



Industrial Performance Services



Industrial Tubular Catalyst Services



ERGONOMICS PROCEDURE

V:2023.1

Ergonomics Procedure

January 2023

Introduction

Ergonomics is the study of people and their interaction with the elements of their job or task including equipment, tools, facilities, processes, and environment. It is a multidisciplinary field of study integrating industrial psychology, engineering, medicine, and design.

In a more practical sense, ergonomics is the science of human comfort. When aspects of the work or workplace exceed the body's capabilities, the result is often a musculoskeletal disorder (MSD). To help avoid MSDs, work demands should not exceed the physical capabilities of the worker. MSDs are also known by several other names including:

- CTDs (cumulative trauma disorders)
- RSIs (repetitive stress or repetitive strain injuries)
- RMIs (repetitive motion injuries)
- Overuse syndrome

The most common, recognizable name for MSDs is cumulative trauma disorders or CTDs. Whatever the name used, these injuries belong to a family or group of wear and tear illnesses that can affect muscles, nerves, tendons, ligaments, joints, cartilage, blood vessels or spinal discs of the body. MSDs do not include slips, trips and falls, cuts, motor vehicle accidents or other similar accidents; although a close look at the reasons for acute injuries often reveals design problems that can be corrected.

Policy

It is the policy of IPS★ITCS to provide all employees with a safe and healthy workplace. A proactive ergonomics program is integrated into our company's written safety and health program. Records documenting the identification, prevention, and control of employee exposure to ergonomic risk factors will be maintained pursuant to all regulations.

This program is a collaborative effort that includes managers, supervisors, and labor. The Ergonomics Program Coordinator is responsible for the program's implementation, management, and recordkeeping requirements.

Ergonomics program

The purpose of an ergonomics program is to apply ergonomic principles to the workplace in an effort to reduce the number and severity of MSDs, thus decreasing workers' compensation claims and, where possible, increase productivity, quality, and efficiency. An ergonomically sound work environment maximizes employee comfort while minimizing the risk of undue physical stress.

A proactive approach focuses on making changes when risks have already been identified, as well as incorporating ergonomics into the design phase of a new facility or process, into purchasing new equipment or tools, and into the contemplation of scheduling changes. IPS★ITCS has such a program which includes the following components:

1. Management Leadership. The management of IPS★ITCS is committed to the ergonomics process. Management supports the efforts of the Ergonomics Program Coordinator by pledging financial and philosophical support for the identification and control of ergonomic risk factors. Management will support an effective MSD reporting system and will respond promptly to reports. Management will regularly communicate with employees about the program.
2. Employee Participation. An essential element to the success of the ergonomics program, employees will be solicited for their input and assistance with identifying ergonomic risk factors, worksite evaluations, development and implementation of controls, and training. Employee participation in the program will occur only during company time.
3. Identification of Problem Jobs. Collecting data that identifies injury and illness trends is called surveillance. Surveillance can be either *passive* or *active*. Conducting a records review is an example of passive surveillance, which looks at existing data such as First Aid logs, workers' compensation claims, trips to the medical facility, and absentee records. Active surveillance uses observations, interviews, surveys, questionnaires, checklists, and formal worksite evaluation tools to identify specific high-risk activities. IPS★ITCS will be using both passive and active surveillance to identify problem jobs.
4. Worksite Evaluations.

Triggers for a worksite evaluation:

- When an employee reports an MSD sign or symptom.
- Jobs, processes, or work activities where work-related ergonomic risk factors have been identified which may cause or aggravate MSDs.
- Any change of jobs, tasks, equipment, tools, processes, scheduling, or changes in work shift hours (for example, going from a traditional 5-day, 8-hour shift to a compressed 4-day, 10-hour shift).
- When a safety walk-through or scheduled inspection or survey has uncovered potential MSD hazards.

Work-related risk factors to be considered in the evaluation process include, but are not limited to:

- Physical risk factors including force, postures (awkward and static), static loading and sustained exertion, fatigue, repetition, contact stress, extreme temperatures, and vibration.
- Administrative issues including job rotation/enlargement, inadequate staffing, excessive overtime, inadequate or lack of rest breaks, stress from deadlines, lack of training, work pace, work methods, and psychosocial issues.
- Environmental risk factors including noise, lighting, glare, air quality, temperature, humidity, and personal protective equipment and clothing.
- Combination of risk factors such as, but not limited to, highly repetitive, forceful work with no job rotation or precision work done in a dimly lit room.

5. Setting Priorities.

Worksite evaluations will be scheduled based upon the following:

- Any job, process, operation, or workstation which has contributed to a worker's current MSD;
- A job, process, operation, or workstation that has historically contributed to MSDs; and
- Specific jobs, processes, operations, or workstations that have the potential to cause MSDs.

6. Worksite Evaluations Methods.

Various methods will be used to evaluate problem jobs including:

- Walk-through and observations
- Employee interviews
- Surveys and questionnaires
- Checklists
- Detailed worksite evaluations

7. Control of the Ergonomic Risk Factors.

IPS★ITCS will take steps to identify ergonomic risk factors and reduce hazards by using a three-tier hierarchy of control (in order of preference):

- Engineering controls. The most desirable and reliable means to reduce workplace exposure to potentially harmful effects. This is achieved by focusing on the physical modifications of jobs, workstations, tools, equipment, or processes.

- Administrative controls. This means controlling or preventing workplace exposure to potentially harmful effects by implementing administrative changes such as job rotation, job enlargement, rest/recovery breaks, work pace adjustment, redesign of methods, and worker education.
- Personal protective equipment (PPE). Although not recognized as an effective means of controlling hazards and do not take the place of engineering or administrative controls, there are acceptable forms of PPE, which include kneepads and anti-vibration gloves.

8. Training.

Training is intended to enhance the ability of managers, supervisors, and employees to recognize work-related ergonomic risk factors and to understand and apply appropriate control strategies. Training in the recognition and control of ergonomic risk factors will be given as follows:

- To all new employees during orientation.
- To all employees assuming a new job assignment.
- When new jobs, tasks, tools, equipment, machinery, workstations, or processes are introduced.
- When high exposure levels to ergonomic risk factors have been identified.

Training will be provided in one, or a combination, of the following formats:

- Oral presentations
- Videos
- Distribution of educational literature
- Hands-on equipment and work practice demonstrations

Trainers will be experienced in delivering training programs that address all work and non work-related risk factors, and will be familiar with IPS★ITCS operations. Training will be provided from one, or a combination, of the sources listed below:

- Internally developed resources
- The workers' compensation carrier
- An outside consultant

All training will be documented. All employees will be required to sign a training sign-in roster.

9. Program Evaluation and Follow-Up.

In order to ensure that issues have been addressed and that new problems have not been created, monitoring and evaluation will be conducted on an on-going basis. The methods include use of individual interviews and checklists to reevaluate the job/task to ensure that risks have been reduced, minimized, or eliminated.

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 Co-ordinator 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 Regional 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 %: | | |