following guides.

### **GUARDING**

- All guards should be in place in or to prevent access to dangerous areas.

- If a fixed barrier is not practical, and access to dangerous areas is required during operations, an interlock physical barrier used?

### **SAFE OPERATIONS**

- Insure that all stop/start controls and emergency stop switches are clearly marked.
- Insure that all workers are made aware of the location of stop and start controls and emergency stop switches.
- Before starting the conveyor ensure that:
  - Nobody is working on the system
  - All access platforms are clear
  - All guards are fitted
  - All lanyards are fitted and working
  - All lights are working and clean
- Insure that the conveyor is locked out and isolated before maintenance is performed.
- Do not wear loose clothing while working around conveyors.
- Insure that any lengthy hair is controlled under the hard hat.
- Do not walk under the moving conveyor system, unless it is guarded to prevent spillage and/or entrapment by the moving parts.
- Do not attempt to clean belts, pulleys, rollers, drums or troughs while the system is moving.
- Do not ride on or cross over the conveyor system.
- Do not attempt to perform any maintenance while the conveyor is moving.

### **TRAINING**

All operators shall receive training, supervision and information about:

- The correct method for stopping and starting the conveyor system.
- The hazards of the conveyor system in its normal operations.

- The hazards of being inattentive or not following safe work procedures.
- The purpose of guards.

## **R-29 BARGE SAFETY**

Company personnel assigned to mid-stream operations as well as shore based offloading are required to work aboard differing types of barges as well as the Company's several pedestal mounted barge cranes. The following are a number of general safety rules while working on barges.

- Personal flotation devices shall be worn at all times while on deck while outside of handrails or protected areas that are not within 10 feet of the edge of the vessel.
- Horseplay will not be tolerated
- Do not run on barges and never jump from barge to barge or over timberheads
- Make sure all gangways are clear and swept clean. Keep cargo clean off walkways. Clean up oil and grease spots on the deck.
- Keep loose gear stowed neatly avoiding obstructing walkways.
- Never stand in the "bight" of a line at any time.
- Stand clear of lines or cables that are under a strain. Do not straddle cables.
- Ladders must be used to enter barges. Entering or exiting barges by jumping on cargo or climbing on equipment is prohibited.
- Insure that all ladders used to enter barges are safe and secured properly before utilizing it. Always descend ladders facing the ladder.
- When working around winches or other machinery, insure all loose clothing is safely tucked in.
- When carrying a load on the gunnel, always keep the load to the outside of the barge.
- Do not lean over the edge of a barge to grab a line.
- Observe safety signs and warnings.
- Never work around the edge of the barge with your back to the water.
- Know the location of all fire extinguishers.

- Familiarize yourself with all alarm signals.
- Keep fingers from between timberheads and wires when placing or throwing off wires or lines.
- Keep alert avoid any dangerous situation.
- Report faulty equipment to your supervisor.
- Avoid walking on barge covers.
- While stacking covers avoid placing your hands or fingers in pinch points.
- Do not walk on manhole covers. Always step over them.
- Maintain visible eye contact with co-workers while on the barge.
- Maintain a clean work area including:
  - Keeping all tools and materials in their proper place when not in use.
  - Keep sharp edges sheaved.
  - Keep the deck cleat at all times.
  - Keep aisles and passageways clear.
  - Close all drawers.
  - Keep wires and chords untangled.
  - Keep flammable liquids in approved airtight metal containers, away from ignition sources.
  - Clean up spills immediately.
  - Dispose of flammable scrap.
  - Insure that all chemical containers are labeled.
  - Do not let grease and dirt build up on decks.
  - Keep lights clean.
  - Properly discard trash.

## R-30 LADDER SAFETY

### TYPES OF LADDERS

- **Fixed Ladders** are used where permanent access is needed, such as from one deck to another, from the deck to the wheelhouse or to reach equipment at the top of the wheelhouse or mast.
- **Straight and extension portable ladders** are used to span the distance between landings of different heights, for access between barges or to gain access to docks, dolphins and locks.
- **Stepladders** are necessary where space is limited and where a freestanding ladder is needed. Stepladders are used for cleaning and maintenance in the engine room and passageways for stowing supplies and for access to overhead equipment and lighting.

### WARNING LABELS

The first step in ladder safety is to know your equipment. All ladders display several declarations, guidelines and warnings marked permanently and as prominently as possible, such as:

- duty rating
- intended use – industrial or domestic
- load rating
- safe recommended working length of the ladder

Metal ladders or ladders with metal components carry bold warnings that extreme caution is needed where an electrical hazard may exist.

- Don't create an unstable and unsafe work platform by standing too high on the ladder. On a straight ladder, don't stand above the third rung from the top. On step ladders, don't go above the second step from the top and under no circumstances should the top be used as step.
- A stepladder also has a caution that it should be used in the fully open position only or that it should not be used unless the spreaders are locked.
- The back of a stepladder should not be used for climbing unless the ladder is specifically designed and provided with steps for climbing on both the front and rear.

## **STORAGE**

Ladders should be stored so that they're not damaged or adversely affected by water, heat or chemicals, and secured so they're not dislodged during rough conditions. They should be stored out of the way of traffic areas so they do not create trip or bump hazards.

## **INSPECTION**

Ladders should be inspected on introduction to service and before each use. Look for any missing rungs or steps and check their condition for:

- Breaks
- Cracks
- Splits
- Worn areas
- Damage by heat or corrosives
- Free of dirt, oil, grease or any other slip hazard

### **Inspection List**

- Check hardware and fittings for worn, loose or broken parts. Make sure nuts and bolts are tight.
- Make sure that the slip resistant safety feet are in working order and not worn or broken.
- On stepladders, see that the spreaders are in good shape and that they lock the ladder open.
- Always see that the ropes and pulleys on extension ladders are in sound condition.
- Check wood ladders for dampness that could alter their non-conductivity
- See that metal ladders are free of burns or sharp edges.

A ladder should be checked after any suspected damage. It's a good practice to have a thorough safety inspection and assessment at regular intervals throughout a ladder's working life.

If an inspection turns up a defective condition, it should be reported to your supervisor immediately. It will be tagged "DO NOT USE" or in some other manner that clearly identifies it as defective and will be removed from

service to be discarded or repaired by a qualified expert. Any repairs must meet original specifications of the manufacturer.

A permanent ladder found to be defective will be tagged "DO NOT USE" and removed from service and may also be blocked to prevent access until it can be repaired or replaced.

## **LADDER SET UP**

After choosing the right ladder for the job, transport it carefully to where it will be used. Extension ladders should be collapsed and stepladders should be closed when being transported. Always carry ladders parallel to the ground.

Using a portable ladder in Maritime situations often means setting the ladder on a metal surface that could be wet. The ladder should have slip-resistant feet.

The area around the base of the ladder should be clear of debris, tools or any other loose objects. Make sure that any power cords or welding leads are run behind the ladder so they're not trip hazards. After checking for overhead electrical wires, place the foot or base of a straight ladder on a firm, level non-slip surface.

### ***The Four To One Rule***

- ***Always place the base of a straight ladder one foot away from the wall or structure for every four feet of ladder height up to the support point.***

Place the head or top of the ladder against a firm, even and secure top to prevent the ladder from shifting. The two rails should be supported evenly.

Never support a ladder on a rung. The ladder should be tied off as close to the support point as possible.

If the ladder is used for access to an upper landing, such as climbing onto an empty barge, the side rails should extend at least three feet above the upper landing surface. The extension locks should be engaged.

As with the base, the area around the top of the ladder should be clear of debris, tools or other loose objects.

When setting up a stepladder, place all four feet on a firm level surface. Make sure the ladder is fully open and lock the spreaders in place. Secure the stepladder if there's a place to tie off and have someone hold the ladder, if possible.

If used near a walkway, doorway or hatch or near an area of workplace activity, warning signs should be posted and access to the ladder area should be blocked or barricaded, so that individuals not involved in the project won't be confronted with the ladder by surprise and accidentally knock it over.

Crewmen should wear non-slip shoes checking them often for contaminants such as dirt, grease, oil, mud and any other slip hazard. Place your foot firmly and well forward on each rung or step moving only one rung at a time.

Whenever possible have both hands free. Carry any needed tools in a waist or shoulder bag, or hoist or lower the tools with a line tied to a tool bag or bucket. Hold the rungs rather than the rails, this will give you better support and control if your foot slips. Grasp the rungs in a hand over hand manner.

### ***Three Point Rule***

- ***If you can't have both of your hands free – always have 2 feet and one hand or 2 hands and one foot on the ladder at all times, even when working.***

Always face the ladder while ascending and descending.

Ideally, the base of a straight ladder should be lashed or secured. Since there's not always a place to tie off, the base should be held in place by an assisting crewman while it's in use.

### **OVERREACHING**

Be conscious of your balance. Overreaching can cause you to lose your balance and fall. Keep both feet on the ladder and try to keep your hips or at least your belt buckle between the rails of the ladder, so your center of gravity also stays between the rails.

## **FALL PROTECTION**

Safe ladder and climbing practices are always called for. Fall protection equipment may be required for work over a certain height.

**There are several important don'ts in the safe use of ladders.**

- Don't set up a ladder on boxes, boards or any other unstable make shift base, to try to get extra height out of the ladder. If it doesn't reach the needed height, get a longer ladder.
- Don't straddle the space between a ladder and another object.
- Don't use a ladder placed in a horizontal position as a make shift scaffold, gangplank or walkway. Using a ladder for something other than its intended use is the most common cause of falls.
- Don't move, shift or extend a ladder while occupied.

## **FATIGUE**

Using a ladder can be strenuous. Repetitive climbing is hard work on the legs and knees. You may find that you may have to rest every once in a while.

Your arms can become fatigued, especially if you are doing work that involves looking up reaching over your head. Resting periodically and performing posture relief exercises,

will help avoid leg, arm, shoulder and neck fatigue and can help you from becoming disoriented.

If you do become disoriented or dizzy, don't panic. Maintain a firm hold on a rung and if possible, drape an arm over the rung. Rest your head on a rung or against a side rail, until you feel in control enough to climb down safely.

Remember that your physical condition is always important. If you're fit, you'll be better able to recover from a potential fall situation and any injuries may be minimized.

## **FALLING**

With routine inspection and maintenance of ladders and with proper training on safe use, you can be as prepared as possible to reduce the risk of ladder related injuries but if a fall should occur, you can be prepared for that, too!

If something happens that you can't recover from, and you do fall, quickly turn and look at the spot where you'll hit. This helps orient your body so you're less likely to fall on your back helping avoid head, neck and spine injuries.

### **Shout It Out !**

- **Shout and exhale as you fall. You can shout whatever comes to mind at the moment, but shout it, forcefully! This will alert others to the situation and may help keep you from getting the wind knocked out of you.**

Try to relax as you fall. Don't stiff arm or stiff leg to brace against the impact. Be prepared to flex your legs or arms to help absorb the shock. This makes your muscles work to take some of the impact and may help minimize bone and joint breaks and dislocations.

Although falls from ladders make up part of the deadliest category of general industrial accidents, routine inspection and hands on safety training, can substantially reduce the risk of ladder related injuries. Remember that ladder work in Maritime situations requires special precautions and should always be pre-planned, and undertaken carefully, whether you're tying up a line to a dock, changing a light or climbing from deck to deck.

## **R-31 CREWBOAT SAFETY**

### **RULE NUMBER ONE**

**THE CREWBOAT CAPTAIN IS IN CONTROL OF THE VESSEL AND IS ULTIMATELY RESPONSIBLE FOR THE SAFETY OF HIS CREW, THE VESSEL AND ALL PASSENGERS. HIS INSTRUCTIONS SHOULD BE FOLLOWED UNLESS DOING SO CREATES A HAZARD FOR ASSOCIATED TERMINAL EMPLOYEES. IF A HAZARD IS IDENTIFIED, THIS NEEDS TO BE COMMUNICATED TO AN ASSOCIATED TERMINALS SUPERVISOR, MANAGER OR SAFETY TRAINING SPECIALIST. ADDITIONALLY, ANY EMPLOYEE HAS THE RIGHT TO REFUSE UNSAFE ORDERS OR DIRECTIONS WHEN FOLLOWING SUCH INSTRUCTIONS MAY RESULT IN PERSONAL INJURY TO ANY PERSONNEL OR DAMAGE TO PROPERTY**

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#### ***ACCESSING THE CREWBOAT***

- Prior to accessing a crew boat all PPE must be on and secured. This includes the following:

- i. PFD (with strobe light for night operations)
  - ii. Glasses
  - iii. Hearing Protection
  - iv. Hard Hats
  - v. Steel Toe Boots
- While utilizing walkways, gangways and docks utilized to access crew boats, employees must be attentive to trip hazards and unsafe conditions of these locations. If any unsafe conditions are noted, these need to be reported to a supervisor.
- A consistent location at each facility or barge should be utilized when possible for access and egress to crew boats.
- When accessing the crew boat, two methods are often utilized, access from the stern of the boat that is tied up or access to the bow that is not tied or secured. In either instance:
  - i. Employees accessing the crew boat should carefully pay attention to foot placement while keeping one hand free to grip the boats handrail.
  - ii. Any items being carried should be either placed on the deck or to another employee on the boat or to a worker who could hand the items once safe access is established.
  - iii. If alone, always maintain a free hand
  - iv. Insure that the vessel is steadied prior to attempting to access it. Take a second to look to the left and right to see if any waves, other vessels or debris may be about to impact the boat which would cause the vessel to become unstable. Do not access the boat if it is possible that vessel may become unsteady due these or other factors.
  - v. If accessing from a gangway or fixed ladder, insure the vessel is in position and has not become entangled with the gangway netting or caught beneath the ladder.
- Once on board, do not walk on the side facing a stationary item such as a ship or dock to avoid potential pinch points. Always walk around the side opposite of any potential pinch points maintaining three points of contact (feet and one hand) on the hand rail system.

- Remain within the handrail system of the crew boat until reaching the destination of voyage.
- Maintain proper footing for stability if standing during transport. Waves will cause the crew boat to sway and rock. Always pay attention to your surroundings to adjust to any sudden movements.
- When exiting the boat to the bow:
  - i. Allow the boat to be steadied prior to exiting the handrail area.
  - ii. Walk around the boat opposite of any pinch points while maintaining three points of contact.
  - iii. Observe whether or not the boat has snagged gangway safety netting. This could result in the gangway being shifted or pulled from the ship. If any part of the boat has become entangled in the netting, then advise the captain and do not attempt to access the gangway.
  - iv. Once the vessel is near the gangway, dock or barge, pay close attention to foot placement and exit the vessel onto the gangway insuring that one hand is free to grab the handrail.
  - v. Be aware of the “bump”, crew boats may stop suddenly if they come into contact with a larger vessel. This will cause passengers to be jolted forward. To prevent any injury from such an event, always hold on to handrails and do not move to the bow of the vessel until it is steadied.

## **R-32 FIRST AID**

First aid is generally required because safety precautions were not observed.

The principal objects of first aid are:

- Prevention of further injury.
- Checking conditions known to be endangering life.
- Protecting injured from infections and complications.
- Making the patient as comfortable as possible to conserve his/her strength.

- Treat for shock.
- Where required, transportation to medical assistance in such a manner as not to complicate the injury or subject the patient to any more discomfort than is absolutely necessary.

## **FIRST AID REMINDERS**

Every person should have a basic knowledge of first aid. People continue to suffer cuts, broken bones, shock, Poisoning, asphyxiation, drowning, and other injuries while at home, on the highways, at work, while swimming, or boating, and in other recreational pursuits. A person with a basic knowledge of first aid can assist the injured until medical attention can be secured, and by doing so, can prevent further injuries, infection, and at times, save a life.

Basic first aid is elementary. It does not require a course in anatomy nor knowledge of all the various types of splints and bandages. Also, it requires knowledge of a few things that should NOT be done.

The priority for first aid treatment is:

- Give artificial respiration if breathing has stopped.
- CPR (Cardiopulmonary resuscitation)
- Stop the bleeding
- Treat for shock.
- Treat for poisoning. .

## **BRUISES, SPRAINS, AND STRAINS**

- Bruises are generally caused by a blow or other direct injury, which breaks blood vessels (releasing blood between the skin) and produces swelling and discoloration. Immediately after the injury, apply cold compresses to restrain the swelling and discoloration.
- A sprain is sudden twist or stretching of a joint, carrying it beyond its usual range of motion and stretching or tearing the ligaments around the joint. There is sudden pain in the joint at the time of injury and swelling usually develops rapidly. Motion of the joint of is restricted; however, discoloration is not immediately observed. You will often be unable to tell whether you are dealing with a severe sprain or fracture. Do not manipulate the injured part. If in doubt, treat it as a fracture. Put the joint at absolute rest; in an elevated position. Apply

cold compresses of ice bags to restrict swelling. Keep cold applications on the injured area for several hours or until the victim can see a doctor. Do not attempt to tape.

- A strain is a quick wrench caused by lifting too great a load or improper lifting. Muscles or tendons may be over stretched or torn by severe exertion. There is usually pain at the time of injury and stiffness. Have patient rest in a comfortable position and apply ice and /or heat to the injured part.

## **MOVING AN INJURED PERSON**

If a severely injured person must be moved, notify your supervisor and attain the proper type stretcher. Do not attempt to move the injured person by makeshift method.

## **PREVENTION OF ACCIDENTAL POISONING**

- Keep all bottles plainly labeled.
- Never take medicine in the dark.
- Keep poisonous drugs separate from other medicines, and locked up.
- Keep all medicines, household cleaners, and poisons out of reach of small children.
- Teach children safety rules in regard to medicine.

Before administering or taking any medicine, follow these rules:

- Read the labels carefully before reaching for the bottle.
- Read the label again before measuring the prescribed dose.
- Check the medicine cabinets regularly. Discard drugs no longer needed for the illness for which they were prescribed.
- Properly dispose of all unlabeled medicine.

## **BURNS AND SCALDS**

- Burns are injuries resulting from contact with heat. (Scalds are injures resulting from contact with hot liquids or hot moist vapor.)
- Burns may be caused by friction heat (as from sliding down a rope) chemicals, electricity, radiant energy, or excessive exposure to the sun's ray.

### **BURNS ARE CLASSIFIED ACCORDING TO DEGREE:**

- First Degree- skin reddened
- Second Degree-skin blistered
- Third Degree- deeper destruction of tissue such as charring or cooking.
- The severity of burns depends upon both their extent and their depth. A physician should treat a severe or extensive burn at once.
- If shock is present, treat it first. Keep the injured person lying down with his/her head low. Wrap him/her in blankets and keep him/her warm. If he/she is conscious, give him/her small drinks of water, frequently.

### **THINGS THAT SHOULD BE DONE:**

- Remove the injured from the heat source
- Secure medical attention at once
- Soak all burns in cold water or apply ice to the burned area.
- Keep the water or ice on the burned area until the burning has ceased. Never apply ointment or petroleum to a severe burn.
- Protect the burned area with loose gauze dressing.
- Chemical burns-
  - Flush a chemical burn immediately and continuously with large amounts of water to remove the chemicals completely, and then treat as any other burn.
  - Treat chemical burns of the eye instantly by washing out the chemical completely with a continuous, gentle stream of water from a partly opened faucet or over drinking fountain for at least 15 minutes.
  - Cover with a sterile compress, and promptly get the injured person to a doctor.

### **TO PUT OUT A CLOTHING FIRE:**

- DO NOT RUN- RUNNING FANS FLAMES!
- If possible, wrap yourself in a rug, blanket, or woolen coat. Wrap it around the neck first.

- Drop to the floor and roll over slowly.
- If there is nothing to wrap in, drop to the floor and roll over slowly.
- Try not to inhale flames. Put left hand on right shoulder and right hand on left shoulder and pull arms against face for protection.
- If water is near, douse yourself and roll in spilled water on floor. If clothing of another person takes fire, use similar measures. It may be necessary to trip him and force him to lie down so you can roll him. Then if water is handy apply it at once.

## WOUNDS

- Any break in the skin or mucous membrane is a wound. Most wounds heal quickly if they are cared for properly, but wounds can become extremely serious if infection develops or if the injured person loses too much blood.
- Most infections result from neglect of simple injuries such as small cuts, punctures or scratches on the fingers or hands.
- Serious injuries should get immediate attention.
- The best thing is to have every wound cared for by a doctor, but if a doctor is not immediately available, a qualified person should render first aid at once.
  - Stop serious bleeding.
  - Apply a sterile gauze pad and snug bandage. Adhesive tape may be used to anchor the bandage.

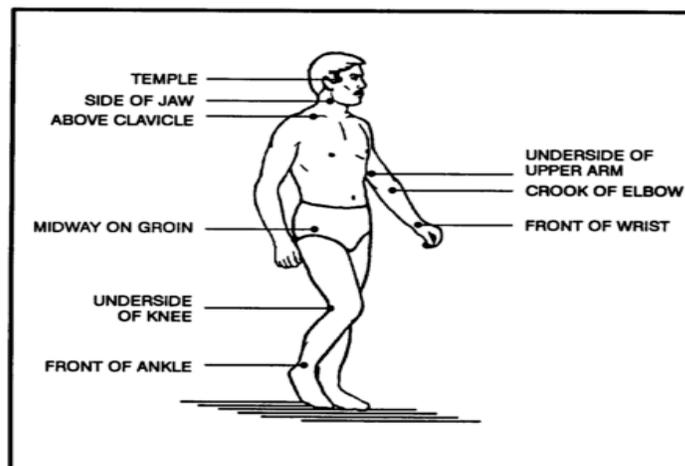


Figure 4-3. Pressure points.

**HERE ARE A FEW FIRST AID PRINCIPALS THAT EVERYONE SHOULD KNOW:**

- Dressing should be changed when soiled, loose, wet or uncomfortable.
- If swelling or pain develops, see your doctor at once.
- In some cases wounds must be cleaned or splinters removed; by such treatment should be left to a doctor.
- Keep dirt, fingers, mouth and un-sterile substances away from wounds. Do not breathe on wounds.
- Do not put adhesive tape directly on a wound; to do so may cause festering. Use only to keep dressing in place.

**REMEMBER-GET IMMEDIATE FIRST AID FOR ALL WOUNDS, NO MATTER HOW SLIGHT THEY MAY SEEM.**

**SHOCK**

- Shock is caused by a collapse of the circulation. It may be procured by severe bleeding, by severe burns, by severe injury, or by great nervous or emotional stress.
- Indications of shock are: pallor, pupils dilated, vacant stare, breathing shallow and irregular, skin cold and clammy, pulse weak or absent, nausea, vomiting, extremities chilled.
- In case of severe injury, it should be assumed that shock would be present. Therefore, treatment should be given to prevent its onset.
- A shock patient should be placed on their back with nothing under his/her head. Put blankets under and over his/her body to conserve body heat, but be cautious about application of external heat. It does little good, and a person in a state of shock can be easily burned. Stimulants are of no value; do not attempt to give them.
- Call a doctor. If it is necessary to move the injured person, carry him/her in a lying down position, with his/her head low.
- In case of electric shock, remove the victim from the source of electricity and if unconscious, apply artificial respiration at once.

## **FOREIGN BODY IN EYE**

- A foreign body in the eye must be removed immediately, preferably by a doctor, but if none is available at once, by an employee qualified to treat such cases.
- Eye must not be rubbed, as this may drive particle deeper into tissues.
- If medical attention is required, place a light compress over eye to protect it until patient is taken to a doctor.
- Never attempt to remove a particle imbedded in the eye.

## **ARTIFICIAL RESPIRATION**

- It is very important that artificial respiration, when needed, be started quickly.
- There should be a slight inclination of the body in such a way that fluid drains better from the respiratory passage.
- The head of the victim should be extended, not flexed forward, and chin should not sag.
- A check should be made to ascertain that the tongue or foreign objects are not obstructing the passages.
- These can be cared for when placing the victim into position or shortly thereafter, between cycles.
- A smooth rhythm in performing artificial respiration is desirable, but split second timing is not essential.
- Shock should receive adequate attention, and the victim should remain lying in a relaxed position after resuscitation until recovery is assumed.

**DO NOT GIVE UP!  
VICTIMS HAVE BEEN REVIVED AFTER TWO HOURS OF  
ARTIFICIAL RESPIRATION!**

## HERE ARE TWO METHODS, WHICH WE WILL DESCRIBE:

### MOUTH-TO-MOUTH METHOD

Here are five steps to administer rescue breathing by this method:

- Make sure the person is lying on a hard, flat surface. Look into the mouth and throat to ensure that the airway is clear. If an object is present, try to sweep it out with your fingers (wear disposable surgical gloves if they are available). Apply the Heimlich maneuver if unsuccessful and the object is blocking the airway. If vomiting occurs, turn the person on his or her side and sweep out the mouth with two fingers. Do not place your finger in the mouth if the person is rigid or is having a seizure.



- Tilt the head back slightly to open the airway. Put upward pressure on the jaw to pull it forward.



- Pinch the nostrils closed with thumb and index finger. Place your mouth tightly over the person's mouth. Use a mouthpiece if one is available. Blow two quick breaths and watch for the person's chest to rise. Take a normal breath (do not over inflate chest and/or force air into the stomach/abdomen). Seal your mouth around victim's mouth.



- Release the nostrils. Look for the person's chest to fall as he or she exhales. Listen for the sounds of breathing. Feel for the person's breath on your cheek. If the person does not start breathing on his or her own, repeat the procedure. Watch chest rise, release mouth; victim exhales. Repeat.



## **CARDIOPULMONARY RESUSCITATION (CPR)**

- CPR is the international standard for providing oxygen-containing blood to the brain and other tissues of a victim whose heart has stopped beating.
- CPR must be initiated immediately because most brain tissue cannot survive more than 5 minutes of oxygen deprivation.
- Tap or gently shake shoulder to establish that victim is unresponsive.
- Shout, "Are You OK?"
- Call out "HELP!" or ask someone to call paramedics.
- Turn victim on back.
- Open the airway using the head tilt/chin lift maneuver.
- Determine if breathing
- Look, listen and feel for breathing.
- If victim is not breathing, give two breaths by mouth-to-mouth technique while sealing the Mouth and nose properly.
- Observe chest rise to make sure airway is adequate. Allow deflation between breaths.
- Check circulation
- Determine pulse by feeling for pulse over carotid artery.

- Maintain head tilt with other hand.
- Begin chest compressions:
- Kneel by victim's shoulders.
- Place the heel of one hand two fingers above the lowest point of the breastbone (sternum).
- Follow compression rate of 30 compressions to 2 ventilations, or 80-100/minute.
- Check hand position throughout. Keep hands on sternum during upstroke and maintain your shoulders over victim's sternum.

**REASSESSMENT:**

- Reassess by feeling for carotid pulse.
- If victim has no pulse, continue CPR by ventilating two times,
- Observe chest rise, then resume compression's/ventilations cycle.
- If pulse is present, open airway and check for spontaneous breathing.
- If breathing is present, maintain airway and monitor pulse and breathing.
- If breathing is absent, perform ventilation at 12 times per minute and check pulse.

## BASIC BARGE DESIGNS



### OPEN HOPPER BARGES

Has a single rake on the bow. Used for dry bulk cargo that doesn't need protection from the weather. Examples of cargoes . . . coal, scrap steel, gravel, rocks, shells, etc.



### BOX BARGES

This type of barge has two square ends without a rake end. Box barges can be either open hopper or cover hopper barges. They are used for cargoes as described above.



### COVER HOPPER BARGES

Has a single rake on the bow. Used for various dry bulk cargoes that do need protection from the weather. Examples of this type of cargo are grain, tinplate, phosphate, paper, steel and etc.

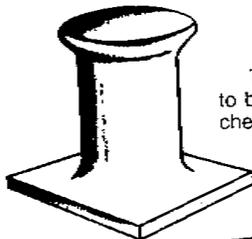


### TANK BARGES

Has a long rake section on the bow, it is a "bow piece" in the tow. It can be turned around and used as a "stern piece" in the tow. Tank barges carry all types of liquid cargoes such as, gasoline, diesel oil, chemicals, black oil, acids, caustic soda, molasses, etc.

**NEVER SMOKE ON or NEAR TANK BARGES.**

## BASIC BARGE MOORING EQUIPMENT



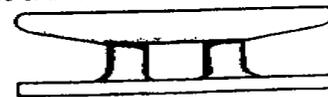
### TIMBERHEADS

The timberhead or bitt is designed to be used with line for making fast, checking, mooring, etc.



### SPOOL

Designed primarily for wire rope. Requires an eye to be used for tying or may be used as a pulley. Normally placed on line deck or towboat.



### CAVEL

Designed also for line. This fitting requires a criss-cross fashion of your line when making it fast. Checking (a braking action) is also done on this fitting in the absence of timberheads.



### CLOSED CHOCK

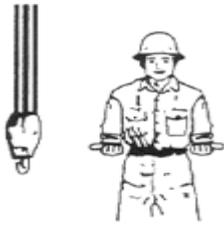
Used for holding down line by running it through the center of the chock. Ideally in cases where the line is made fast below and eliminates "riding up" on the timber head.



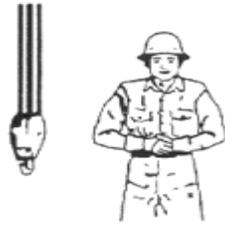
### BUTTON

Found mostly on lock walls designed to hold the eye of a line or wire. Is also used as deck fitting on boats.

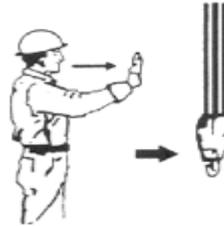
# HAND SIGNALS



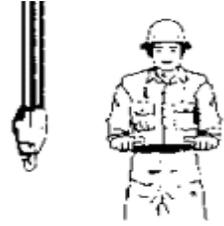
**EXTEND BOOM**



**DOG EVERYTHING**



**TRAVEL**



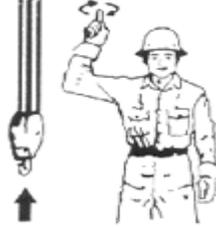
**RETRACT BOOM**



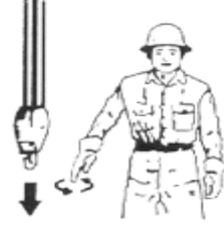
**EXTEND BOOM  
(ONE HAND)**



**RETRACT BOOM  
(ONE HAND)**



**HOIST**



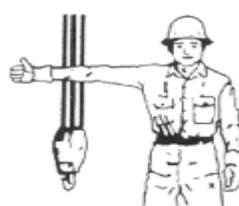
**LOWER**



**USE MAIN HOIST**



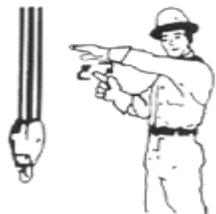
**USE WHIP LINE**



**RAISE BOOM**



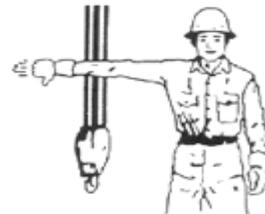
**LOWER BOOM**



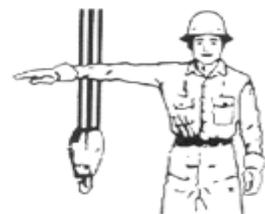
**MOVE SLOWLY**



**RAISE THE BOOM &  
LOWER THE LOAD**



**LOWER THE BOOM &  
RAISE THE LOAD**



**SWING**



**STOP**



**EMERGENCY STOP**



**ASSOCIATED TERMINALS**

## SLINGS AND CONNECTORS

RELATIVE SIZES OF SLINGS AND CONNECTORS FOR TYPICAL LOADS									
IMPROVED FLOW STEEL WIRE ROPE 6 STRAND: 19 WIRE HEMP CENTER			NEW WROUGHT IRON CHAIN		ROUND PIN OR SCREW SHACKLE		DROP FORGED STEEL HOOKS		
DIAMETER IN INCHES	SAFE LOAD IN POUNDS	SAFE LOAD KG	DIAMETER OF LINK STOCK IN INCHES	DIAMETER OF PIN (INCHES)		ROUND PIN	DIAMETER		
				SCREW PIN	SCREW PIN		EYE	THROAT	
1/2	4,300	1,950	3/8	3/4	5/8	1 1/4	1 1/4	1 3/8	1 3/8
9/16	5,400	2,449	9/16	3/4	3/4	1 3/8	1 3/8	1 1/2	1 1/2
5/8	6,600	2,994	5/8	7/8	3/4	1 1/2	1 1/2	1 3/4	1 3/4
3/4	9,400	4,264	3/4	1	7/8	1 3/4	1 3/4	2	2
7/8	12,800	5,806	7/8	1 1/8	1	2 3/8	2 3/8	2 1/2	2 1/2
1	16,000	7,257	1	1 1/4	1 1/8	2 3/4	2 3/4	3	3
1 1/8	21,200	9,616	1 1/8	1 1/2	1 3/8	3 1/8	3 1/8	3 3/8	3 3/8
1 1/4	26,000	11,793	1 1/4	1 5/8	1 1/2	3 1/2	3 1/2	4	4
1 3/8	31,400	14,243	1 3/8	1 3/4	1 5/8	3 1/2	3 1/2	4	4
1 1/2	37,000	16,783	1 1/2	2	2	4	4	4 1/2	4 1/2

# CABLE CLAMP DIAGRAM



**RIGHT**



**WRONG**



**WRONG**

## CABLE CLAMP SIZE CHART

Clip size	# Of Clips	Turn Back in inches	Torque in Ft. Lbs
1/8	2	3 1/4	
3/16	2	3 3/4	
1/4	2	4 3/4	15
5/16	2	5 1/4	30
3/8	2	6 1/2	45
7/16	2	7	65
1/2	3	11 1/2	65
9/16	3	12	95
5/8	3	12	95
3/4	4	18	130
7/8	4	19	225
1	5	26	225
1 1/8	6	34	225
1 1/4	6	37	360
1 3/8	7	44	360
1 1/2	7	48	360
1 5/8	7	51	430
1 3/4	7	53	590
2	8	71	750
2 1/4	8	73	750
2 1/2	9	84	750
2 3/4	10	100	750
3	10	106	1200



Figure-eight knot



Overhand knot



Square knot



Granny knot



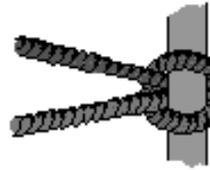
Sheepshank



Slipknot



Cat's-paw



Cow hitch



Bowline



Bow knot

## THE WORKERS CREED



## ASSOCIATED TERMINALS

### THE WORKERS CREED

“And the end is that the worker shall live to enjoy the fruits of their labor; that their mother shall have the comforts of their arms in her age; that their spouse shall not be ultimately a widow; that their children shall have a father and mother; and that cripples and helpless wrecks who were once strong people shall no longer be a by-product of industry”

P.B. Juhnke