FEM

THE FEDERATED EMPLOYERS' MUTUAL ASSURANCE COMPANY (RF) (PTY) LTD

Ergonomics – A COIDA **Perspective**

Mduduzi Mthethwa

Providing Workers' Compensation to the construction industry since 1936

Definition of ergonomics

- **"ergonomics"** means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance;

- **"ergonomic risk"** means a characteristic or action in the workplace, workplace conditions, or a combination thereof that may impair overall system performance and human well-being;

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

ERGONOMICS REGULATIONS, 2019

FEM

Common causes of ergonomic related injuries

According to Professor Smallwood & Haupt (2009) some of the causes of ergonomic injuries can be attributed to –

- Lifting heavy loads
- Performing repetitive tasks
- Frequent bending and twisting of the body
- Working above shoulder height
- Working below knee level
- Manual handling of heavy and irregular-sized loads
- Adopting awkward work postures
- Working in confined spaces
- Holding the same position for long periods
- Forceful exertion
- Working under hot and cold temperatures / weather

Ergonomics On site

- Vibration affects tendons, muscles, joints, nerves
- Contributing factors

-Prolonged grip restricts blood supply to hands and fingers

-Tools without vibration dampening device

-Poor power tool maintenance

-Prolonged use of a grinder

The Construction Environment

- Building and Wood Workers' International (BWI) estimates that there are up to 180 million construction workers worldwide, with 75 per cent in developing countries. It argues that construction (BWI 2006): gives much needed employment for many of the world's poorest and most vulnerable people.

South Africa

- Construction companies with FEM - Approx. 5000
- Balance – estimated at 50000 – formal Sector
- CIDB – formal sector around 618000 employees
- STATS SA (Quarterly Labour Force Survey – QLFS - Household Survey) puts total number around 1.5 mil. – informal sector
- FEM covered approx. 296523 (2018) - 48% formal sector and just 20% of both the formal and informal sector

RSI & MSD

- A repetitive strain injury (RSI) is an injury to part of the musculoskeletal or nervous system which is caused by repetitive use, vibrations, compression or long periods in a fixed position. Other common names include repetitive stress disorders, cumulative trauma disorders (CTDs), and overuse syndrome.
- Musculoskeletal Disorders or MSDs are injuries and disorders that affect the human body's movement or musculoskeletal system (i.e. muscles, tendons, ligaments, nerves, discs, blood vessels, etc.). Common musculoskeletal disorders include: Carpal Tunnel Syndrome. Tendonitis. Muscle / Tendon strain

FEM Statistics 2017 - 2020

Injuries	Accident %	Days lost	Number of accidents	Permanent Disabilities not resulting In Pension	Permanent Disabilities Resulting In Pension	Average costs	Year
Muscle injuries: sprain & strain, ligament, muscle, tendons	10,48%	571	98	1	0	R20 450	2020
	10,75%	496	144	2	0	R10 175	2019
	11,94%	869	164	6	0	R15 393	2018
	9.97%	1 198	124	1	1	R24 753	2017
Abdomen-including Lumbar	3,21%	57	30	0	0	R13 466	2020
	3,58%	310	48	2	0	R19 618	2019
	6,04%	1425	83	4	1	R41 347	2018
	3,86%	394	48	6	0	R55 476	2017

FEM Statistics 2017 - 2020

Injuries	Accident %	Days lost	Number of accidents	Permanent Disabilities not resulting In Pension	Permanent Disabilities Resulting In Pension	Average costs	Year
Muscle overstraining - any work involving the handling of or exposure to repetitive movements	0,07% 0,07% 0,08%	10 9 0	1 1 1	0 0 0	0 1 0	R4 983 R4 222 R2 722	2019 2018 2017
Joint injury-including-dislocation, sprain, injury to cartilage	10,70% 16,95%	336 1198	100 227	5 12	0 0	R20 413 R19 440	2020 2019

What are the advantages of ergonomics?

1. <u>Increased savings</u>

- Fewer injuries
- More productive and sustainable employees
- Fewer workers' compensation claims

2. <u>Fewer employees experiencing pain</u>

- Implementing ergonomic improvements can reduce the risk factors that lead to discomfort.

3. <u>Increased productivity</u>

- Ergonomic improvements can reduce the **primary risk factors** for MSDs, so workers are more efficient, productive, and have greater job satisfaction.

4. <u>Increased morale</u>

- Attention to ergonomics can make employees feel valued because they know their employer is making their workplace safer.

5. <u>Reduced absenteeism</u>

- Ergonomics leads to healthy and pain-free workers who are more likely to be engaged and productive

Primary risk factors

- **The following are factors for developing an MSD.**
- Force
- Heaving lifting
- Push or pull
- Carrying
- Gripping
- Awkward or prolonged postures
- Repetitive activities
- Overhead work
- Vibration

When is the work likely to result in an injury?

- When it's performed frequently
- When it's performed for a long period of time
- When the work is intense
- When there is a combination of several risk factors

Impact of poor ergonomics

- Ergonomics is getting more airtime.
- Takes a while to see the symptoms of poor ergonomics
- Possible increase in office worker claims
- Temporary loss of critical skills
- Costly to rectify after diagnosis – office equipment etc.
- Higher claims = no rebates and possible loadings

Process of reporting to FEM

- Employee to inform the employer as soon as possible to report an accident- COIDA section 38.
- Employer to complete the Employers Report form (WCL2)- COIDA section 39
- To complete the sprain and strain form
- Send to FEM for registration and adjudication
- Claim number will sent and advised if liability was accepted or not
- Claim will be allocated for administration: Medical treatment, compensate for possible TTD and PD

Case studies cost

1. Case study 1

- Back injury (strain and sprain) with pre-existing condition
- History: strained back while lifting a heavy object, claim was accepted for Liability. TTD was paid for 3 months
- Treatment: including Hospitalization- ICU and the General ward, Xray-CT scan and MRI. Including Physio and Occupational therapy, non-invasive treatment with Rhizotomy.
- Compensation: booked off for 12 weeks, no impairment awarded.

2. Case 2

- Sprained ankle injury while pushing a wheel-barrow
- TTD was paid for 181 days cost: R 71 156.86, Hospitalization: R 85 039.65
- Total cost on the claim: R283 570,36
- No Permanent Disablement awarded

3. Case 3

- Strained back while working with the gate, it was a minor claim booked off for 2 weeks but complicated when he fell and worsened the earlier back strain.
- Total cost incurred: 1,9 m, awarded PD at 20%, TTD paid for 18 months

Identifying Ergonomic Hazards in the Workplace.

- An ergonomic hazard is any interaction with the made world that causes the user discomfort or strain. There are three primary types of ergonomic hazards: objects, environments, and systems that result in poor posture or unnatural, uncomfortable, or awkward movements.
- Ergonomic hazards include –
- Workstations and desks; all tools, equipment, and machinery workers use to do their jobs; and the physical processes workers perform.

Possible Prevention methods

The Work Environment

- We cannot design a specific workstation for every employee.
- We CAN give workers the tools and education they need to make sure their work area fits them.
- Include ergonomics as a topic to cover in toolbox talks.
- Hire an ergonomics expert to give a presentation to your staff and work with employees one on one.
- Provide workers with the resources they need to change elements of their workspace that are causing problems.

Tools and Machines

- Make sure all tools and machines are ergonomically designed.
- Go through your entire tool and machine inventory and see where you can improve.

THANK YOU

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