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# Brunel Energy, Inc.

## Compressed Air

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## 1. Purpose

- 1.1. The purpose of this safety policy and procedure is to establish procedures for the protection of Brunel Energy, Inc., hereinafter referred to as, “the Company,” employees working with or on compressed air equipment.

## 2. Applicability

- 2.1. This policy applies to employees, subcontractors and/or visitor(s) of the Company. For the purposes of this policy, an employee shall be considered on the job whenever he/she is:
  - 2.1.1. On or in, any Company or client property, including parking areas; or
  - 2.1.2. On Company time even if off Company premises (including paid lunch, rest periods and periods of being on call).
- 2.2. As a condition of employment, Company employees are required to abide by additional governmental or customer policies and requirements that may be imposed at a worksite in addition to the requirements of these policies and procedures. Nothing set forth in this policy constitutes, construes, or interprets in any way as a contract of employment.

## 3. Definitions

- 3.1. **Air Compressor Storage Tank** is a pressurized vessel that stores air generated from an air compressor.
- 3.2. **Drain Valve** is a valve that is installed at the lowest point of an air compressor storage tank to provide for the removal of accumulated oil and water.
- 3.3. **Pounds per square inch (PSI)** is a measurement of pressure in the Imperial system of measurement. PSI is commonly used to measure the pressure of gases (pneumatic pressure) or liquids (hydraulic pressure).
- 3.4. A **trap** is a device which uses venting head pressure to purge the tank from condensed water.

## 4. Responsibilities

- 4.1. Manager(s) shall:
  - 4.1.1. Ensure adequate funds are available for the purchase and repair of air compressor storage tanks. Identify and list employees affected by this safety policy and procedure.
  - 4.1.2. Provide training for affected employees.
  - 4.1.3. Ensure proper use and maintenance of air compressor storage tanks and equipment.
- 4.2. HSE Supervisor(s) shall:
  - 4.2.1. Ensure that only those employees who have been trained to work with air compressor storage tanks are allowed to operate such equipment.

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- 4.2.2. Ensure that the equipment needed is available and is in good working condition.
- 4.2.3. Ensure damaged equipment is removed from service until repaired and tested.
- 4.2.4. Ensure that air compressor storage tanks are inspected every six months.
- 4.2.5. Provide employees with Personal Protective Equipment (PPE) necessary for their job.
- 4.2.6. Provide prompt assistance to managers, supervisors, or others on any matter concerning this safety policy and procedure.
- 4.2.7. Assist in developing required training.
- 4.2.8. Coordinate with Purchasing to ensure that all newly purchased air compressor storage tanks comply with current safety regulations.
- 4.2.9. Provide consultative service and audit assistance to ensure effective implementation of this safety policy and procedure.
- 4.3. Employee(s) shall:
  - 4.3.1. Inspect air compressor storage tanks prior to use and note any damage or defects.
  - 4.3.2. Inspect all hoses and equipment before connecting to any compressed air system.
  - 4.3.3. Immediately report any damage or defects to their supervisors.
  - 4.3.4. Empty manual drains and taps on a regularly scheduled basis.

## 5. Requirements

- 5.1. Equipment
  - 5.1.1. Drain valves are installed at the lowest point of an air compressor storage tank to provide for the removal of accumulated oil and water. Drain valves must be opened once a week to purge water build-up unless they are automatically operated traps.
  - 5.1.2. Drain Traps are devices, installed on the lowest point of a storage tank, which use venting head pressure to automatically purge the tank from condensed water.
  - 5.1.3. Gauges and Valves - All air compressor storage tanks must be equipped with at least one safety valve and pressure gauge. Gauges and safety valves will be tested at least every six months to ensure proper operation. No valve of any type shall be placed between the air receiver and its safety valve.
  - 5.1.4. Accessibility - Air compressor storage tanks must be installed such that all drains, handholds, and manholes are easily accessible. Air compressor storage tanks shall never be buried underground or located in an inaccessible place.
- 5.2. Air Powered Equipment
  - 5.2.1. Equipment and tools that use compressed air must be inspected before each use. This includes all hoses and connections.

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- 5.2.2. Only approved snap-type connectors are permitted on hoses. Use of hose clamps to connect fittings to hoses is not permitted.
- 5.2.3. All hoses must be connected only to approved supply valve locations.
- 5.2.4. Air powered equipment must not be connected to any air supply unless the design pressure of the equipment meets or exceeds the supply air pressure.
- 5.2.5. Temporary reducers may not be installed in any compressed air supply system without approval by the Safety Department.
- 5.2.6. All air-lance/wand equipment must have an automatic hand closure valve that is positioned such that the employee holds the valve open while using the lance/wand.
- 5.2.7. Compressed air shall not be used for cleaning purposes except where the pressure is reduced to less than 30 PSI and effective chip guarding and personal protective equipment is implemented.
- 5.2.8. Goggles are required during air cleaning of facilities or equipment.

## 6. Procedure

### 6.1. Storage Tank Safety Checks

- 6.1.1. All drains, handles, and manholes easily accessible.
- 6.1.2. Drainpipe and valve are installed on the lowest point of the air compressor storage tank.
- 6.1.3. The drain valve on air receivers shall be opened and the receiver completely drained frequently and at such intervals as to prevent the accumulation of excessive amounts of liquid in the receiver.

### 6.2. Air Compressor Storage Tanks Pressure Gauge.

- 6.2.1. Each employer shall determine that compressed gas cylinders under their control are in a safe condition to the extent that this can be determined by visual inspection. These visual inspections shall be conducted as prescribed in the Hazardous Materials Regulations, as they pertain to the type of compressed cylinders under the employer's control.
- 6.2.2. Every air receiver shall be equipped with an indicating pressure gauge, so located as to be readily visible, and with one or more spring-loaded safety valves. The total relieving capacity of such safety valves shall be such as to prevent pressure in the receiver from exceeding the maximum allowable working pressure of the receiver by more than 10 percent.

### 6.3. Safety Valves

- 6.3.1. All safety valves shall be tested frequently and at regular intervals to determine whether they are in good operating condition. Safety valves, indicating/controlling

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devices, and other safety appliances need to be constructed, located, and installed so they cannot be rendered inoperative by any means.

## **7. Training**

- 7.1. All affected employees will be trained in:
  - 7.1.1. The purpose of air compressor storage tanks.
  - 7.1.2. The basic operation of air compressor storage tanks.
  - 7.1.3. Maintenance requirements of drains and traps.
  - 7.1.4. Reading gauges and operating valves.
  - 7.1.5. Identifying damage and defects in storage tanks, hoses, or air driven equipment.
- 7.2. This training must be performed upon initial employment and/or job reassignment. Periodic refresher training shall also be conducted at the discretion of the supervisor or Safety Department.

## **8. Reference**

- 8.1. 1926.803 - Compressed air.