

IPS

Industrial Performance Services



ITCS

Industrial Tubular Catalyst Services



FIRE PROTECTION / FIRE PREVENTION FIREWATCH PROCEDURE

V:2023.1

Fire Protection/Fire Prevention/Firewatch Procedure

January 2023

During hot work activities a potential for fire always exists. IPS★ITCS requires that an employee be assigned with the specific task of Fire Prevention/Firewatch. The Firewatch shall stay at his assigned area for 30-minutes after completion of hot work. A Firewatch plays a very important role in the safe execution of a job. It is the duty of the supervisor to see to it that each man is instructed as to what his duties are and to the location of the safety equipment to be used in case of an emergency.

A. PROCEDURE

Before any employee is utilized as a Firewatch, he shall be thoroughly trained as to his duties and responsibilities and shall acknowledge this training by successfully passing a written test.

1. Knowledge of the condition in and around the area.
 - a. Stay alert.
 - b. Be aware of other work going on in areas around you, especially line breaking, spills and leaks, etc.
2. Stay in contact with the people doing the work. Make it a point to know what type of work they are doing.
3. Know where emergency equipment is located and how to use it.
 - a. Have a fully charged extinguishing agent readily available for the type of fire anticipated.
 - b. Do not use unit fire extinguishers for fire watch. Check on out of the tool room.
 - c. Know where the nearest phone, radio or control room is located in case of emergency.
4. Know where the welding machines, and the oxygen/acetylene bottles are located and how to turn them off.
5. Always keep the area around your job site clean. Do not allow trash, material, and tools to accumulate.
6. Check all sewer openings around your job.
 - a. Make sure all sewer openings are plugged or properly covered.
 - b. Check sewer openings after breaks before resuming work.
7. Never leave your job unattended.
 - a. Stay within 35 ft. of the hot work site.
 - b. If you must leave, either stop the hot work or have another trained person take over
8. In case of a spill, fire, leak, evacuation, or other emergency:
 - a. Notify the people in your area.
 - b. Shut off all machines and gas cylinders.
 - c. Make sure everyone is properly evacuated.
 - d. Notify emergency personnel and supervision immediately.

9. Firewatch personnel are responsible for their job sites. It is part of their job to report unsafe conditions and unsafe acts to supervision immediately.
- 10 The Firewatch should keep the permit on them at all times.
11. Firewatch personnel must wear a distinguishable vest while on duty to identify them.
12. Demonstrate the proper operation of a standard 60 BC dry chemical fire extinguisher and warn them not to activate it until needed. (Note: 60 BC covers 60 square feet of liquid spill.)
13. Remain in the hot work area for 30 minutes after the work is complete.

B. TRAINING

All personnel assigned to Firewatch duties must be trained in the responsibilities and duties of a Firewatch either by:

- Area Safety Council (as required by client)
- IPS★ITCS In-house training

Hands-on training in fire extinguishments is recommended if available through client. However, due to environmental concerns, this may not be practical. In any event, affected employees must handle the type of extinguisher available and demonstrate a complete understanding of its use and limitations.

This training must be documented.

Fire Safety Plan

Purpose:

The purpose of the Fire Safety Plan is to prevent potential injuries and deaths, and to protect IPS★ITCS' property from damage or loss due to fire. This plan includes fire prevention, building exits, fire extinguishing, emergency evacuation, and employee training.

This plan will be reviewed with all new employees when they begin their job and with all employees when the plan is changed.

C. FIRE PREVENTION:

Our first line of defense against fire is to prevent it in the first place. It is the responsibility of all employees to prevent fires. All employees will be appraised of the potential fire hazards in their work area and will be trained in safe work procedures and practices. Employees are expected to follow proper procedures to prevent fires and to notify their supervisor or other management personnel if they observe any condition that could lead to the ignition of a fire or could increase the spread of a fire.

The following are some general fire prevention practices and procedures that will be followed:

All ignition sources (i.e., open flames, cutting torches, spark producing equipment, electric motors, heating equipment, etc.) will be controlled. All contact of ignition sources with combustible and flammable materials will be avoided. All employees will keep all combustible materials at least five feet from such ignition sources and all flammable liquids at least twenty feet away.

Extensive use of electrical extension cords should be avoided. Any damaged or frayed electrical wiring, equipment cords, extension cords, etc. will be removed from service immediately and replaced or repaired.

Any use of flammable liquids will be done in a manner that prevents spills, and prevents the flammable liquid or its vapor or spray from coming into contact with any ignition source. All flammable liquids will be stored in proper flammable liquid storage containers and kept in the proper storage cabinets.

Housekeeping and storage practices are critical to preventing fires. Any combustible materials will be stored in neat stacks with adequate aisle space provided to prevent the easy spread of fire and to allow for access to extinguish any fire that may start. Trash, scrap, and other unnecessary combustibles must be cleaned up immediately and placed in proper disposal containers.

Smoking is restricted to designated areas.

D. COMPANY FIRE EXITS:

Each area of the building/work site has at least two means of escape and are to be used in a fire emergency. The location of exits and the path of egress (escape) will be shown on maps (and posted throughout the building as necessary).

Fire exit doors will not be blocked or locked during business hours in order to prevent their emergency use (when employees are within the building).

Exit routes from the work site will be clear and free of obstructions. All exits are marked with signs designating exits from the premises.

Fire Extinguishers:

Each area of IPS★ITCS will have a full complement of the proper type of fire extinguisher for the fire hazards present. All fire extinguishers will be inspected annually by a fire protection equipment company and tagged with the date of inspection. If a fire extinguisher is used or discharged for any reason, it will be removed from service and replaced with another properly charged fire extinguisher while it is being recharged.

Employees who are expected or anticipated to use fire extinguishers will be instructed on the hazards of fighting fires, how to properly operate the fire extinguishers available, and what procedures to follow in alerting others to the fire emergency. These employees will only attempt to extinguish small incipient fires. If a fire cannot be immediately and easily extinguished with a fire extinguisher, the employees will evacuate the building. They will not try to fight the fire! All employees who are not trained and designated to fight fires are to immediately evacuate the premises at the

first sign of fire or initiation of the fire alarm and are prohibited from using an extinguisher and re-entering the premises.

E. EMERGENCY FIRE EVACUATION:

If any employee discovers a fire or smoke, the employee will immediately pull the nearest fire alarm box. If there is time and it is safe to do so, the employee will contact a member of Management to report the fire. Management will then make an announcement over the public address system that all employees and customers are to evacuate the building. Management will then call 911 and report the fire to the fire department.

If a fire alarm sounds or a fire is otherwise announced, all employees (except those designated and trained to use fire extinguishers) are expected to immediately exit the premises by proceeding to the nearest exit in an orderly fashion. If the nearest exit is blocked by fire or smoke, the employees should proceed to an alternate exit. There should be no running, shouting, pushing, etc. A calm orderly evacuation is the safest for all concerned.

Upon exiting the building, all employees and personnel are to proceed to the designated meeting area(s) away from the building, so as not to hamper access by fire fighters, and in order to be accounted for. The designated meeting area(s) for our building is:

Locations will be designate while at host facility by host facility

Supervisors and managers will account for all their employees to ensure that no one is still in the building and unaccounted for.

Where needed, special procedures for helping physically impaired employees will be established. This will be done on a case-by-case basis when the employee is first hired or when the physical impairment first occurs.

F. EMPLOYEE TRAINING:

All new employees will receive fire prevention and emergency evacuation training when they are hired. All employees will also receive refresher training and a review of this plan on an annual basis.

IPS★ITCS will hold fire drills and will include a practice evacuation of the building at least annually. These drills will be used to evaluate employee response and behavior and will help us determine where more training is needed.

Those employees who are designated and authorized to use fire extinguishers to fight small fires will receive training in the proper use of extinguishers, how to extinguish a fire, the hazards involved in fighting fires, when not to fight a fire, and when to evacuate the area.

The HSEQT Manager administers IPS★ITCS' fire prevention and life safety inspection programs. This includes reviewing all new building construction and renovations to ensure compliance with applicable state, local, and national fire and life safety standards.

Fire prevention measures propose to reduce the incidence of fires by eliminating opportunities for ignition of flammable materials.

G. FLAMMABLE AND COMBUSTIBLE MATERIALS:

Substitution-

Flammable liquids sometimes may be substituted by relatively safe materials in order to reduce the risk of fires. Any substituted material should be stable and nontoxic and should either be nonflammable or have a high flashpoint.

Storage -

Flammable and combustible liquids require careful handling at all times. The proper storage of flammable liquids within a work area is very important in order to protect personnel from fire and other safety and health hazards.

1) Cabinets

Not more than 120 gallons of Class I, Class II, and Class IIIA liquids may be stored in a storage cabinet. Of this total, not more than 60 gallons may be Class I and II liquids. Not more than three such cabinets (120 gallons each) may be located in a single fire area except in an industrial area.

2) Storage Inside Buildings.

Where approved storage cabinets or rooms are not provided, inside storage will comply with the following basic conditions:

- a. The storage of any flammable or combustible liquid shall not physically obstruct a means of egress from the building or area.
- b. Containers of flammable or combustible liquids will remain tightly sealed except when transferred, poured or applied. Remove only that portion of liquid in the storage container required to accomplish a particular job.
- c. If a flammable and combustible liquid storage building is used, it will be a one-story building devoted principally to the handling and storing of flammable or combustible liquids. The building will have 2-hour fire-rated exterior walls having no opening within 10 feet of such storage.
- d. Flammable paints, oils, and varnishes in 1- or 5-gallon containers, used for building maintenance purposes, may be stored temporarily in closed containers outside approved storage cabinets or room if kept at the job site for less than 10 calendar days.

Ventilation -

Every inside storage room will be provided with a continuous mechanical exhaust ventilation system. To prevent the accumulation of vapors, the location of both the makeup and exhaust air openings will be arranged to provide, as far as practical, air

movement directly to the exterior of the building and if ducts are used, they will not be used for any other purpose.

Elimination of Ignition Sources-

All nonessential ignition sources must be eliminated where flammable liquids are used or stored. The following is a list of some of the more common potential ignition sources:

- Open flames, such as cutting and welding torches, furnaces, matches, and heaters- these sources should be kept away from flammable liquids operations. Cutting or welding on flammable liquids equipment should not be performed unless the equipment has been properly emptied and purged with a neutral gas such as nitrogen.
- Chemical sources of ignition such as d.c. motors, switched, and circuit breakers- these sources should be eliminated where flammable liquids are handled or stored. Only approved explosion-proof devices should be used in these areas.
- Mechanical sparks- these sparks can be produced as a result of friction. Only non-sparking tools should be used in areas where flammable liquids are stored or handled.
- Static sparks- these sparks can be generated as a result of electron transfer between two contacting surfaces. The electrons can discharge in a small volume, raising the temperature to above the ignition temperature. Every effort should be made to eliminate the possibility of static sparks. Also, proper bonding and grounding procedures must be followed when flammable liquids are transferred or transported.

Removal of Incompatibles -

Materials that can contribute to a flammable liquid fire should not be stored with flammable liquids. Examples are oxidizers and organic peroxides, which, on decomposition, can generate large amounts of oxygen.

Flammable Gases-

Generally, flammable gases pose the same type of fire hazards as flammable liquids and their vapors. Many of the safeguards for flammable liquids also apply to flammable gases, other properties such as toxicity, reactivity, and corrosivity also must be taken into account. Also, a gas that is flammable could produce toxic combustion products.

H. FIRE EXTINGUISHERS:

A portable fire extinguisher is a "first aid" device and is very effective when used while the fire is small. The use of fire extinguisher that matches the class of fire, by a person who is well trained, can save both lives and property. Portable fire extinguishers must be installed in workplaces regardless of other firefighting measures. The successful performance of a fire extinguisher in a fire situation largely depends on its proper selection, inspection, maintenance, and distribution.

Classification of Fires and Selection of Extinguishers-

Fires are classified into four general categories depending on the type of material or fuel involved. The type of fire determines the type of extinguisher that should be used to extinguish it.

- 1) Class A fires involve materials such as wood, paper, and cloth which produce glowing embers or char.
- 2) Class B fires involve flammable gases, liquids, and greases, including gasoline and most hydrocarbon liquids which must be vaporized for combustion to occur.
- 3) Class C fires involve fires in live electrical equipment or in materials near electrically powered equipment.
- 4) Class D fires involve combustible metals, such as magnesium, zirconium, potassium, and sodium.

Extinguishers will be selected according to the potential fire hazard, the construction and occupancy of facilities, hazard to be protected, and other factors pertinent to the situation.

Location and Marking of Extinguishers-

Extinguishers will be conspicuously located and readily accessible for immediate use in the event of fire. They will be located along normal paths of travel and egress. Wall recesses and/or flush-mounted cabinets will be used as extinguisher locations whenever possible.

Extinguishers will be clearly visible. In locations where visual obstruction cannot be completely avoided, directional arrows will be provided to indicate the location of extinguishers and the arrows will be marked with the extinguisher classification.

If extinguishers intended for different classes of fire are located together, they will be conspicuously marked to ensure that the proper class extinguisher selection is made at the time of a fire. Extinguisher classification markings will be located on the front of the shell above or below the extinguisher nameplate. Markings will be of a size and form to be legible from a distance of 3 feet.

Condition of Fire Extinguishers-

Portable extinguishers will be maintained in a fully charged and operable condition. They will be kept in their designated locations at all times when not being used. When extinguishers are removed for maintenance or testing, a fully charged and operable replacement unit will be provided.

Mounting and Distribution of Extinguishers-

Extinguishers will be installed on hangers, brackets, in cabinets, or on shelves. Extinguishers having a gross weight not exceeding 40 pounds will be so installed that the top of the extinguisher is not more than 3-1/2 feet above the floor.

Extinguishers mounted in cabinets or wall recesses or set on shelves will be placed so that the extinguisher operating instructions face outward. The location of such extinguishers will be made conspicuous by marking the cabinet or wall recess in a contrasting color which will distinguish it from the normal décor.

Extinguishers must be distributed in such a way that the amount of time needed to travel to their location and back to the fire does not allow the fire to get out of control. OSHA requires that the travel distance for Class A and Class D extinguishers not exceed 75-feet. The maximum travel distance for Class B extinguishers is 50-feet because flammable liquid fires can get out of control faster than Class A fires. There is no maximum travel distance specified for Class C extinguishers, but they must be distributed on the basis of appropriate patterns for Class A and B hazards.

Inspection and Maintenance of Extinguishers

Once an extinguisher is selected, purchased, and installed, it is the responsibility of the HSEQT Manager to oversee the inspection, maintenance, and testing of fire extinguishers to ensure that they are in proper working condition and have not been tampered with or physically damaged.

Fire Safety Inspections and Housekeeping:

First line Supervisors and the HSEQT Manager are responsible for conducting work site surveys at least annually. These surveys should include observations of work site safety and housekeeping issues and should specifically address proper storage of chemicals and supplies, unobstructed access to fire extinguishers, and emergency evacuation routes. Also, they should determine if an emergency evacuation plan is present in work areas and that personnel are familiar with the plan.

Emergency Egress:

Every exit will be clearly visible, or the route to it conspicuously identified in such a manner that every occupant of the building will readily know the direction of escape from any point. At no time will exits be blocked.

Any doorway or passageway which is not an exit or access to an exit, but which may be mistaken for an exit, will be identified by a sign reading "Not An Exit" or a sign indicating its actual use (i.e., "Storeroom"). Exits and accesses to exits will be marked by a readily visible sign. Each exit sign (other than internally illuminated signs) will be illuminated by a reliable light source providing not less than 5 foot-candles on the illuminated surface.

Facilities Design Review:

Facilities will be designed in a manner consistent with health and safety regulations and standards of good design. Company Management, together with HSEQT Manager, will ensure that there is appropriate health and safety review of facility concepts, designs, and plans. A formal design review process is currently in place for all new construction efforts.

Occupant Emergency Plan for Persons with Disabilities:

The first line supervisor is assigned the responsibility to assist Persons with Disabilities under their supervision. An alternate assistant will be chosen by the supervisor. The

role of the two assistants is to report to their assigned person, and to either assist in evacuation or assure that the Persons with Disabilities is removed from danger.

- Supervisors, alternates, and the person with a disability will be trained by the HSEQT Manager on available escape routes and methods.
- A list of persons with disabilities is kept in the Office of Health and Safety. This list is updated by the HSEQT Manager and the Office of Personnel Management.
- Visitors who have disabilities will be assisted in a manner like that of Company employees. The Host of the person with disabilities will assist in their evacuation.

I. Emergencies Involving Fire:

Fire Alarms - In the event of a fire emergency, a fire alarm will sound for the building.

Evacuation Routes and Plans - Each facility shall have an emergency evacuation plan. All emergency exits shall conform to NFPA Life Safety standards.

Should evacuation be necessary, go to the nearest exit or stairway and proceed to an area of refuge outside the building. Most stairways are fire resistant and present barriers to smoke if the doors are kept closed.

Do not use elevators. Should the fire involve the control panel of the elevator or the electrical system of the building, power in the building may be cut and you could be trapped between floors. Also, the elevator shaft can become a flue, lending itself to the passage and accumulation of hot gases and smoke generated by the fire.

Emergency Coordinators - Emergency Coordinators will be responsible for verifying personnel have evacuated from their assigned areas.

Fire Emergency Procedures - If you discover a fire:

1. Activate the nearest fire alarm.
2. Notify the fire department by dialing 911. Give your location, nature of the fire, and your name. Follow **HSE.PRO.Communication Plan.2022** using L-CAN Report Format
3. Notify the Manager on duty and other occupants.
4. Notify the HSEQT Manager.

Fight the fire ONLY if:

1. The fire department has been notified of the fire, AND
2. The fire is small and confined to its area of origin, AND
3. You have a way out and can fight the fire with your back to the exit, AND
4. You have the proper extinguisher, in good working order, AND know how to use it.

5.If you are not sure of your ability or the fire extinguisher's capacity to contain the fire, leave the area.

If you hear a fire alarm:

1.Evacuate the area. Close windows, turn off gas jets, and close doors as you leave.

2.Leave the building and move away from exits and out of the way of emergency operations.

3.Assemble in a designated area.

4.Report to the Manager/monitor so they can determine that all personnel have evacuated your area.

5.Remain outside until competent authority (Physical Security, Office of Health and Safety, or your supervisor) states that it is safe to re-enter.

Evacuation Routes

1.Learn at least two escape routes, and emergency exits from your area.

2.Never use an elevator as part of your escape route.

3.Learn to activate a fire alarm.

4.Learn to recognize alarm sounds.

5.Take an active part in fire evacuation drills.

Revision History

Rev	Rev Date	Rev By	Approved By	Description
1.0	1.3.2022	Shayne Torrans	Shayne Torrans	Initial Procedure Document
1.1	11.23.2022	Shayne Torrans	Shayne Torrans	Format Revision

Approvals:

Procedure Owner

Competency Assessment

No.	Questionnaire	C/NYC
Q1		
A1		
Q2		
A2		
Q3		
A3		
Q4		
A4		
Q5		
A5		

Enclosed Attachments	
Risk Assessment	<input checked="" type="checkbox"/>
Environmental Aspect and Impact	<input checked="" type="checkbox"/>
Training and Competency	<input checked="" type="checkbox"/>
Measure and Evaluation Tools	<input checked="" type="checkbox"/>

Competency Checklist

To be filled out by Trainer and signed by Employee, Assessor and Supervisor before being returned to the HSEQT Manager for recording purposes.

Procedure	Competency	Date	Competent YES / NO	Employee Signature

(Please tick appropriate box)

This employee is competent in performing the job.

This employee has not attained the competency level.

*

* *If the employee has not attained all competency levels, the General Manager must assess the action to be taken, provide an extension of training or alternative action as listed below.*

Alternate action to be taken: _____

Signed By	Employee:	_____	Date:	_____
	Trainer:	_____	Date:	_____
	Assessor:	_____	Date:	_____
	Regional Manager:	_____	Date:	_____

Environmental Aspects and Impacts

Identified Environmental Aspects and Impacts

The following table is a summary of the likely environmental aspects and impacts that may be identified during site inspections. The significance of each impact needs to be assessed using the Risk Assessment Model.

Activity	Aspect	Impact
Purchasing & Administrative Work	Consumption of goods	Conservation of natural resources
	Consumption of energy (eg. Electrical equipment and facilities)	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of waste (eg. Paper)	Consumption of space for waste disposal; Habitat loss
Climate Control	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of noise	Disturbance to community; Habitat loss
Cleaning of – offices / vehicles	Storage, use and release of chemicals	Contamination of air, water or soil; Risk to human health
Transport (Fleet vehicles / staff travel)	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Loss of habitat at all stages of generation; Light pollution
	Consumption of goods (eg. Oil)	Consumption of natural resources; Generation of waste; Habitat loss; Biodiversity impacts
	Generation of waste (eg. Oil)	Consumption of space for waste disposal; Potential contamination of water or soil; Habitat loss
	Exhaust emission	Release of greenhouse gases and atmospheric pollution
	Use of dangerous goods (eg. Batteries)	Potential contamination of air, water or soil; Risk to human health
	Generation of noise	Disturbance to community; Habitat degradation
Operations		

Sample only.
To be filled in

Risk Assessment



Risk Assessment // insert name here

<p>Step No: Logical sequence</p>	<p>Sequence of Basic Job Steps documented in the Procedure, Work Instruction and project plans. Break down Job into steps.</p> <p>Each step should be logical and accomplish a major task.</p>	<p>Potential Safety & Environmental Hazards/Impacts at the site of the Job</p> <p>Identify the actual and potential health and safety hazards and the environmental impacts associated with each step of the job.</p>	<p>Risk Rating</p> <p>Refer to the risk matrix or HSEQT.PRO.Risk Mgt</p>	<p>Recommended Corrective Action or Procedure</p> <p><i>Determine the corrective actions necessary to reduce the risk to as low as reasonably practical (ALARP) refer to HSEQ.PRO.Risk Mgt. The risk must be reduced or controlled to ALARP before work commences.</i></p> <p>Document who is responsible for implementing the controls to manage each hazard identified.</p>	<p>Risk Rating refer to the risk matrix or HSEQT.PRO.Risk Mgt</p>
1.					
2.					
3.					
4.					
5.					

Audit



Process: insert// Procedure: Insert //		Date:	Audited by:	
		Location of Audit:	Area Mgr/Supervisor:	
Item	Question	Evidence Sited	Comments	Conformance Score 0,3,5
1.				
2.				
3.				
4.				
5.				
6.				
7.				
AUDITOR'S SIGNATURE:		CONFORMANCE SCORE: / 25		0 – Non-Conformance 3 – Continuous Improvement Opportunity 5 – Total Conformance
SAFETY REP'S SIGNATURE:		CONFORMANCE %:		