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- The Draft 2024 Construction Regulations: The long overdue overhaul of addressing 'designing for construction health and safety (H&S)' issues and related interventions has passed
- New and or Amended Regulations to the Occupational Health and Safety Act, Act 85 of 1993 (OHSA)
- Four steps to justify the costs of ergonomic improvements
- Mental wellness in the workplace: A legal and practical imperative for South African employers
- Sanitation in the field—the unspoken challenges
- When your biggest critic is the man in the mirror
- The hidden dangers of hand-arm vibration: Understanding risks and solutions
- Fire safety in workplaces: Fire loading assessments

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ACHASM Association of Construction Health & Safety Management
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Editor's Comment

Every year on 28th April the world comes together to recognise the importance of occupational health and safety as the World Day for Safety and Health at Work is celebrated. In 2003 the International Labour Organisation (ILO) initiated this day to emphasise the importance of preventing work-related accidents, injuries and illnesses. Although this day serves as a reminder to prioritise the well-being of workers, employee health and safety must be a daily priority within every organisation.

This year's theme "Revolutionising Health and Safety: The Role of AI and Digitisation at work", focuses on how new technologies such as artificial intelligence, automation and the Internet of Things (IoT) impacts worker's safety and health. By being aware of both the negative and positive impacts, organisations can put measures in place to mitigate all the cons and focus on improving and implementing the pros.

AI and digitisation in an organisation can contribute towards achieving our goals of a healthier and safer workforce: It can analyse data to identify potential hazards and predict risks, enabling proactive measures to prevent accidents. It can implement enhanced monitoring of worker's health and safety, therefore allowing for intervention. It can streamline reporting making it easier to track and analyse safety data. AI powered training programmes can tailor safety training to individual workers' needs. It can improve analysing of data.

However, organisations must also be aware that an over-reliance on digital tools can lead to sedentary behaviour such as prolonged sitting, musculoskeletal disorders and other health related issues. There are ways to mitigate these risks such as the implementation of ergonomic workstations. The increase of cybersecurity risks is another negative which may compromise worker data and safety. Robust security measures must be therefore be increased and continually updated.

We are seeing an increase in work related stress because AI driven monitoring can create anxiety among workers. The most worrying for workers is job displacement leading to unemployment and its related mental health issues. Through upskillling and reskilling, training can be provided to help employees adapt to new technologies so that they can take on new roles. Through modern technologies and advancements, hazards can be detected and real-time alerts implemented so that incidents can be avoided.

In the PPE industry, AI and digitisation can impact both workers and manufacturers. PPE design can be optimised so that worker well-being is kept in mind, with fit, comfort and effectiveness optimised. Maintenance can be predicted—reducing downtime and increasing productivity. Supply chain management can be optimised—ensuring timely delivery of PPE. Quality control can be achieved—detecting defects and ensuring optimum protection. Personalised PPE fitting can be executed—optimising protection.

By keeping up with progress and implementing modern technologies, organisations will invest in the future of their workforces. A culture of care, respect and responsibility will be fostered which is essential for employee well-being, morale and productivity leading to a healthier, happier and more productive workforce.

Fire safety in workplaces

Fire loading assessments

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He is a lecturer for the Bachelor of Science in SHEM and MSc in OHSW. He is currently a guest speaker / associate lecturer with the Leeds Beckett University, Cardiff Metropolitan University. His experience is highly sought after in Singapore mega projects.

A fire incident is will destroy assets and take away lives. Fire safety is therefore of great importance and should be carefully evaluated and managed. As engineering solutions become more prevalent, it becomes crucial to identify, characterise, and quantify fire detection and fire fighting provisions.

The ignition, heat release, and flame temperature of design fires depends on the weight and arrangement of combustible materials.

During fire incidents, the amount of energy released is directly related to the mass of combustible materials, impacting fire intensity and duration.

The composition of the fire load, exposed surface, and fresh air supply play significant roles in the heat release rate.

FIRE LOAD ASSESSMENT (FLA)

Verification of fire load is an important element of any fire safety audit.

What is (FLA)?

A Fire Load Assessment (FLA) evaluates the total potential heat release in a building or area if a fire were to occur, determining the fire resistance requirements and adequacy of firefighting measures by assessing combustible materials.

By quantifying this data, fire safety professionals and facility owners can assess the potential for fire hazards and make informed decisions about fire prevention strategies.

The purpose of FLA is a crucial step in fire safety planning, helps to determine the potential severity of a fire and the necessary fire safety measures.

Factors within a FLA that must be considered:

1. **Combustible materials** which includes furniture, fixtures, fittings, building materials (walls, ceilings, floors), and stored goods.
2. **Fire load** that signifies the total amount of heat that can be released if all combustible materials in a space were to burn.
3. **Fire load density** which indicates the fire load per unit area (e.g., MJ/m²).
4. **Fire load engineering calculations:**

The NFPA Standard 557 proposes that a fire load survey can be conducted by either the weighing or the inventory technique or a combination of them. Each survey method has its own advantages and disadvantages.

- **Inventory method** that calculates fire load based on the measured volume of items, multiplying the measured volume of combustibles by its density.
- **Calorific value** that utilises the heat of combustion (MJ/kg) of different materials to convert measured weights into energy units (MJ).
- **Combination method (weighing and inventory)** which uses data from the direct weighing method and inventory method.

Weights of items are obtained from:

- directly weighing items
- pre-weighed items
- measured dimensions with subsequent conversion into weights through the use of the item's material densities.

Fire load is calculated by the product of item weights and their corresponding calorific values.

5. *Importance:*

- **Fire resistance** that could helps to determine the required fire resistance of building structures.
- **Firefighting measures** that assesses the adequacy of firefighting resources and strategies.
- **Fire safety planning** that provides essential data for developing effective fire safety plans.

FIRE LOAD CALCULATION FORMULA AND FIRE LOAD

The fire load of a facility, industrial entity, process plant or building, is the heat energy that could be released per square meter of the floor area of a compartment, by the complete combustion of the contents of the unit area and any combustible parts of the unit.

It is a way of establishing the potential severity of a hypothetical future fire. The heat output per unit floor area, often in kJ/m², calculated from the calorific value of the materials present.

The fire load per unit area is defined as Fire Load Density. Fire load or fire loading is used for evaluating industrial safety risks.

$qc = \Sigma\ mvHv / Af$

Where: qc = fire load (MJ/m²)

Af= Floor area (m²)

mv= Total mass of the combustible material (Kg)and

Hv= Calorific value of the combustible material (MJ /Kg)

WHY FIRE LOAD CALCULATION IS IMPORTANT

In order to characterise fires, fire risk assessment which provides detail information on fire load is very important. Fire load surveys or calculation of fire load is the direct way to collect associated information which can provide a basis for the design fire.

HOW DO WE DO FIRE LOAD CALCULATION?

As we know, fire load, or more accurately fire load density, is defined as the weight of combustible content per unit floor area.

It is commonly divided into two categories:

Movable contents:

Fire load consisting of combustible furniture, equipment, goods, and supplies brought in for the use of the occupant.

Interior finish:

Fire load consisting of exposed combustible materials permanently affixed to walls, ceilings, or floors plus doors, trim, and built-in fixtures. In some cases where furnishings were fixed in place, estimates of weight were made on the basis of dimensions.

In addition, weights were estimated for combustible flooring and exposed woodwork other than flooring. These fixed, interior finish items were reported separately as well as combined with movable fire load to show the total fire load present.

Fire load is sometimes called fuel load. Typically, all weights are converted to equivalent weights of combustibles having a calorific value of 4,700 Kcal/kg (8,000 BTU/lb).

However, larger compartments can generate higher temperatures, increased radiation, and higher burning rates. The effects of different thermal conductivities of enclosing walls on gas temperature are significant.

During the early stages where radiation is dominant, thermal inertia, kpc, is most important, while in the later stages where heat conduction loses predominance, thermal conductivity is most important.

The fire load calculation formula may also consider factors that determine the early or pre-flashover stages of fire growth. This is considerably more complex and can only be considered for high complex and hazardous entities.

In models of early fire growth however, important parameters include the amount, surface area, and arrangement of combustible contents; the formation of openings in walls, ceilings or doors; and local zones of hot gases.

FIRE KEY FUNDAMENTALS

Fire action

The fire action is defined as the total quantity of heat produced by the complete combustion of all combustible material in the fire compartment, inclusive of stored goods and equipment together with building structures and building materials.

The various loads should, therefore, be combined in accordance with the stipulations in the relevant fire safety design codes.

Design fire

The design fire involves things like heat output, smoke production and toxic gas generation of a fire. Information of toxic gases is of great importance in fire hazard assessment, while due to the complexity of combustion process it is difficult to quantify the type and quantity of gaseous products being generated in a real fire.

Heat release rate

It gives useful information such as the fire size, rate of smoke production, the possible fire environment, and other relevant data for hazard assessments.

The main factors that control the fire development at growth stage and fully developed stage are different.

FIRE LOAD CALCULATION AND FIRE SEVERITY

Fire severity is defined as the intensity and duration of a fire. To some extent, fire severity also expresses the concept of the potential for a fire to damage a structure or its contents.

Fire severity is considered in terms of the equivalent duration test. The actual assessment of severity in any specific facility fire situation is largely a subjective matter and to a certain extent, depends upon the physical and thermal properties of the enclosing structure itself and the degree of ventilation involved.

Thus, temperature and the duration of burning in a compartment depend upon whether the walls and ceiling are good conductors or insulators and how much thermal energy is exhausted outside the burning room.

WHAT ARE THE REFERENCE STANDARDS FOR FIRE LOAD CALCULATION?

There are in fact several reference standards (both prescriptive and performance based codes or standards) available globally for calculation of fire load.

Few of them which are being used by industry are listed below:

- NFPA 557, Standard for Determination of Fire Loads for Use in Structural Fire Protection Design
- NFPA 551, Guide for the Evaluation of Fire Risk Assessments.

Inputs for fire load calculation

- Facility layout plan (a schematic diagram with measurements will serve the purpose)
- Major compartments or unit blocks within the facility

- Typical inventory of materials held in different areas of the facility to calculate the Fire load
- Situational or Seasonal impacts of the inventory
- Site fire safety walkthrough observations.

THE NEXT STEP

Once we had completed the fire load calculation using the Fire Load Calculation Formula, the next step is to conduct the Fire Risk Assessment (FRA).

A fire risk assessment is an organised and methodical approach to detect, prevent and mitigate any hazard or condition that will lead to a fire at your factory, building, warehouse or facility due to the activities carried out on your premises or by some external influences.

The basis of the process is a fire risk assessment that is conducted to investigate the likelihood that a fire could start and cause harm to those in and around the premises, based on the existing fire load in the location/property.

ROI of breathalyser testing in the workplace

Rhys Evans, Managing Director of ALCO-Safe

Alcohol abuse in the workplace poses a significant threat to safety, productivity, and overall company morale. Oftentimes, the reason companies want to start testing is because they've had an incident or noticed employees may be intoxicated.

Employers may suspect there's an issue with alcohol abuse, however they don't always grasp the full extent until testing begins.

The number of positive results is often higher than expected, with repeat offenders identified - sometimes leading to a high number of dismissals. This issue is far more prevalent than many businesses realise.

Implementing breathalyser testing programmes can effectively mitigate these risks, creating a safer and more efficient work environment.

By identifying and addressing alcohol-related issues proactively, businesses can reduce the likelihood of accidents, injuries, and associated legal liabilities, ultimately leading to substantial cost savings.

HIGH COST OF ALCOHOL-RELATED INCIDENTS

The financial consequences of alcohol-related workplace incidents can be staggering. Accidents, injuries, and property damage not only result in direct costs but also lead to increased insurance premiums, lost productivity, and potential legal battles.

With 20% to 25% of injuries in the workplace involving employees under the influence of alcohol, it's clear that this should be an area of concern for all businesses, not just those in high-risk industries.

By implementing breathalyser testing programmes, businesses can proactively address this issue, reducing the risk of such incidents and the associated costs.

QUANTIFYING THE BENEFITS IN MORE THAN RANDS AND CENTS

The financial advantages of breathalyser testing in the workplace are undeniable with the benefits extending far beyond mere monetary savings.

By reducing accidents, enhancing productivity, and fostering a positive work environment, breathalyser testing programmes contribute to a company's overall success and well-being.

Regular testing helps identify employees who may be under the influence before they cause accidents, significantly reducing the risk of workplace injuries. This saves on medical expenses, lost wages and fosters a safer work environment.

The workplace also becomes more productive. Alcohol abuse can lead to increased absenteeism, affecting productivity and morale. By addressing alcohol-related issues, businesses can improve employee attendance and create a more focused and productive work environment.

This in turn boosts morale, as a workplace free from the negative impacts of alcohol abuse is characterised by increased job satisfaction and higher productivity.

Beyond the bottom line, breathalyser testing can help foster the positive image of a company that prioritises employee safety and well-being, projecting positive image to customers, investors, and the community.

Furthermore, investing in employee safety and well-being demonstrates a company's ethical commitment to its workforce.

THE IMPORTANCE OF A FAIR AND TRANSPARENT WORKPLACE POLICY

From a legal standpoint, breathalyser testing is one of the most effective means to mitigate risk. Alcohol-related incidents can result in costly legal battles. Breathalyser testing programmes will help mitigate the risk of legal liabilities and associated costs.

The successful implementation of breathalyser testing programmes depends heavily on a well-defined and transparent workplace policy on alcohol consumption in the workplace. This policy should clearly outline the company's expectations, the consequences of violating these expectations, and the procedures for conducting alcohol testing.

A fair and transparent policy helps to ensure that alcohol testing is conducted fairly and consistently across the organisation, by outlining the procedures for conducting tests, challenging results, and addressing any disciplinary actions.

INVEST IN SAFETY TODAY, REAP THE REWARDS TOMORROW

To ensure accurate and reliable testing results, it is essential to invest in high-quality breathalyser equipment and consult with experienced providers. These experts can assist in developing effective testing policies, training employees, and ensuring compliance with relevant regulations.

While the initial investment in breathalyser equipment and related services may seem costly, the long-term benefits in terms of cost savings and improved safety will far outweigh the upfront expenses.

By reducing the risk of accidents, injuries, and legal liabilities, businesses can improve safety, enhance productivity, and ultimately achieve substantial cost savings.

However, employers must remember that the success of these programmes depends on the development and implementation of a fair and transparent workplace policy on alcohol consumption.

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When your biggest critic is the man in the mirror

Dr Bill Pomfret has over 50 years of experience as a safety consultant working for leading companies around the world.
Dr Bill is a passionate advocate for safety training.

While attending one of our client coal mining industry's remarkable functions, I had the privilege of meeting a young mining professional who had joined the mining sector in pursuit of better opportunities, after a difficult childhood with testing family circumstances. For purposes of this article and to keep his identity firmly intact., I will call the gentleman Thomas.

For Thomas, mining represented more than just a career, it was a lifeline, a chance to rewrite his family's story. This is a common story in mining, one that I feel isn't sufficiently told.

Thomas approached me after I delivered a short speech that, in his words, left him encouraged but also equally conflicted.

"You made me feel like anything is possible," he said, "but at the same time, I feel that people like you are just different. Born with something special I don't have."

His words hung heavy in the air, a painful reminder of the false narratives many of us carry.

Thomas believed he was ordinary, trapped by an invisible barrier of being destined to be "average." To him, the world was divided into two groups: the naturally gifted and everyone else. Naturally gifted to include public speakers born with a microphone in their hands, and a supernatural command of words and narratives. Or athletes who were destined for stardom before they could even walk.

"I'm not one of them," he said. "My life has been average, and it will probably stay that way."

His impassioned reflection pulled at my emotional strings. Here was someone who had fought through a tough upbringing, who had clawed his way to a better life, but who was shackled by the belief that he wasn't good enough. It struck me that so many of us live with these false truths, these self-limiting narratives we play on repeat, stories we tell ourselves that become barriers between us and the life we desire.

THE LIES WE TELL OURSELVES

Thomas shared an example: he participated in a three-year programme that took him eight years to complete. To him, it was proof of his inadequacy. But as I listened, all I could see was a story of resilience. A testament to grit. The kind of determination that says, "No matter how long it takes, I will finish." What Thomas saw as failure, I saw as extraordinary strength.

Yet, his inner critic was loud. Deafening in fact. It whispered the same destructive lies that so many of us hear: You're not good enough. You're not gifted. You're destined for mediocrity.

The world doesn't lack for critics. They come at us from every direction, family, partners, friends, society. But the most powerful critic is often the one within. The voice that tells us we're not smart enough, talented enough, or deserving enough. That voice doesn't just undermine us it paralyzes us and robs us of a life we could have.

THE MYTH OF NATURAL TALENT

I told Thomas something I wish more people would understand: the people he admires, the ones he believes are "born with it," are often just relentless practitioners. They aren't magic. They are just skilled at silencing their own inner critic long enough to practice, fail, and improve.

Most of us didn't grow up with parents who instilled unshakable confidence in us. Many of us were raised by people who carried their own insecurities and passed them on, unintentionally. But here's the truth: while it might be harder for us, it's not impossible. We must fight for our confidence. We must fight to silence the self-doubt.

THE INTERNAL BATTLE

The path to greatness isn't a straight road; it's filled with stumbling blocks and hurdles. But those hurdles aren't the real enemy. The real battle is internal. It's about facing your fears, confronting the lies you've been told and which you continue to tell yourself. It is about refusing to let self-doubt win.

You'll stumble. You'll fall. But you'll also rise stronger each time. And when you do, you'll look back and realise that the life you've always wanted was waiting for you to claim it.

PRACTICAL STEPS TO RECLAIM YOUR POWER

Thomas dreams of being able to walk into a room and conduct a successful meeting, to stand in front of his community and rally them toward a common goal, to deliver a moving speech with confidence. His goals are beautiful, achievable, and within reach.

I urged him to join Toastmasters, a supportive environment where he could practise public speaking and leadership. I said to him, "Thomas, the difference between who you are today and who you want to be is just practise. It's the courage to show up, to try, to fail, and to try again."

I don't know if he'll take my advice. But I do know this: the voice that says, you can't do it, is a liar. And with every small step, every small win, you can silence that voice.

TO THOMAS, AND EVERYONE ELSE FIGHTING THEIR INNER CRITIC

The conversation with Thomas reminded me of the work we all must do. We must look in the mirror and say, "Today, I choose to believe in myself."

To Thomas, I say this: "You are whoever you want to be. You can achieve whatever you set your mind to. Go after your dreams with everything you've got. The world is yours to conquer, my brother. Godspeed."

Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light, not our darkness that most frightens us.

We must ask ourselves, "Am I to be brilliant, gorgeous, talented and fabulous?" To Thomas I ask "Who are you not to be"?

The hidden dangers of hand-arm vibration:

Understanding risks and solutions

Shaun Ramroop is the Head of the Department of Environmental Health at the Nelson Mandela University, Gqeberha. He has over 30 years of experience in Environmental and Occupational Health and Safety and has worked both in the public and private sectors. His research focus is in the area of human factors/ergonomics (HFE).

When workers use hand-held vibrating power tools, they may be exposed to harmful levels of hand-arm vibration (HAV).

Reducing either the vibration exposure or the duration of use can help lower the risk of musculoskeletal disorders (MSDs).

WHAT IS HAND–ARM VIBRATION?

HAV refers to vibration transmitted to the hand and arm while operating hand-held power tools, hand-guided equipment, or holding materials being processed by machines.

Workers who frequently use tools like drills, hilti guns, grinders, chainsaws, and jackhammers are commonly exposed to hand-arm vibration (Marras and Karwowski 2006).

EFFECTS ON WORKERS HEALTH

Exposure to HAV can lead to impaired circulation in the hand and forearm, as well as damage to nerves, tendons, muscles, bones, and joints in the hand and arm. It can result in various conditions collectively referred to as hand-arm vibration syndrome (HAVS), along with specific disorders such as carpal tunnel syndrome, tennis elbow, and vibration white finger.

Workers exposed to vibration while performing other hazardous manual tasks may also experience:

- Pain in the hands and arms.
- Reduced muscle strength.

Prolonged exposure over years can lead to episodes of finger whitening, typically triggered by cold, due to temporary shutdowns of blood circulation to the fingers.

Additionally, workers who use equipment that exposes them to both HAV and noise may be at a higher risk of hearing loss (Mal'kova, Popov et al. 2012).

THE 3 MAIN FACTORS INFLUENCING THE EFFECTS OF EXPOSURE TO HAV

1. Tool characteristics:

- The longer a worker using tools is exposed to HAV, the greater the risk of developing HAVS.
- Poor tool maintenance.
- Minimal handle insulation (Saha and Kalra 2016).

2. Organisational factors:

- Long exposure during each work shift and years of exposure.
- Lower duration and frequency of rest periods.
- Lower temperature of work environment (Bovenzi 1998).

3. Individual's characteristics:

- Gripping the handle more tightly than needed.
- Awkward postures and working overhead.
- Low operator skill ; poor technique.
- Individual lifestyle factors (e.g. smoking).
- Individual's medical history (e.g. disease or prior injury to fingers, hands or wrists). (Burström 1994).

WORKPLACE CONTROLS

The principle of hierarchy of control MUST be used to control hand-arm vibration in the workplace.

- What ever method of control is going to be implemented in the workplace the workers must be consulted and involved in identifying solutions, including the procurement of new vibrating hand-tools.
- Eliminating or minimising exposure to HAV usually involves isolating or cushioning methods.
- Substituting alternative methods or processes to eliminate the need to use vibrating hand-held tools.
- Selecting tools with low vibration emission levels to eliminate or minimise exposure to vibration.
- Professionally modifying existing tools to either minimise the vibration or prevent the vibration from moving into the handle of the tool.
- Directing cold air away from the worker's hand.
- Maintaining equipment regularly to minimise vibration.
- Modifying work methods to reduce exposure to vibration.
- Altering work practices and the way work is organised to reduce exposure to vibration.

These measures need to be accompanied by training, education and supervision including advice on good work practices and tool maintenance, the effects of individual factors (e.g. smoking and some medications may impact on circulation and vibration white finger), as well as recognising and reporting symptoms of HAVS (Ferguson 1940, Schoeman, Van den Heever et al. 2001, Yan, Zhu et al. 2020).

ARE THERE MANDATORY EXPOSURE LEVELS?

Yes, South Africa has adopted European Union levels, which are contained in Table 1, of the Physical Agents Regulations, as contained in the Occupational Health and Safety Act, 1993 (Act no 85 of 1993) (Govender 2011, Mangharam 2012, Africa 2017).

Physical Agent	Action Level	Time-Weighted Average OEL	Unit	Duration
Hand-Arm Vibration	2,5	5	Meter per square second m/s^2	8-hours

Table 1. European Union Levels

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Mental wellness in the workplace:

A legal and practical imperative for South African employers

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Andrea Rocha
Reiki Master and Energy Healer

In today's fast-evolving work environment, mental wellness is no longer just a personal concern—it is a critical occupational health and safety issue. Employers in South Africa are now legally required to address mental health as an integral part of workplace safety. Failure to do so could lead to legal consequences, diminished workforce productivity, and a toxic workplace culture.

This article explores the legal framework around workplace mental wellness, highlights the challenges of addressing mental health risks, and introduces innovative solutions such as workplace wellness programmes, including Reiki and mindfulness practices.

MENTAL HEALTH IN THE WORKPLACE: A LEGISLATIVE PERSPECTIVE

Under South African law, the Occupational Health and Safety Act No 85 of 1993, obligates employers to ensure a safe working environment that mitigates risks to employees' physical and mental health. Complementary frameworks such as the South African National Standard (SANS) 45001 expand this responsibility to include systematic risk management for both physical and psychological well-being.

For instance, employers are required to proactively identify, assess, and address workplace stressors, such as excessive workloads, toxic environments, and harassment, which could compromise employees' mental health.

The inclusion of mental wellness under occupational safety legislation recognises its critical role in fostering a sustainable, productive workforce.

Moreover, the Labour Appeal Court's rulings, such as in Independent Municipal and Allied Trade Union on behalf of Strydom v Witzenburg Municipality and Others (2012), emphasise the need for employers to consider mental health conditions in performance management.

Employers must investigate whether mental health challenges affect job performance and explore reasonable accommodations before considering dismissal for incapacity.

The Employment Equity Act 55 of 1998 further safeguards employees by prohibiting harassment based on psychological harm, reinforcing the need for inclusive workplace policies. These legal obligations underline the importance of cultivating a workplace culture that prioritises mental health.

THE CONSEQUENCES OF IGNORING MENTAL HEALTH

Failing to address mental wellness in the workplace can have dire consequences for both employers and employees.

Research indicates that unaddressed mental health issues, such as anxiety, depression, and burnout, lead to:

- Increased absenteeism: Employees struggling with mental health challenges are more likely to take sick leave, costing businesses significant time and resources.
- Reduced productivity: Chronic stress and burnout impair cognitive functions, focus, and creativity, diminishing overall output.
- Higher turnover rates: A toxic workplace culture exacerbated by unaddressed mental health issues can push valuable employees to resign.
- Legal risks: Non-compliance with mental health regulations may result in legal penalties and reputational damage.

The workplace, traditionally a source of financial stability, has become a leading contributor to mental health challenges, especially in high-stress industries. Addressing these risks is not just a legal obligation but an ethical imperative for employers.

THE BENEFITS OF WORKPLACE WELLNESS PROGRAMMES

Beyond legal compliance, workplace wellness programmes offer a pathway to enhancing employee well-being, productivity, and engagement. A structured wellness initiative that integrates stress management, yoga, meditation, and complementary therapies such as Reiki can transform the workplace into a space of support and growth.

The benefits of implementing wellness programmes include:

- Increased productivity: Employees who feel supported are more engaged, focused, and innovative.
- Reduced absenteeism: Wellness practices, such as meditation and stress management, boost immunity and reduce illness-related absences.
- Improved morale: A supportive workplace fosters positive energy, team cohesion, and job satisfaction.
- Enhanced focus and clarity: Practices like yoga and Reiki help employees manage stress, leading to sharper decision-making and reduced errors.
- Cost savings: Preventative care through wellness programmes reduces the long-term financial burden of addressing workplace mental health crises.

THE ROLE OF REIKI AND MINDFULNESS IN MENTAL WELLNESS

One of the most innovative approaches to workplace wellness is the integration of Reiki, an ancient Japanese healing practice that promotes relaxation and stress relief. Andrea Rocha, a qualified Reiki master, yoga instructor, and wellness coach, emphasises the transformative impact of Reiki in fostering a healthy work environment.

Reiki sessions in the workplace provide employees with:

- Emotional balance: Reiki helps individuals process and release emotional stress, reducing anxiety and improving focus.
- Physical relaxation: The practice encourages deep relaxation, alleviating physical tension and fatigue.
- Team harmony: Group Reiki sessions or mindfulness practices can strengthen bonds among employees, creating a culture of mutual respect and support.

Mindfulness meditation is another powerful tool for mental wellness. Simple practices such as breathing exercises and guided meditation can be easily incorporated into the workday, offering immediate benefits. These include enhanced concentration, reduced stress, and greater resilience in the face of challenges.

TAILORED WELLNESS PROGRAMMES FOR CORPORATE SETTINGS

Wellness programmes should provide employers with tailored solutions to suit their specific needs.

1. Executive programmes: Designed for leaders, combining yoga, meditation, and breathing techniques to reduce stress, improve decision-making, and enhance leadership qualities.
2. Desk and energising yoga: Perfect for employees with sedentary jobs. They should focus on improving posture, increasing energy levels, and reducing back and neck pain.
3. Meditation practice: Quick, impactful meditation sessions should offer employees a mental reset, improving focus and productivity in as little as 15 minutes.
4. One-on-one mentorship: This should delve into individual challenges, providing actionable strategies to enhance holistic well-being.

These programmes must meet legislative requirements and position companies as progressive, employee-centred organisations.

INTEGRATING WELLNESS INTO COMPANY CULTURE

Implementing a workplace wellness programme is not just about offering occasional sessions; it's about embedding wellness into the company's culture. Here's how employers can achieve this:

- Policy development: Draft clear policies that prioritise mental health, including procedures for identifying and addressing mental health risks.
- Leadership involvement: Encourage executives to participate in wellness programs, setting a positive example for employees.
- Regular workshops: Host monthly or quarterly wellness workshops focusing on stress management, mindfulness, and team building.
- Safe spaces: Create designated quiet zones for meditation and relaxation during the workday.
- Feedback mechanisms: Regularly assess employee needs through surveys and adjust wellness offerings accordingly.

A PATH TO LEGAL COMPLIANCE AND PRODUCTIVITY

By aligning workplace practices with frameworks like SANS 45001 and leveraging wellness programmes, employers can ensure compliance with legal requirements while unlocking the full potential of their workforce.

Organisations that prioritise mental wellness not only mitigate legal risks but also foster a culture of care, respect, and productivity.

In the words of Andrea Rocha, "Mental wellness is the key to unlocking the highest potential of employees, empowering them to thrive both personally and professionally."

CONCLUSION

The inclusion of mental wellness in occupational health and safety is a testament to its growing importance in today's workplace. By embracing innovative wellness programs, employers can transform their organisations into thriving ecosystems of productivity and well-being. It's time for South African bosses to lead the way, not just in compliance, but in creating workplaces where employees feel valued, supported, and empowered.

Mental health isn't just a legal box to tick—it's a game-changer for the modern workplace.

Make it a priority today.

The Draft 2024 Construction Regulations:

The long overdue overhaul of addressing 'designing for construction health and safety (H&S)' issues and related interventions has passed

Professor John Smallwood PhD (Construction Management) Pr CM Pr CHSA FCIOB FCMSaiosh MACHASM MACPM MARCOM MESSA MICOH MIOSHProfessor of Construction Management, Department of Construction Management, Nelson Mandela University

Regulations as, research findings, must be implementable and measurable, or monitorable in the case of regulations. Furthermore, they must be possible and logical.

A pre-requisite for this is an understanding and appreciation of the project processes involved on the part of those involved in the process of amending them.

The primary processes concerned are design, procurement, and construction, relative to the six statutory built environment councils' six stages of work, although a fourth, namely planning, precedes design.

Given that this is intended to be a succinct article, it is necessary to refer readers to the following chapters authored by the author of the article, and included in Applied Construction Health and Safety: Chapter 4: Designing for Construction Health and Safety; Chapter 5: Baseline Risk Assessment; Chapter 6: Designer Health and Safety Specification; Chapter 7: Design Hazard Identification and Risk Assessment; Chapter 8: Designer Report, and Chapter 9: Contractor Health and Safety Specification (Haupt & Smallwood, 2023).

RISK ASSESSMENT

Generally, there are three phases of risks

Concept and feasibility – risks arising from the 'idea' e.g., the upper aerial cableway station of the project undertaken in 1997. Exposure to, among other, 'sheer face' construction, a maximum wind speed of 130 km/h, a temperature of - 12° C including wind chill, the 'tablecloth' that can envelop the mountain in minutes, undulating terrain, and Cape Cobras.

These should be addressed in a client baseline risk assessment (BRA). Figure 1 provides an overview of the nature and scope of the challenges posed by the Table Mountain Aerial Cableway Station project.

Design – construction work risks arising from the design e.g., insitu work at elevated heights as opposed to using prefabricated sections, and specification of heavy materials, or materials containing hazardous chemical substances. These should be addressed in a design hazard identification and risk assessment (HIRA).

Construction – construction work risks e.g., activities or tasks such as excavations in 'collapsible' soils, and cutting paving blocks. These should be addressed in a contractor HIRA.

Client

The 2014 Construction Regulations (Republic of South Africa (RSA), 2014) require clients to: 5(1)(a) Prepare a BRA, and 5(1)(b) Prepare an H&S specification based on the BRA, which is possible and logical.

The 2024 Construction Regulations require clients to: 5(1)(a) Prepare a documented design risk assessment for an intended construction work project. Firstly, it is notable that 'design risk assessment' is not included in the definitions. Secondly, it is impossible for clients to prepare a design risk assessment as such a risk assessment can only be conducted during the design process!

Designer

The 2014 and 2024 Construction Regulations do not refer to design HIRA in Regulation 6. Duties of designers. It may be implied, however, for the uninitiated, it is not explicit. It must be explicit and elaborated upon, even briefly. Then, how many reviews of design HIRA have been undertaken by the Occupational Health and Safety (OH&S) Inspectorate, Department of Employment and Labour (DEL) to date? Probably zero? The same question applies to 'designer reports'.

H&S SPECIFICATION

The intention of H&S specifications should be to contribute to mitigating hazards and risks. However, historically, they have invariably been a 'regurgitation' of the Construction Regulations. There should be two H&S Specifications.

Firstly the 'designer' version, which includes the hazards and risks identified during the BRA and the client requirements. Then, the 'contractor' version, which includes the hazards and risks identified during the BRA and the client requirements, and the residual hazards and risks resulting from the design HIRA process and included in the 'designer report' i.e., designers should record the residual hazards and risks after addressing the raw hazards and risks.

H&S FILE

Both the 2014 and 2024 Construction Regulations have failed to realise the intention of an H&S file.

The rationale is, among others, to: provide a record of information for the end user; alert those responsible for the structure and equipment, of the significant H&S risks that need to be dealt with during the use, maintenance, amendment, and

Figure 1: Upper Aerial Cableway Station, Table Mountain (Table Mountain Aerial Cableway, 2014)

demolition of the structure, and provide information for future H&S plans.

The United Kingdom's Construction (Design and Management) Regulations 2015 (Health and Safety Executive, 2015) Regulation 12 Construction phase plan and health and safety file' (5) reads as follows: "During the pre-construction phase, the principal designer must prepare a health and safety file appropriate to the characteristics of the project which must contain information relating to the project which is likely to be needed during any subsequent project to ensure the health and safety of any person."

An example is post-tensioned suspended reinforced concrete slabs i.e., the inadvertent forming of an opening through such slabs will result in their collapse.

AN OVERVIEW OF THE PROCESS

The following is a summary of the process the 2024 Construction Regulations should reflect: client BRA → 'designer' H&S specification → design HIRA → designer report → 'contractor' H&S specification → H&S plan (including 'construction' pretender & pre-contract HIRA) → construction HIRA (including review of effectiveness of design HIRA) → H&S file and H&S close out report relative to the client, designers, and contractors.

CONCLUSIONS

The essence of construction H&S is the elimination of hazards and risks, or at the very least, the mitigation thereof. 'An overview of the process' above informs with respect to how this can be achieved.

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SAIOH President's Message

Karen du Preez: SAIOH President, e-mail: president@saioh.co.za

The Southern African Institute for Occupational Hygiene (SAIOH) is deeply committed to its members and the advancement of the occupational hygiene profession.

To uphold this commitment, we consistently provide updates and share developments with our members. As an institute that exists to serve its members, we value your active participation and ethical contributions to the field.

To foster a stronger connection, we welcome your feedback and input on the topics we discuss.

The legacy of SAIOH

SAIOH is a professional body recognised by the South African Qualifications Authority (SAQA) and the International Occupational Hygiene Association (IOHA), with approximately 1 000 members.

The management team and Council members that serve SAIOH volunteer their time and expertise to contribute to the vision and mission of SAIOH.

What motivates someone with a demanding day job to take up a position that places another claim on their already limited time? The answer is "legacy", which can be defined as the long-lasting impact of specific past events or actions.

The actions and commitment of past and present leaders of SAIOH have contributed to the growth of SAIOH and paved the way for incoming members to excel.

Standing at the beginning of my tenure as SAIOH President, I acknowledge these past actions and contributions. I know the road has been travelled by great names in occupational hygiene, and following in their footsteps is a privilege and an honour.

My commitment to SAIOH members is to build on the great example set by past presidents who served the occupational hygiene profession and SAIOH's best interests with passion and dedication. Together with the Council and management team, my focus will be on identifying and implementing projects that align with SAIOH's strategic objectives to enable our members to practice sound and ethical occupational hygiene to ensure safer and healthier workplaces.

My invitation to our members is to utilise the opportunities that SAIOH provides to grow professionally and excel as occupational hygiene professionals in southern Africa and beyond.

National council feedback

Karen du Preez: SAIOH president, e-mail: president@saioh.co.za
Deon Jansen van Vuuren: SAIOH general manager, e-mail: deon.jvvuuren@gmail.com

The SAIOH Management Board has maintained the momentum from 2024 through a series of meetings and combined discussions. The first Management Board meeting of 2025 was held on 3 February, followed by the SAIOH Strategic Session and the first Council meeting on 26 and 27 February, respectively.

Additional engagements included:

- **September and October 2024**: Impromptu Zoom and MS Teams meetings with the conference organising and planning committee.
- **16 October 2024**: Attendance at the Department of Employment and Labour's successful Occupational Health and Safety (OHS) Strategy Conference, including the signing of the OHS Accord at Emperors Palace.
- **November 2024, January, and February 2025**: Circulation of information on several occupational hygiene-related webinars to SAIOH members.
- **21 November 2024**: Representation by the SAIOH PCC Chief Examiner at the South African Society of Occupational Health Nursing Practitioners (SASOHN) Annual Conference in White River, Mpumalanga.
- **27 November 2024**: Participation in the Occupational Health Southern Africa editorial board meeting.
- **26 and 27 November 2024**: Contribution to the Occupational Heat Exposure Symposium hosted by the University of KwaZulu-Natal.
- **29 November 2024**: Engagement in the Mine Health and Safety Council's heat tolerance screening workshop.
- **29 November 2024**: Attendance at meetings held by the Occupational Hygiene Approved Inspection Authority (OH AIA) Association.
- **Ongoing**: Naadiya Mundy, representing SAIOH management, attended meetings with Workplace Health Without Borders (WHWB), the International Occupational Hygiene Association (IOHA), and other occupational hygiene organisations to formulate strategies to combat global threats to occupational hygiene, amplified by the US Congress' proposal to abolish their Occupational Safety and Health (OSH) Act and cutting funds to the National Institute for Occupational Safety and Health (NIOSH).

SAIOH continues to demonstrate its commitment to advancing occupational hygiene through consistent engagement and active participation across various platforms.

Strategic plan

The current SAIOH strategy (5-year) plan is steered by Jaco Pieterse. The strategy is discussed, and progress thereof is evaluated at each monthly SAIOH management board and quarterly council meetings.

Ethics

NGO Law is in the process of refining the SAIOH Ethics Policy and Procedures. Their initial feedback has been received, accompanied by additional questions about specific SAIOH procedures.

SAIOH Management completed its initial review and has resubmitted it to NGO Law for additional revisions.

The SAIOH Ethics Policy and Procedures is of critical importance, as it is essential for the Ethics Committee to commence implementation. Additionally, it is a key priority in the SAIOH strategy - Item No. 3.

Effective 1 January 2023, all SAIOH-certified members must provide evidence of completing an approved occupational hygiene ethics training course. A one-year phase-in period was granted during 2022 to facilitate this transition.

Terry McDonald from BOHS delivered PDCs during the 2021 and 2022 Annual Conferences, as well as on 25 July 2024. These online seminars are available for purchase.

SAIOH, in collaboration with Northwest University, is actively working on developing an Occupational Hygiene specific training course on Ethics in SA.

SAIOH Branch activities

The Gauteng branch meeting, chaired by Cecil-Roux Steyn, took place on 7 March 2025. The meeting featured two presentations: Trysome's Cab and Enclosure Air Quality ISO 23875 requirements, and the PCC's presentation on member responsibilities regarding Continuous Professional Development compliance.

On 12 March 2025, the KwaZulu-Natal branch hosted a virtual meeting with presentations covering key topics, including navigating a landscape filled with various health hazards as occupational hygienists, and an overview of the Department of Employment and Labour's promulgated Regulations for Hazardous Chemical Agents, as well as a presentation on Medical Surveillance, and Hazardous Chemical Agents.

On 14 March 2025, the Cape Town branch convened for its inaugural 2025 meeting, starting with the introduction of the new Western Cape members. This was followed by an update on feedback from the SAIOH National Council meeting and Strategy Session. During the meeting, Dale Kennedy from Ergomax delivered a presentation on Ergonomics Regulations, and Jody Kekana from U-Mask gave the second presentation. This meeting was in-person.

Unfortunately, the Central (Free State), Northern Cape, and Mpumalanga branches remain inactive.

International Occupational Hygiene Association (IOHA) and Occupational Hygiene Training Association (OHTA) feedback

The Occupational Hygiene Training Association (OHTA) and the International Occupational Hygiene Association (IOHA) continue to publish their newsletters. Links are e-mailed to all SAIOH members and published on the SAIOH website: https://www.saioh.co.za

The OHTA - Global Link and IOHA GEM newsletters are posted on the SAIOH website and sent to all members via Mailchimp as soon as they become available.

Deon Jansen van Vuuren's representation of SAIOH on the IOHA Board and the National Accreditation Recognition Committee (NARC) concluded on 31 December 2024.

24. The PCC Exco has nominated Corlia Peens as the new IOHA Board Director and member of the NARC, effective 1 January 2025.

SAIOH Technical Committee feedback

The SAIOH Technical Committee, under the leadership of Dr Ivan Niranjan, the SAIOH Technical Portfolio Coordinator, has made significant progress on its research into welding fumes, focusing on measurement and analysis.

A dedicated sub-committee, comprising members from SAIOH and the OH AIA Association, has convened to draft a technical and position paper on this topic, with the final version anticipated in 2025.

A second technical committee is actively working on the development of technical procedures and a SAIOH position paper concerning heat stress management. Despite the unfortunate passing of Schu Schutte, which posed a temporary setback, coordination with the CSIR and Dr. Johan Kielblock is now underway to carry out the necessary research. This project aims for completion by mid-2025, with a dual focus on producing a technical paper and enabling SAIOH to provide robust, relevant proposals to enhance the newly introduced Physical Agents Regulations (PAR), previously referred to as the Environmental Regulations for Workplaces.

Additionally, Wessel van Wyk, the former Technical Co-ordinator, continues to play a key role in finalising a position paper on real-time monitoring. Once approved by the SAIOH PCC Exco's sub-committee and the Technical Committee, this document will be shared with all SAIOH members and stakeholders.

Annual SAIOH scientific conference

The conference dates have been confirmed as 20 - 23 October 2025. Members are requested to save the date and keep a lookout for abstracts submission dates.

The 2025 SAIOH Conference will be held on 20 – 23 October 2025 at the Raddison Blu Hotel, Umhlanga, Durban and will be hosted by the KwaZulu-Natal branch of SAIOH.

Theme: "Occupational Hygiene in Practice – Navigating New Workplace Challenges

Communications

SAIOH publishes its newsletter/Presidents' page in two electronic media formats, namely *Occupational Health Southern Africa*, and the *African OS&H* magazine (A-OS&H).

Numerous interactive communications were accomplished in the final months of 2024 and the first two months of 2025:

- November 2024: the then SAIOH Vice President, Karen du Preez, gave a presentation on SAIOH at the Tshwane University of Technology (TUT) for their 3rd year students.
- February 2025: Deon Jansen van Vuuren, representing SAIOH, spoke about heat stress to the Diploma in Occupational Health students at the University of the Witwatersrand School of Public Health.
- SAIOH communicates daily with its stakeholders via e-mail, Mailchimp notifications, phone calls, and virtual meetings. These communications cover important news, technical information, legislation changes, new standards, occupational hygiene job opportunities, occupational hygiene products and services, courses, and webinars on occupational hygiene, health, occupational and environmental safety.
- Several communications with the American Industrial Hygiene Association (AIHA), regarding the Bill to abolish the Occupational Safety and Health (OSH) Act in the United States of America.

Several e-mail notifications on occupational hygiene and health webinars and short courses were distributed towards the end of 2024 for IOHA, WHWB, SASOM webinars, the SASOHN annual conference and Safety-First's Fire Conference.

Several on-line events and webinars were recently hosted by our stakeholders and attended by SAIOH management, members, and staff, including:

- 30 January 2025: WHWB webinar on asbestos and silica risks
- 12 February 2025: University of Johannesburg Occupational Health Department's lecture on "The impact of new technologies on Occupational Health".

From the Professional Certification Committee (PCC)

Lee Doolan: SAIOH PCC administrator, e-mail: lee@saioh.co.za
Deon Jansen van Vuuren: SAIOH General Manager, e-mail: deon.jvvuuren@gmail.com
Ivan Nirajan: PCC chairperson, e-mail: ivann@dut.ac.za

Professional Certification Committee (PCC) members are SAIOH Registered Occupational Hygienists (ROHs) with at least five years' experience at this level, volunteering their time to ensure that the certification processes are in line with South African requirements and international occupational hygiene practices.

The PCC processes and procedures are documented in Chapter 2 of the SAIOH Quality Manual, and assessors undergo regular instruction and training through meetings and webinars.

The PCC is supported by highly skilled and dedicated administrative staff that adhere to strict professional conduct to provide the best possible service to all members. The PCC administrators, in handling communication with members regarding the sensitive topic of assessment processes and outcomes, occasionally have challenging conversations with members. We urge all members to treat staff and volunteers with respect and dignity at all times.

SAIOH regularly provides members with updates on rules, guides, ethics, compliance, and more. We value each member and strive to maintain a community where everyone feels respected and valued.

Certification assessments

A summary of results for the assessments that took place for the period mid-March to December 2024 is provided in Table 1.

ASSESSMENT RESULTS – WRITTEN AND ORAL for 2024

Certification Categories	Total Assessed 2024	Passed 2024	Failed 2024	Pass Rate % 2024	Total Assessed 2024	Passed 2024	Failed 2024	Pass Rate % 2024
OH Assistants	245	240	5	98.0%	245	240	5	98.0%
OH Technologists	84	70	14	83.3%	101	58	43	57.4%
Occ. Hygienists	41	22	19	53.7%	34	18	16	52.9%
TOTAL	**370**	**332**	**38**	**89.7%**	**380**	**316**	**64**	**83.2%**

PCC news

- The PCC Exco nominated a new Chief Examiner, Dr Goitsemang Keretetse.
- The PCC is developing an electronic written assessment on the MS Excel platform to replace the current learning management system (LMS) electronic assessment system. This task is proving to be more challenging than anticipated, especially as we aim to convert all certification assessments to multiple-choice format. This work is ongoing.
- The PCC's written assessments will continue to be conducted in hard copy format until a new system is finalised and implemented.

PCC activities

- The subcommittee responsible for revising the skill set/self-assessment tool meets biweekly. They have completed work on the 17 skill sets and are developing scenario questions aligned with the skill set module requirements for use in oral assessments. PCC members convened on Friday 14 February 2025 for the first of a series of oral assessor training workshops.
- The PCC ExCo held an official hand-over session on 24 January 2025, during which the previous Chair, Vice Chair, and Chief Examiner officially transferred their duties to the new PCC Management team. The new team comprises Dr Ivan Niranjan as Chair, Andre van Rooyen as Vice Chair, and Dr Goitsemang Keretetse as Chief Examiner.

We thank the previous incumbents, Corlia Peens (Chair), and Maryke van der Walt (Chief Examiner), for their excellent service.

Occupational Hygiene Skills Forum (OHSF)

The SAIOH Occupational Hygiene Skills Forum (OHSF) was established to oversee all aspects related to the recognition of occupational hygiene training materials, such as asbestos training courses, and occupational hygiene training short course providers and institutions.

The forum is also responsible for the development and management of assessment and examination systems.

The OHSF took part in the OHTA Approved Training Provider forum meetings in 2024/5.

The OHSF is making good albeit slow progress with the accreditation of tertiary institutions and is in the final stages of evaluating the Cape Peninsula University of Technology's (CPUT) occupational health qualification.

Qualifications offered by North-West University (NWU) and the Tshwane University of Technology (TUT) are already recognised.

Several universities, including those from Botswana and Uganda, are scheduled to meet early 2025 to discuss their curricula.

All tertiary institutions that offer occupational hygiene qualifications are encouraged to contact the PCC administrator, Lee Doolan, for information regarding application for recognition: lee@saioh.co.za

Details of recognised training providers and recognised qualifications are available on the SAIOH website (https://www.saioh.co.za). This makes it easier for students and certification candidates to select suitable occupational hygiene training programmes that meet SAIOH and international certification requirements.

Dr Hennie van der Westhuizen contributed to the OHSF by developing draft questions based on articles from Occupational Health Southern Africa Journal towards December 2024.

This initiative allows members to earn CPD points and promotes more active involvement in the journal. SAIOH is preparing to launch this initiative based on content in the second issue of the journal in 2025.

SAIOH ANNUAL CONFERENCE 2025

Dates: 20 - 23 October 2025

Venue: Raddison Blu Hotel, Umhlanga, Durban

Theme: Occupational Hygiene in Practice – Navigating New Workplace Challenges

New and or Amended Regulations to the Occupational Health and Safety Act, Act 85 of 1993 (OHSA)

Tibor Szana
Chief Inspector: Occupational Health and Safety (Retired.)
Director ACHASM

Over the last couple of weeks, the Department of Employment and Labour (DEL) have sent various Regulations for publication through the Government Printers.

One of the publications related to the General Safety Regulations which saw a Notice published: ***General Safety Regulations, 2025***, *Gazette No. 42894/ R.1589 of 2019, dated 6 March 2025.*

The Regulation itself is not new and this is an addition to the current General Safety Regulations, Government Notice. R: 1031, 30 May 1986, General Safety Regulations, 1986.

What is new however that has taken place is that the DEL has taken several elements from the Government Notice. R: 2281, 16 October 1987, Environmental Regulations for Workplaces, 1987 and has split it up between General Safety Regulations (Personal Safety Equipment; Flooding; Housekeeping and Fire Precautions) while also maintaining the major portion of it placing it under the **Physical Agents Regulations, 2024**, *Gazette No. 42894/ R.1589 of 2019, dated 6 March 2025.* Regulation 5 of this new Regulation viz. "Duties of Designers, Manufacturers, Importers and Suppliers" also has an element contained in it that we will recognise in Section 10 of the Act.

WHY REGULATION 2

It is not clear why under the new addition to the General Safety Regulations they (ACOHS/DEL) have included the totally random Regulation 2.

It would seem that only the bracketed portion referring to the 1984 legislation then is removed and the rest stays.

The fact that the "Repeal of Regulations" Regulation does not repeal the whole or portion of Regulation 2 is not clear as the gist of it again appears in the new Physical Agent Regulations (PAR).

The reason I say so is because Regulation 16: Personal Protective Equipment and Facilities covers Regulation 2 and the philosophy thereof. The Guide Note in the PAR, at the back of the Regulation gives a clear explanation of the purpose of the Regulation.

You would do well to remember that the "Repeal of Regulations" and "Offences and Penalties" Regulations are important as it will tell you in the "Repeal of Regulations" what Regulations were withdrawn by this Regulation, and in the "Offences and Penalty" Regulation it will tell you what Regulations you will be contravening, in the event you do not comply with it.

We will cover this and the other new Regulations in future articles.

In closing then, the Environmental Regulations for Workplaces (ERW), 1987, published as Government Notice No. R 2281 of 16 October 1987, **will be repealed 18 months after the date of Promulgation of the Physical Agents Regulations. Effectively this means that the ERW will still be in force for the next 18 months**.

Lastly, the General Safety Regulations as it stands is no longer sufficient for industry and it was anticipated that more sweeping changes would have been made than has been made.

It is hoped that the Advisory Council for Occupational Health and Safety will apply itself to this task over the next year or two with substantive changes given that some proposals have already been made for such changes to the General Safety Regulations which was originally published in May 1986.

Four steps to justify the costs of ergonomic improvements

Tobi Durowoju is the principal ergonomist for Duergo Limited and OOHMS Limited, an Ergonomics consulting and training company in Nigeria. He holds an undergraduate Bachelor of Physiotherapy, and a Master of Science degree in Ergonomics, and is a Certified Professional Ergonomist in Nigeria and Canada.

The following steps justify the costs of implementing an effective ergonomics programme.

STEP 1: UNDERSTANDING THE PROBLEM

Too often, we have a solution in mind and want to work backwards. Instead, building a case is easier if we start by understanding the full cost of the existing problem.

Ergonomists are most often invited to do an assessment because an injury trend has been identified by safety professionals. Their goal is clear: what solution could we implement to prevent these injuries from occurring? However, unlike noise exposure, where mitigation is legally mandated, the relationship between strain/sprain injury risk and injury is more complex. People are exposed to strain/sprain hazards 16 hours (or more) every day. Human bodies are more variable in their response to heavy, awkward loads, in comparison to their response to noise, cut, or chemical hazards.

Ergonomics exposure criteria are more complicated and difficult to apply. So, when safety professionals make recommendations to reduce the physical demands of a job, they may be met with unanticipated requests for justification.

Key questions to assess the problem include:

- Have strain/sprain injuries been associated with this job? Do workers say this is the hardest job on the line? Have you surveyed employees to identify the most challenging jobs?
- Are productivity issues linked to this job? Does the supervisor identify it as a bottleneck?
- Are quality problems, such as scrap or rework, associated with this job? How much time is spent correcting these errors?
- What is the cost of employee turnover on this job? Are supervisors constantly trying to find people who can do it? Do employees frequently request transfers, call in sick, or ask for extra help?

STEP 2: GATHERING COST DATA

Identifying all associated costs provides a comprehensive estimate of potential savings from ergonomics improvements.

The cost of existing injuries is the most obvious. These will include workers' compensation costs, but may also include the indirect costs associated with claims management, training replacement workers, and modified work.

Unfortunately, injury costs, while the most logical consequence of poor design, are also often the most elusive to obtain. Compensation costs for strain/sprain injuries are rarely attributed to a specific task or job.

Productivity issues may be associated with the problem. If you're running overtime to meet customer demands, assigning extra workers to keep up with demand, or incurring fines for late deliveries, costs are being incurred that could be avoided.

The cost of quality problems, such as scrap or rework, can be significant. For example, if pulling a part out of a mould is physically difficult, the parts may be damaged, and that damage can lead to scrap or rework. By improving the process, the client can avoid scrap and rework costs.

This applies to service industries as well; a worker who is in pain can't provide good quality responses to customers. If I can't pull the wrench hard enough to create a tight seal, I may produce a part that leaks, which could present a new service issue, or even a safety issue.

The cost of employee turnover on this job might be the biggest one of all. You can ask your human resources department how much it costs to hire and onboard a new employee. Even if people don't leave your organisation, a job that is associated with strain/sprain hazards is almost invariably the one that no one wants to do. A supervisor can give you a clearer picture of what that costs the organisation. A supervisor who has to train three people per year to do a specific job will be acutely aware of these costs. Note also that hiring a new employee is a lot easier for HR in an organisation that is known for taking good care of its employees. People talk.

STEP 3: WEIGHING COSTS VS. BENEFITS

Cost-justification requires weighing the cost of a proposed change against the savings it can generate.

Will the change eliminate the hazard? Some interventions, like enclosing a noisy machine, can fully mitigate hazards, but ergonomic solutions often reduce rather than eliminate strain/sprain risks.

How significant will the impact be? While a lift table may improve lifting height, it won't eliminate all lifting-related injuries. Setting realistic expectations helps secure management buy-in.

Can you test the change? Mock-ups allow workers to trial proposed solutions, providing critical feedback and data for refining recommendations before full implementation.

Cost-calculators, such as the Washington State research published by Goggins et al can help estimate financial savings: https://pubmed.ncbi.nlm.nih.gov/18571576/) or the Ontario Ergonomics Intervention Cost-Benefit Calculator (https://www.msdprevention.com/resource-library/ontario-ergonomics-intervention-cost-benefit-calculator.

However, senior leaders may still have questions, making experimentation and real-world testing valuable.

STEP 4: TAKING ACTION

Surveys, interviews, experiments, and what-if assessments are powerful tools in cost-justifying ergonomics improvements. Safety professionals should:

- Assess the problem systematically using injury, productivity, quality, and turnover data.
- Quantify all relevant costs to create a compelling case.
- Use cost calculators and real-world tests to strengthen their argument.
- Pilot test changes where possible before full implementation.

CONCLUSION

By following this structured approach, safety professionals and ergonomists can effectively demonstrate the financial and operational benefits of ergonomics improvements, helping organisations make informed investment decisions.

Challenges of inspections and cash rewards

Ehi Iden
an Occupational Health and Safety Management Consultant in Africa, President of OSHAfrica

Note from Editor: The OSHAfrica WhatsApp group generates many interesting and informative conversations. The following two comments by Ehi Iden were in response to posts from members.

Inspections

***Comment from a WhatsApp participant**: From personal experience as a former inspector with an regulatory authority in a European country... I went for an unannounced inspection. The person I met at the reception said I had to make an appointment and come another day because they were very busy that day. I gave him two options 1) I do the inspection that day and be done with it, or 2) I come back the next day with 3-4 other inspectors and we turn the entire company upside down. In the next 2-3 minutes, the company's production manager, the personal manager, the foreman, the workers representative were all assembled in front of me, ready for the inspection, a meeting room was set with all the relevant files put ready for me to check. That's the authority inspectors have some other places.*

Even in Africa the actual laws provide all those powers. Ours even includes power of arrest. However, in practice it requires political will. They have the authority but are under-resourced and most times lack the will and confidence but by law they have they are authorised.

RESPONSE FROM EHI IDEN

The challenges we noticed during our classes for inspectors are similar across all African countries, even in some parts of the West.

I met with the Chief Labour Inspector of Kosovo Inna conference in Bilbao and these challenges were also clearly expressed in his submission.

Here are a few of them:

Insufficient OSH and Labour Inspection Legislation

Some countries have just a handful of such laws while others have laws which are obsolete and have not been reviewed to meet the fast changing pace of workplace processes and patterns.

Most inspectors do not even know the content of these legislations, some have never taken their time to read and understand these provisions within these laws. You are only able to affect authority to the point that you understand you are empowered. The laws are in place, but they do not know what the laws say.

Fewer number of labour inspectors per country

The government does not employ enough inspectors to cover the entire country. I did a short study two years ago and was shocked by the number of inspectors per country population. We need to have more inspectors so that more organisations are covered within a given year.

COUNTRIES	POPULATION (Per Million)	OSH INSPECTORS	LABOUR INSPECTORS
Ghana	34.1	50	
Nigeria	223.8	720	
Zambia	20.5	13	
Botswana	2.6	19	
South Africa	60.4	170	
Mozambique	33.9	35	125
Egypt	112.7	520	
Rwanda	14.094	33	
Kenya	55.1	157	200
Gambia	2.7	3	
Cote D'Ivoire	28.9	300-400	
Malawi	20.9	21 (DoL and Mines)	
Lesotho	2.3	6	
Cameroon	28.6	138	
Uganda	48.5	215	

Country population data source: https://www.worldometers.info/

Lack of requisite training

These inspectors are given employment mostly on recommendation based on political affiliation, and not on merit. The best hands do not get the jobs. The people that get the jobs are often from different fields of studies including geography and even literary studies. They are never trained to be skilled inspectors. They are given identification cards or badges which authorise them to be inspectors. But they do not know what to look out for, or what to ask for when they visit workplaces.

Funding

Inspectorate departments are mostly not

adequately funded. We hear of this over and again. The department needs to be seen as a very useful and sensitive department within the country's OSH eco system but this is currently not so. This has also led to poor remuneration and poor employment conditions. With the result, some inspectors may fall for temptations when they go out and cover up for erring companies. This can result in someone getting injured or dying because corrective actions were never affected.

Brown envelopes

This brings me to the very last issue - the brown envelope syndrome.

Brown envelopes are kept by organisations for inspectors. Most inspectors know the juicy organisations. Some are even assigned by their bosses to those places based on what they will get at the end of the day.

In our training session of *Ethics of OSH Inspection,* this is an item that causes much debate. I think it needs to be taught widely. It is important. Inspectors must know who they are and they must act correctly.

A case I clearly remember was from a participant in Ghana who shared how they had to go on an inspection without enough fuel in their vehicles. The organisation they inspected produced fuel, and when they were finished, they had to ask the organisation they had just inspected for fuel to get them back to the office.

You see, this act alone will compromise the report they will write. The gesture of the organisation to give them fuel stands in the way of objective reporting.

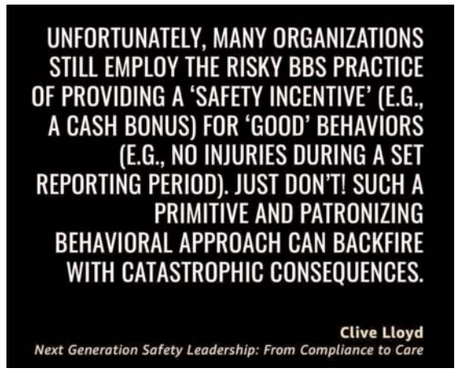
This is how it works

When inspectorate departments are well funded to do their work properly, and the employees well remunerated, it will improve the ethics of OSH and Labour Inspection. This will also make room for decent inspection and objective reporting.

I do a lot of facility safety inspections of Hotels here in Nigeria. It is tempting work where you get offered anything and everything. They always package food and drinks and tell you it is a part of their hospitality culture. It is vital not to take anything from them.

Some will even give you money or vouchers to use their hotels. Ethics of inspections refers to this as inducements. The inspector is not allowed to touch or accept them.

Cash rewards



Following this graphic posted by Fabian Buckley, Ehi Iden responded:

Reward, consequences, incentives or motivation—you will find them all when it comes to encouraging or sustaining good behaviour. Rewarding good behaviour is okay. But what is important, is how the behaviour is rewarded. Giving cash rewards for zero accidents within an agreed period has been seen as enabling people to cover up incidents—even minor accidents—just to access the reward.

There was a clear case of a company in the United States many years ago that introduced the cash reward policy. A certain department or unit won this cash award for so many years but there were issues that they never reported. Many years later several occupational health issues were picked by an independent Occupational Health Physician in that locality.

It was discovered that they had a supervisor who had an eye on that cash reward. He got them all to cover it up the incidents because the cash reward was shared amongst them.

For example, in a case of laceration, they covered it up by getting the employee treated quietly. It was never reflected in their books.

Rather than a cash reward, give rewards such as a training course, a free lunch ticket, or even a day-with-the-CEO. These are motivational approaches that will be more effective than the primitive cash reward.

Comment by Tatenda Nyenda: "In my view surely it depends on the maturity level of the organisation's OSH Management systems. A good organisation must suspect that cash rewards may tempt departments to under report just like any other risk assessment. On suspecting that they will develop robust performance evaluation processes that will counter possibilities of concealing such incidents. Otherwise behaviour based rewards heavily require behaviour observations rather than hearsays by departmental heads. Otherwise when properly done, the system is good".

Training in Zambia

Mark Kunda is an award winning safety consultant with over 15 years experience. An engineer by profession, Mark is r ecognised as a leader on matters of safety in Zambia. He has participated in many national safety programmes including the development of the national Occupational Safety and Health policy.

Safety Focus in Zambia recently trained 52 participants in the important skills of first aid. The aim was to build capacity in emergency response and equip participants with lifesaving skills in providing emergency care to casualties.

FIRST AID TRAINING

First aid is a lifesaving skill. By learning first aid, people develop the sense of care. Instead of concentrating on taking pictures at scenes of casualties, they'll start focusing on rather helping those casualties. It is therefore important to build a culture of lifesaving by ensuring that everyone learns first aid.

First aid trainings available in the Zambian market do not address first aid legal requirements, how to conduct first aid risk assessments and how to write a first aid report. Therefore Safety Focus developed its training programme to fill these and many other gaps. The programme explains the legal requirements as provided for by the Mining Regulations and Factories Act for First Aid in mines and non-mining companies. It also covers the roles of a first aider, emergency scene management, primary and secondary survey, first aid kits selection, usage and management, to mention a few.

FIRE EXTINGUISHER USAGE TRAINING

Safety Focus recently ran a programme training teachers how to operate a fire extinguisher. In this way, the teachers who are equipped with the skills will pass it onto pupils. The pupils were also curious to see a fire extinguisher.

Above and left: First Aid Training

Below and below left: Fire Extinguisher Training

Compliance and the current state of PPE

Günther Verreyne
Chairman SAPEMA

As Chairman of the South African Protective Equipment Marketing Association (SAPEMA), I am honoured to share my thoughts on the current state and future of manufacturing in South Africa. In this issue of African OS&H, I will address the critical importance of compliance with both international and local standards in our industry, the impact of global manufacturing, and the need to drive local manufacturing and sourcing initiatives.

IMPORTANCE OF COMPLIANCE TO INTERNATIONAL STANDARDS

Compliance with international standards is essential for ensuring consistency, transparency, and efficiency across industries. These standards, established by global organisations such as the International Organization for Standardization (ISO), provide a common framework that businesses, governments, and regulatory bodies follow to ensure compatibility and operational efficiency. Adhering to these standards enhances trust in financial reporting, improves product quality, and facilitates global trade.

International standards also play a crucial role in risk management and promoting global recognition. By following these norms, businesses can manage and mitigate risks effectively, fostering trust and reliability across sectors. Moreover, compliance with international standards strengthens political relationships by fostering economic and diplomatic ties between countries.

IMPORTANCE OF COMPLIANCE TO LOCAL STANDARDS

Equally important is compliance with local standards, which ensures that businesses operate within the boundaries of legality and ethics, safeguarding the interests of various stakeholders. Local standards are tailored to address specific regional needs and regulatory requirements, making them vital for successful operations within the country.

Localisation is key to adhering to local regulations and facilitating successful international expansion. It involves creating content and processes that are fully adapted to meet local standards and regulatory requirements. By understanding and complying with local laws, organisations can mitigate risks, enhance their reputation, and unlock new opportunities for growth and success.

IMPACT OF GLOBAL MANUFACTURING ON SA

Global manufacturing plays a pivotal role in shaping South Africa's economy. It brings about economic growth, technological advancements, and increased exports. However, our reliance on foreign direct investment (FDI) also introduces vulnerabilities, such as economic volatility and geopolitical risks.

While FDI can boost our manufacturing sector, it is essential to balance it with domestic investment to ensure sustainable growth. Strengthening local manufacturing capabilities can mitigate the negative impacts of global economic fluctuations.

NEED TO DRIVE LOCAL MANUFACTURING AND SOURCING

Local manufacturing and sourcing are crucial for our economic growth and job creation. By reducing dependence on imports, we can foster a more resilient economy and create numerous opportunities for business expansion. Investing in local manufacturing solutions for infrastructure projects can address critical backlogs in sectors like energy and logistics. This approach not only supports local industries but also ensures long-term sustainability and efficiency.

VALUE OF IMPORTED PRODUCTS

Imported products add significant value to South Africa by providing access to advanced technologies, diverse goods, and competitive pricing. These imports can enhance the quality of local manufacturing by integrating cutting-edge components and materials. Additionally, importing goods can help South African businesses remain competitive in the global market by offering a wider range of products to consumers.

STRENGTHENING POLITICAL RELATIONSHIPS

The importation of goods also plays a crucial role in strengthening political relationships. Trade agreements and import activities foster stronger economic and political ties between countries. These shared interests can lead to better diplomatic relations and mutual cooperation. For instance, favourable trade agreements can streamline operations and reduce costs, benefiting both South Africa and its trading partners.

ONGOING SAPEMA PORTFOLIOS

SAPEMA has acted in the footwear and respiratory categories with the NRCS and SABS. Our latest discussions are with Protechnik Laboratories, a subsidiary of Armscor, which has faced difficulties in testing disposable respiratory products over the past few months. While SABS has adopted the latest standards in respiratory, NRCS has not yet been able to implement them, raising some concerns. Furthermore, the N95 masks reaching our shores that do not conform to our SANS standards are being sold in South Africa, posing another serious concern. With growing global tensions, more products that do not comply with our country's standards continue to reach end users. SAPEMA is active on the frontline of safety for all its members, and we are proud to represent the industry.

IN CLOSING

I encourage all readers to prioritise compliance with both international and local standards. By doing so, we can ensure the highest quality and safety in our products, foster trust and reliability, and strengthen our position in the global market. Additionally, supporting local manufacturing efforts while recognising the value of imported products will help build a stronger, more resilient South Africa that stands tall in the global manufacturing landscape.

The Ergonomics Society of South Africa

leading the way to advance human factors / ergonomics in South Africa

Despite the management of human factors / ergonomics (HFE) risks being a legislated imperative under the Occupational Health and Safety Act and the Mine Health and Safety Act for decades, awareness of HFE and the management of HFE risks within work systems seems to have not been in the radar of many organisations.

Over recent years, more and more regulatory scrutiny and safety oversight activities are highlighting non-compliance to the ergonomics requirements as a finding against organisations in various industries.

This has brought to sharp focus the need to improve awareness on human factors / ergonomics to assist South African organisations to effectively identify and proactively manage HFE risks within their work systems.

The Ergonomics Society of South Africa (ESSA) is a leading partner in the mission to raising awareness about HFE and supporting professionals, organisations, and the public in implementing HFE in South Africa.

WHO IS ESSA

ESSA was established in 1985 as a representative body for HFE professionals and members of the public who are interested in HFE matters.

ESSA is a federated society of the International Ergonomics Association (IEA iea.cc), which is an international organisation representing the human factors / ergonomics discipline and societies around the world.

ESSA is the only society in South Africa that is recognised by the IEA, and one of four on the African continent that is a federated society of the IEA (see figure 1).

ESSA is also a member of ErgoAfrica, a network of IEA federated societies that was formed to support the development of HFE across the African continent.

ESSA AT THE FOREFRONT OF RAISING AWARENESS ABOUT HFE IN SOUTH AFRICA

Recognising the fact that HFE is still not yet widely understood or implemented in the South African context, ESSA has been actively involved in activities aimed at raising awareness about the HFE discipline and its importance in improving worker health and safety as well as organisational performance.

Some of these activities have included the following:

1. Organising events including webinars, workshops, and seminars where local and international HFE experts present on topical HFE issues.
2. Collaborating with safety authorities to provide HFE awareness aimed at supporting inspectors with their safety oversight activities.
3. Working with professional bodies from cognate disciplines such as SAIOSH and SAIOH to facilitate information sharing.
4. Disseminating HFE information and resources to HFE professionals and the public.

WORLD-CLASS HFE PROFESSIONAL CERTIFICATION SYSTEM

While a lot of effort is placed on raising awareness about the HFE discipline, ESSA recognises the urgent need to support and facilitate the development of HFE professionals.

ESSA, through the ESSA Professional Affairs Board (PAB), is the only society that certifies HFE professionals in South Africa. ESSA's professional certification system is not only aligned with globally recognised HFE competencies (https://iea.cc/leadership/education-certification/iea-recognised-and-endorsed-certification-systems-for-professional-ergonomists/), but is one of only eight in the world that are endorsed by the IEA.

The list of IEA-endorsed certification systems globally includes those from the following countries:

- South Africa (ESSA)
- Australia
- Brazil
- Canada
- Europe
- Japan
- New Zealand
- United States of America

Having an endorsed certification system not only provides an added layer of credibility to the work that is done by the ESSA PAB, but also lends credence to the calibre of HFE professionals that are certified through our system.

We have seen a rise in the number of certified professionals over the last few years as more South African-based professionals recognise the value of being certified.

Similarly, an increasing number of organisations are requesting certified professionals when sourcing HFE services and hiring HFE professionals. This is a further vote of confidence in the ESSA PAB certification system. We therefore encourage HFE professionals to apply for ESSA PAB certification.

BECOME A MEMBER OF ESSA

ESSA has a lot in store for its members this year including an exciting line-up of webinars and a conference which will coincide with celebrations to commemorate 40 years of ESSA's existence and contribution to the development of HFE in South Africa and beyond.

ESSA members will get preferential access and discounted rates to these events. ESSA members also get exclusive access to valuable HFE resources and participation in mentoring and networking opportunities.

We welcome all professionals and members of the public who are interested in the HFE discipline to join our community, be a part of, and benefit from, the movement aimed at achieving widespread implementation of HFE in South Africa.

ESSA membership registration is open for 2025. Sign up to be a member here: https://ergonomic-ssa.com/general/register_member_type.asp?

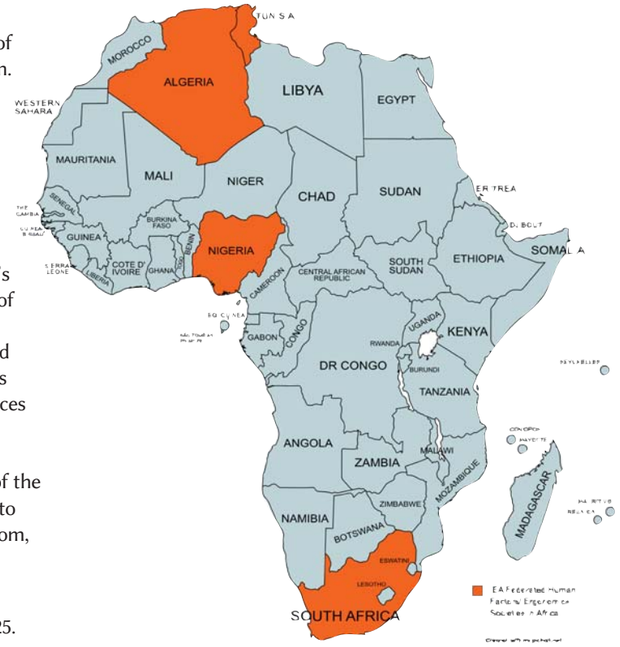


Figure 1: ESSA, one of four International Ergonomics Association (IEA) federated human factors/ ergonomics (HFE) societies in Africa.

Sanitation in the field - the unspoken challenges

A guide to portable toilet safety in South African mining and remote work sites

Herman (Harry) Fourie has a passion for occupational health and safety and has been working in the industry for many years. He is Vice-Chairman of the Safety First Association.

Let's be honest, portable toilets aren't exactly the highlight of any mining operation. They're often the elephant in the room that safety practitioners avoid discussing, contractors try to ignore, and auditors sometimes overlook. But these humble facilities play a crucial role in maintaining worker health, dignity, and legal compliance at sites across South Africa.

WHY PROPER SANITATION MATTERS

In the harsh environments of South African mines—from the scorching heat of open-pit chrome operations to the depths of platinum shafts—portable toilets aren't merely conveniences. They're essential infrastructure that directly impacts:

- Worker health and well-being.
- Site productivity and morale
- Legal compliance with multiple regulations.
- Environmental protection.

The South African mining landscape presents unique challenges: remote locations, extreme temperatures, limited water access, and diverse workforce needs all combine to make sanitation management both critical and complex.

UNDERSTANDING THE LEGAL FRAMEWORK

South African mine operators must navigate several overlapping regulations regarding sanitation:

Mine Health and Safety Act (MHSA) 29 of 1996

The MHSA places a clear obligation on employers to maintain a healthy and safe working environment, including adequate sanitation facilities.

Section 5 requires that employers identify hazards, assess risks, and implement appropriate control measures—including biological hazards from inadequate sanitation.

Occupational Health and Safety Act (OHSA) 85 of 1993

Though mining has its specific legislation, OHSA principles still apply, particularly the Facilities Regulations, which specify minimum requirements for sanitation facilities including:

- One toilet per 15 workers.
- Separate facilities for different genders where possible.
- Adequate washing facilities.

National Environmental Management: Waste Act 59 of 2008

This legislation governs how waste (including human waste) must be managed, transported, and disposed of.

Key requirements include:

- Licensed waste transporters.
- Proper documentation and manifests.
- Disposal at registered treatment facilities.
- Weight measurement and record-keeping.

Water Services Act 108 of 1997

Regulates water quality and waste disposal to prevent contamination of water resources, particularly important in mining areas where water scarcity is often an issue.

MAKING COMPLIANCE WORK

Strategic placement

- Position toilets no more than 100 meters from any workstation.
- Ensure they're accessible without crossing dangerous areas.
- Place on stable, level ground with protection from the elements.
- Consider privacy and cultural sensitivities in placement.

Proper ratios and capacity

For South African mining operations:

- Provide at least one toilet per 10-15 workers per 8-hour shift.
- For smaller chrome operations, 4-6 units may suffice depending on workforce size.
- Include dedicated facilities for female workers where applicable.

HEALTH PROTECTION MEASURES

Vaccinations for sanitation workers

Workers responsible for toilet cleaning and maintenance should receive:

- Hepatitis A & B vaccinations.
- Tetanus (TDaP) boosters every 10 years.
- Typhoid vaccination in areas with poor water quality.
- Annual influenza shots.
- Rabies protection in rural sites with potential wildlife exposure.

All vaccinations should be documented in the worker's occupational health file as required under Section 13 of the MHSA.Proper PPE Requirements.

Sanitation workers must be equipped with:

- Full-body chemical-resistant coveralls.
- Heavy-duty nitrile or rubber gloves with extended cuffs.
- Eye protection (goggles or face shield).
- Appropriate respiratory protection.
- Waterproof steel-toe rubber boots.

Cleaning and maintenance protocols

A standardised cleaning procedure should include:

1. Assessment - Check unit condition before entering.
2. Preparation - Don all required PPE.
3. Disinfection - Spray all surfaces with approved disinfectants.
4. Waste removal - Empty the waste tank via vacuum pump.
5. Thorough cleaning - Scrub all surfaces with appropriate tools.
6. Restocking - Replenish hand sanitiser, toilet paper, and other supplies.
7. Documentation - Log the service in site records.

ESSENTIAL DOCUMENTATION

Your sanitation compliance file should include:

- Daily inspection records.
- Cleaning schedules and completion logs.
- Waste disposal manifests and weighbridge tickets.
- PPE issue and replacement records.
- Training certificates for sanitation workers.
- Vaccination records.
- Incident reports related to sanitation issues.

During Department of Mineral Resources and Energy (DMRE) inspections, these records will be your evidence of compliance with Section 5 of the MHSA.

WASTE MANAGEMENT COMPLIANCE

To meet South African environmental regulations:

- Contract only with licensed waste removal companies.
- Obtain and retain waste manifests for each collection.
- Ensure waste is delivered to registered treatment facilities.
- Maintain weighbridge tickets as proof of proper disposal.

Small mines with 4-6 toilets typically require servicing weekly or biweekly, this may need adjustment based on usage patterns.

Beyond compliance: The human element

Providing clean, accessible toilet facilities is more than just ticking regulatory boxes—it's about respecting your workforce.

Research shows that proper sanitation facilities contribute to:

- Higher workplace morale.
- Reduced absenteeism.
- Increased productivity.
- Fewer health-related complaints. In South Africa's mining sector, which has historically faced challenges in working conditions, demonstrating care through proper sanitation can be a powerful statement about company values.

SPECIAL CONSIDERATIONS IN THE SOUTH AFRICAN CONTEXT

Gender considerations

Though mining remains predominantly male, female participation is growing. Section 19 of the Employment Equity Act requires reasonable accommodation for all employees, including:

- Separate toilet facilities when possible.
- Proper disposal facilities for sanitary products.
- Safe access, particularly during night shifts.

Water conservation

In a water-scarce country like South Africa, consider:

- Waterless toilet options where appropriate.
- Grey water recycling systems.
- Water-efficient cleaning methods.

Cultural sensitivity

South Africa's diverse workforce may have different cultural perspectives on sanitation.

Open communication and adaptation of facilities may be necessary to ensure all workers can use facilities comfortably.

CONCLUSION: SANITATION AS A SAFETY STRATEGY

In South Africa's challenging mining environments, from deep platinum shafts to dusty chrome pits, portable toilets represent more than just facilities—they're a fundamental aspect of operational integrity and legal compliance.

By treating sanitation with the same seriousness as other safety protocols, mine operators can protect worker health, maintain environmental standards, and demonstrate commitment to dignity in the workplace.

Proper sanitation isn't just about avoiding fines or passing inspections—it's about creating mining operations where every aspect of worker well-being is valued and protected.

This guide reflects current South African legislation as of 2025. Always consult with legal and safety professionals for advice specific to your operation.

OHS hazards that must be considered during risk assessments at your workplace

By Leighton Bennett,
Benrisk Consulting.
Safety First Association
Chairman.
OHS & Risk Management
Consultant

The (not-exhaustive) list below addresses generic OHS hazards that may occur in a range of locations and activities for which OHS professionals and practitioners have responsibilities.

Users of this document will need to tailor the list of hazards to address the circumstances of their locations and activities, which fall under their responsibility or influence.

Are there some workplace hazards and exposures (risks) that are not being considered during the development of your workplace or job-task activity risk assessments?

Consider the common hazards listed here:

Gravitational,including specialised technical and construction hazards:

- Falls from height, falling objects, gravity risks.
- Lifting equipment hazards about which an OHS professional may be expected to have the knowledge and skills to advise management.
- Slips, trips and falls on level and stairs.

Biomechanical (Ergonomics):

- Forceful motions—manual lifting/handling, digging, etc.
- Postural / awkward motion—reaching, pulling, pushing, bending, twisting, etc (including seating).
- Repetitive strain.

Electrical and (electro)magnetic—AC, DC, EMF and static electrical.

Chemical:

- Solid, particulate, liquid, gas, vapours, mists and cryogenic hazards.
- Acids, alkalis, cryogenics.
- Biohazards and pesticides, oxidising and reactive, gasses, etc.
- Poisons, toxic, carcinogenic, teratogenic and corrosive chemicals, fibres/fibers and dusts.
- Nanoparticles.
- Sensitising agents (for asthma, dermatitis, etc).
- Fire and explosion.

Thermal environment

- Heat and cold—heat stroke/exhaustion, hypothermia, frost bite, etc.
- Hot work—burns, fire ignitions, etc.

Noise—steady, fluctuating, impulsive dB(A) noise type impacts.

Vibration (whole body and hand/arm).

Equipment under pressure/pressure vessels –pressure release, rupture, explosion exposures.

Powered plant:

- Flying objects ejected from machinery processes.
- Entanglement in moving parts of static machinery, (incl. robots).
- Use of portable power tools.

Moving plant/vehicles and occupational road use.

Specialised technical and construction hazards.

Subsidence and collapse—ground conditions, structures.

Structural failure – failed design, over-loading, demolition.

Psychosocial hazards:

- Workload/stress.
- Fatigue.
- Impacts on wellness – mental health.
- Bullying and harassment.
- Aggression (people/animals).
- Violence at work.

Occupational health hazards:

- Biological factors—ageing, gender, genetic changes.
- Lifestyle—including behaviour.
- Social and economic factors
- Medical conditions—epileptic, diabetic, asthmatic, disabled, etc.
- Occupational disease caused ill health—silicosis, asbestosis, etc.

Hazards of the work environment:

- Workplace—design, layout, access, terrain, condition
- Confined spaces (including asphyxiant atmospheres)—both life and non-life threatening.
- Drowning/diving.
- Higher than atmospheric pressure—positive pressure workplaces.
- Computer/monitor screen, including control rooms.
- Wildlife: flora—poisonous contacts, fauna—attacks, bites, stings, etc.
- Biological hazards (including occupational pathogens, bacteria, viruses, etc)).

Infectious diseases – (e.g. TB, HIV/Aids, etc):

- Indoor air quality (spores, pollens, prions, etc.).
- Ionising radiation.

Nonionising radiation (including lasers, UV, radio frequency, etc.).

Hazards of the natural environment (earthquake, flooding, storm, tornado, lightning, wind, climate change, archaeological—graves, fossils, sacred sites, etc.).

Socio-political hazards—community actions, strikes, unrest, riots, mafia attacks, etc.

Neighbouring exposure risks—risks and exposure threats from neighbouring sites.

In terms of the above listed hazards, the hazard exposure effect on workers performing or exposed during performing such activities can and often significantly increase the hazard risk, where one or more of the following 3 factors are elements impact on the work activity being performed:

- Frequency—how often does the hazard exposure happen or is performed?
- Intensity – how severe is the hazard exposure?
- Duration – how long in the hazard exposure time, to perform the (repeated) activity?

Are you HIRAs or Job-task step risk assessments identifying all these Job-Task hazards and risk exposures? Hopefully, the above list will help improve your OHS risk Identification processes.

REFERENCE

Adapted from the types of OHS hazards table in the INSHPO Occupational Health and Safety Professional Capability Framework a Global Framework for Practice 2017 (www.Inshpo.org)

A-OSH 2025: annual gathering to showcase safety solutions

A-OSH EXPO 2025, Africa's largest occupational safety and health exhibition, will take place from 3 to 5 June 2025 at Gallagher Convention Centre.

This annual event is an important for industry leaders, innovators, and professionals from across South and southern Africa to showcase the latest in safety solutions and fire prevention.

This event is also beneficial for organisations who are increasingly faced with the challenge of keeping up-to-date with regulations and ensuring the health, safety, and wellbeing of their workforce. From mitigating risks in high-hazard environments, to staying compliant with ever-tightening regulations, the need for effective occupational safety and health (OSH) solutions continues to grow. OSH solutions to workplace accidents and health hazards improve productivity, reducing costs, and ensuring long-term operational success.

"For professionals looking to stay ahead of developing regulations, discover progressive products, or network with industry experts, A-OSH EXPO is an unmissable event.

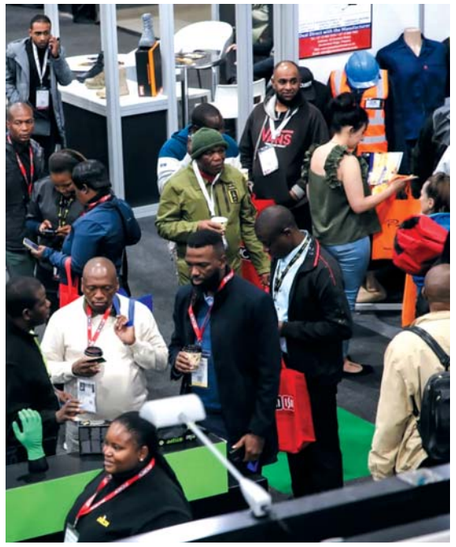
"It offers a unique platform to enhance knowledge and expertise in workplace safety and efficiency," says Mark Anderson, Portfolio Director at Specialised Exhibitions—a division of Montgomery Group.

The variety of products and services at A-OSH EXPO is wide and diverse including:

- Auditing
- Disaster management
- Environmental management
- Fall arrest/working at height equipment
- First aid/medical supplies & training
- Gas detection and monitoring equipment
- Hazardous materials storage and handling
- Noise control, monitoring equipment and services
- Occupational health services (including ergonomics and wellness programmes)
- OSH-oriented software
- Personal protective equipment (PPE).

"We continue to align A-OSH EXPO with recognised and respected industry bodies and associations to help bring awareness of high-quality OSH solutions to the market. These include Saiosh, the Safety First Association, the Fire Protection Association (FPASA), and the Southern African Protective Equipment Marketing Association (SAPEMA)," says Anderson.

Anyone attending should take advantage of the informative free-to-attend theatres and seminars.



Further information is available as follows:

- To find out more about companies exhibiting, the seminar sessions, and other important expo information, visit www.aosh.co.za."
- To avoid the long queues at registration, it is important to pre-register at www.aosh.co.za.
- To book an exhibition space email: zelda.jordaan@montgomerygroup.com, or johan.vanheerden@montgomerygroup.com