

THE TURNING POINT

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The Vision of the Turning Point

This newsletter is to inform you of recent changes and trends regarding the environment, health and safety. The Turning Point is a monthly newsletter covering topics from various industries and sectors. The Turning Point will respond to your inquiries and inform you of current services and updates regarding Raising the Standard Consulting Inc. (RTSC).

ERGONOMICS – Not Just About Injuries

Joe Maltby, Associate

Many companies, when they think about ergonomics, remember the simple definition: *making the task fit the worker instead of requiring the worker to adapt to the task* and they think about injuries such as carpal tunnel and low back pain. Then they consider ergonomics to be just another “Health and Safety Issue”.

But ergonomics is also an issue that can affect a company’s productivity, the quality of its products and ultimately the company’s profitability and reputation.

The easiest way to think about ergonomics is to think about you. If you could make your work easier to do, what would be the result? Would you do more work? Would your work be of a higher quality? Would you have the time and/or energy to do some of the things that you haven’t been able to get to?

If you could eliminate some wasted movements or tasks, you could spend that time doing something useful.

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Past Newsletters

Please feel free to pass our newsletter to anyone you feel may benefit from the information.

Also, if you are receiving *The Turning Point* for the first time, you may be interested in our past newsletters on Aggressive/Violent Behaviour, Machine Guarding Safety and Occupational Health Hazards, and Construction Safety Regulations. Please contact us for a copy.

MINISTRY OF LABOUR UPDATE

BELROCK DESIGN BUILD INC. FINED \$70,000 FOR HEALTH AND SAFETY VIOLATION

BRAMPTON, Ont.--Belrock Design Build Inc., a construction company based in Concord, Ont., was fined \$70,000 on July 18, 2002 for a violation of the Occupational Health & Safety Act that resulted in serious injuries to a high school co-op student.

On March 31, 2000, a high school co-op student was walking backwards while drilling small holes in a roof when the worker fell 11.76 metres (38 feet, 7 inches) through a pre-existing hole. The worker suffered serious injuries to the wrist, ribs, lung, neck and shoulders. A Ministry of Labour investigation found there were no guardrails around the opening where the worker fell. The co-op student was working for an electrical subcontractor hired by Belrock Design Build Inc. The incident occurred at a construction project on Pendant Drive in Mississauga.

Belrock Design Build Inc. pleaded guilty, as a constructor, to failing to ensure a guardrail was provided around the roof opening to which the worker had access, as required by Section 86(1) of the Regulations for Construction Projects.

This was contrary to Section 23(1)(a) of the act.

The fine was imposed by Justice of the Peace Keith Currie of the Ontario Court of Justice in Brampton.

BIG TUB LODGE OWNER FINED \$70,000 FOR HEALTH AND SAFETY VIOLATIONS

OWEN SOUND, Ont.--The owner of Big Tub Lodge, a resort which operated a dive shop in Tobermory, Ont., was fined a total of \$70,000 on July 8, 2002, for violations of the Occupational Health and Safety Act and Boilers and Pressure Vessels Act that resulted in the death of an employee. The fines were the maximum that can be imposed

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If you could accomplish something quicker and easier by changing your work methods or by using a different tool, would it improve your productivity or would it improve the quality of product that you produce? (The product could be widgets, reports, or customer relations.)

If you could rearrange your schedule so you are not doing exactly the same thing for long periods of time, would you feel less tired, more comfortable and happier at the end of the day (or week)? If you cannot rearrange your schedule, can changes to your _____ make you more comfortable and less tired?

Think of the possibilities for you. Then think of what it could mean to your company and to all of its employees if their work was easier. Depending on what your company produces, you could see improvements in productivity, quality, customer relations, sales, etc. These improvements should also result in lower absenteeism, lower staff turnover, and higher morale.

The end result is higher profitability and a more respected company.

So how does ergonomics provide these benefits? Once again it is easier to explain if we consider just one person. When you hire an ergonomic consultant, you are paying for an unbiased independent assessment that has the health of the worker(s) as its first priority. There are of course other priorities, such as efficiency, productivity, etc., but safety and long-term health must be first.

First an ergonomic consultant would meet with you to discuss your problems or concerns. Then they would observe you while you are working and would ask further questions and perhaps have you try a few things. It may be necessary to make notes, measurements or take pictures for further study. Depending on the situation, you may get immediate suggestions and information or you may get them later, or there may be some combination. In most cases, you will receive information to help you understand the problem and how the suggested solution(s) will improve the situation.

Please notice that the suggestions are only suggestions! It is up to you to decide if you want to try a particular suggestion and if it "works" for you. An ergonomic consultant makes educated suggestions based on scientific knowledge and past experiences. It is your (and perhaps your company's) responsibility to decide what is the best solution for your situation. Generally, the more the consultant knows about your situation, the better. If they know your needs, they may be able to provide short-term suggestions that will improve the situation(s), as well as suggestions that are even better, but are only practical in the future. An ergonomic consultant can provide sources for any of the suggestions that require new equipment. Normally they will not specify a particular company's product so that you can make the best decision for yourself after you have had a chance to try

against an individual for a violation of the Occupational Health and Safety Act.

On June 8, 2000, a worker was working in the dive shop (a store for scuba divers) when a storage tank exploded outside the shop. The storage tank was part of a compressed air tank system used to fill scuba dive tanks. The force of the blast - estimated to be equivalent to three or four sticks of dynamite - spread debris over a considerable distance. The worker died as a result of the incident, which occurred on Big Tub Road in Tobermory.

A joint investigation by the Ministry of Labour and the Technical Standards and Safety Authority found the worker had been trained to fill scuba tanks, but not trained, as required by law, in the requirements of the Workplace Hazardous Materials Information System. The joint investigation also found the exploded tank had not been inspected and certified recently, as required by law, and was corroded from lack of proper maintenance.

An individual who carries on business as Big Tub Lodge pleaded guilty to:

Failing, as an employer, to take the reasonable precaution of having pressure vessels inspected to ensure they could be used safely. This was contrary to Section 25(2)(h) of the Occupational Health and Safety Act;

Failing, as an employer, to train workers in the requirements of the Workplace Hazardous Materials Information System. This was contrary to Section 25(2)(a) of the Occupational Health and Safety Act; and

Failing to ensure a pressure vessel was maintained in a safe working condition and operated safely. This was contrary to Sections 27 and 41 of the Boilers and Pressure Vessels Act.

Justice of the Peace Sharon Woodworth, of the Ontario Court of Justice in Owen Sound, fined the Big Tub Lodge owner \$25,000 on the first count, \$25,000 on the second count and \$20,000 on the third count.

FERGUSON HEATING EQUIPMENT LTD. FINED \$125,000 FOR HEALTH AND SAFETY VIOLATION

TORONTO--Ferguson Heating Equipment Ltd., a Toronto-based company which installs and repairs heating and cooling systems and which carries on business as Ferguson Heating and Cooling, has been fined \$125,000 for a violation of the Occupational Health and Safety Act that resulted in the death of an employee.

On May 29, 2000, a worker was on a catwalk on an overhead mobile crane when another worker, unaware anyone was on the catwalk, attempted to move the crane to another location. The worker on the catwalk fell about 7.6 metres (25 feet) to the ground and died later that day as a result of injuries. A Ministry of Labour investigation found the deceased worker was not wearing a fall arrest system and there was no guardrail on the catwalk's west side. The incident occurred at a plant on Warden Avenue in Toronto.

several suppliers' products on a trial basis.

A similar, but more involved process would occur for a whole office, production line or factory. The important thing to remember is that it is the Principles of Ergonomics that are used to adapt or design a workstation to fit the individual workers physical and mental requirements so that they can perform the work with the minimum of effort or strain. It is not the product that determines whether it is ergonomic - it is whether the product fits the worker.

FALL ARREST

Effective June 12, 2002, Ontario Construction Regulation 213/91 was amended.

The Regulation now requires that:

- 1) employers ensure that workers using a fall protection system are given oral and written training in its use by a competent person.
- 2) training records are kept - records must include training dates and participants' names.
- 3) employers must make training records available to MOL inspectors on request.

Falls are the number one leading cause of accidental death in construction and incidents in the industrial and services sector. The consequences of not having adequate fall protection are serious: financial ruin, lost production, work refusals, fines, even imprisonment.

TRAINING

Please register for Fall Arrest Training

\$70.00 +GST per person, min. of 15 people, can be conducted after hours at your worksite if you prefer.

Transportation of Dangerous Goods

\$80.00 +GST per person, min. of 10 people, to be conducted on-site.

UPCOMING COURSES:

Machine Guarding

Certification Part 1

Emergency First Aid Training



RAISING THE STANDARD CONSULTING INC.

The deceased worker was employed by Ferguson while the worker who tried to move the crane was employed by the company which operated the plant where the incident occurred. The company had retained Ferguson to do the roof heater work. Ferguson Heating Ltd. pleaded guilty to failing, as an employer, to ensure the worker on the catwalk wore a fall arrest system when exposed to the hazard of falling more than three metres (9.8 feet), as prescribed by Section 85 of the Regulations for Industrial Establishments. This was contrary to Section 25(1)(c) of the act.

The fine was imposed by Justice Edward Ormston of the Ontario Court of Justice at Old City Hall in Toronto.

JOB ROTATION - Will it Prevent Work-related Musculoskeletal Injuries?

Ergonomic research strongly indicates that over-exposure to one type of movement (i.e., repetitive movements required to complete a task) can lead to wear and tear on the muscles that are required to perform work. Prolonged wear and tear on tissues, along with the effects of aging eventually will lead to muscle weakness, loss of function and discomfort. These warning signs, in many cases, lead to a work-related musculoskeletal injury, such as muscle strain, tendonitis or carpal tunnel syndrome.

Sometimes one of the best preventative methods to reduce risk of injury for physically demanding and/or repetitive work is to implement an "optimal" job rotation. The general principle behind rotation is: rotating work allows fatigued muscle groups to recuperate while others perform the work and this practice will help to prevent over-stressing a muscle group.

What are the **Ergonomic risks and/or benefits** of implementing a job rotation?

Risks

1. Initially there may be some confusion with scheduling and complaints from employees. In the long run these issues should work themselves out. All changes take time and very few changes go through without some resistance.
2. Productivity may be slightly reduced as employees are cross-trained, depending on the diversity of work and skill required. If work procedures between departments are almost identical, productivity should not be an issue. However, if work procedures are drastically different be prepared to allow approximately 21 days of training time. During this time productivity rates should improve quickly. Consider cross-training employees slowly to diminish its effects.
3. Employees may experience some discomfort when performing a different task for the first time. However, as long as the time spent performing this task is not prolonged at the beginning, discomfort should decrease over time as

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employees become more used to the change.

Benefits

1. Implementation of a plant-wide rotation reduces employee exposure to the physical demands of one task. The greater the number of different task, the more beneficial job rotation can be.
2. Different muscle groups are used when tasks differ in procedure.
3. The degree of muscular activation is altered due to different productivity rates and weights of tools, products and equipment handled.
4. A plant-wide rotation would minimize the amount of time any employee is exposed to either maximum weight or repetition.
5. Employees are involved with all production areas. This can increase quality.
6. Employees are exposed to more mental stimulation.
7. Monotony is eliminated.

These benefits have been shown to greatly outweigh the risks. In fact all of the risks listed above can all be controlled when they are understood and handled properly. What is the “optimal” job rotation?

1. The more different types of tasks that can be included in a job rotation, the more successful it will be at reducing work-related discomfort.
2. The more frequently employees can rotate between tasks, the more optimal the rotation is for injury prevention. If possible, a 20 - 30 minute rotation is optimal.
3. Employees should rotate between tasks that differ in the following:
 - productivity rates
 - uses of muscle groups and parts of the body (i.e., assembly vs. manual labour)
 - handling of weight
 - use of hand tools
 - exposure to heat, cold and vibration
 - exposure to noise
4. Rotation should be random. In other words, employees should not rotate through all of the light assembly tasks first, then the manual labour tasks and then the cognitive tasks, they should randomly rotate through all tasks.
5. If a company has several departments with several different types of tasks within each department, a daily rotation between departments is ideal. However, this may be impractical from an organization perspective. A more practical rotation schedule could have employees rotate between departments weekly and between tasks within a department daily.
6. Employees should be encouraged to operate equipment, use hand tools and start machines with both hands, arms or feet. This will reduce stressful exposure to one body part by 50%. In other words, this practice doubles the amount of

time any one employee can work without discomfort to that body part. This type of rotation is extremely successful in manual skill-type tasks, such as sewing.

7. Workstations should be set up for both right and left handed employees. Employees should learn from the beginning to use both sides of the body.
8. Employees that **prove** a medical restriction, and cannot work at a specific task, due to its weight or the number of repetitions, should not participate in the rotation until they have medical clearance.

Job rotation is only **one** way to reduce exposure to workplace injury risk factors. It should **not** be the only strategy employed to reduce injuries. Alone, job rotation can only make a small impact on injury reduction, especially when job rotation is within the same task. Changes in the workplace are cumulative. The more improvements that are made to a task, the lower the risk of injury. Companies should continue to find ways to reduce exposure through proper workstation set up and automation.

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The President of RTSC, Stanford Brown, has a B.Sc. from the State University of New York - Empire State College, a Diploma in Safety Engineering Technology and a Certificate of Occupational Hygiene and Safety from Humber College of Applied Arts and Technology. He is also one of the few safety professionals in Canada who holds the Canadian Registered Safety Professional designation (CRSP), the Certified Health and Safety Consultant designation (CHSC) and the International Certified Safety Professional designation (CSP) from the Board of Certified Safety Professionals in Savoy, Illinois.

Raising the Standard Consulting Inc. has a sterling reputation in providing cost-effective solutions in a spectrum of EH&S issues through the development of exceptional policies and programs. They have attained excellence in various industries including retail product distribution, the food industry, construction, dry chemical manufacturing, mining and steel manufacturing over the last 10 years. They have managed over TWENTY Workwell audit compliance projects in the last year and have maintained a 100% pass rate in businesses ranging from educational institutions to steel manufacturing plants.

They have received recognition from various businesses such as: The Document Company Xerox, Ingram Micro, Canpar, Industrial Accident Prevention Association, Kaneff Group of Companies and Ford.

For assistance in “raising the standard” of environment, health and safety in your organization, contact us at (905) 840-1918, visit our website at www.rtsconsulting.com or email us at rtsc@rtsconsulting.com