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What building health, safety, fire legal due diligence?

Reaching industry milestones on noise induced hearing loss
in the South African Mining Industry

Leading OHS from behind

Mandatory vaccinations at the workplace:

Is this a ticking time bomb?

Training and certification for safe food and food products

Health promotion in construction: Does it have a place?

Cognitive Dissonance:

A mental health & well-being risk in the workplace

Identifying zone 0, zone 1 and zone 2 hazardous areas

PPE Covid-19 waste

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Editor's Comment

90 YEARS OLD AND STILL GOING STRONG

This year the **Safety First Association** celebrates its 90th anniversary. During 1932, seeing the accident and fatality statistics increasing in the mines, Sir Ernest Oppenheimer collected together a group of industrialists worried about the decline of safety and health in industry, and together with the mayor of Johannesburg they registered the Safety First Association.

The fledgling association's aim was to educate management and workers on safe and healthy work practices mainly through informative literature. To help share its message, the magazine National Safety was launched. Within a short time, traffic safety was also included in the association's fold as well as home safety.

90 years later, the Safety First Association has the same vision and our magazine now called **African OS&H** continues to be the main mouthpiece to the industry. Whereas we have seen many OSH magazines come and go, we have never missed an issue, not even during the second world war.

Several articles in this issue focus on mental health which because it can't be seen, is often ignored. Prof John Smallwood and Dr Claire Deacon write about promoting health in construction which includes improved health and fitness; reduced health care costs; reduced absenteeism; improved productivity; increased job satisfaction and enhanced self-responsibility. They conclude that clients, contractor and employee associations should evolve or promote health promotion programmes on all projects, as a matter of course.

Han Wenqi, explains that employees suffering from cognitive dissonance - a mental health and poor well-being - can pose a risk in the workplace. According to Han, cognitive dissonance is a significant cause of stress manifesting in a range of counter-productive behaviours. He concludes that Mental Health Risk Assessments must be conducted to address and mitigate cognitive dissonance.

From Dr Thuthula Balfour we learn that noise induced hearing loss (NIHL) remains a challenge for the South African mining industry. Targets have been set for the elimination of NIHL by 2024 and the Minerals Council has put in place measures to accelerate its elimination in the industry.

We summarise a WHO report on PPE Covid-19 waste which with 38,000 tonnes of non-essential PPE waste and 49,000 tonnes of essential waste is causing havoc with the environment, filling landfills to capacity. However, not much thought has been given to the waste-pickers of South Africa as they pick through suburban bins, touching items that may be contaminated by people who are suffering from Covid-19. What about the danger to their health?

Following two recent major fires in state buildings in South Africa, Leighton Bennett looks into the state of fire safety in government buildings. In a 2005 due diligence audit at the Bank of Lisbon Building housing two government departments he found it to be 27% compliant to health, safety and fire. He reviews some aspects of legal health, safety and fire due diligence requirements which he hopes will help companies when monitoring their due diligence.

There is also an interesting read from Wellington Mudenha who discusses leading from behind as a leadership approach.

As the debate around vaccination mandates continues, read Herman Fourie's article on this problem he refers to as a "time bomb".

What building health, safety, fire legal due diligence?

Two cases of major fires in government buildings have recently been well publicised, namely Parliament in Cape Town and Charlotte Maxeke Academic Hospital in Johannesburg. A while back, there was also a deadly fire at the Bank of Lisbon building occupied by a government department. The question is why?

A media-published local authority report indicated that the state and its national key points are not bound by the National Buildings Regulations and Building Standards Act, so the State only has to lodge building plans to their local authorities for information purposes.

Fire departments are therefore not empowered to perform fire safety compliance inspections of state assets.

Recent fire incidents seem to suggest that many state buildings are not sufficiently fire safe to work in, or for people to visit.

My 2005 due diligence audit of the Bank of Lisbon building, housing two government departments assessed that health, safety and fire were 27% compliant. Sadly, the building's 2018 fire resulted in the deaths of three firemen. The building's fire damage was so severe that the building was explosion demolished.



Photo: Neil McCartney

Various recently published media reports indicate that fire and safety legal non-compliances contributed to the higher fire damage losses of these state buildings.

As a professionally registered Construction Health and Safety Agent, Occupational Health & Safety (OHS), Risk Management practitioner/consultant and a "freelance" Insurance Surveyor, I have performed health and safety related due diligence and compliance audits on all types of workplaces, to name a few: office blocks, shopping malls, schools, all types of factories, warehouses, hospitals, hotels, sport stadia, construction sites and some government buildings, etc. I have encountered and reported to clients on many fire and safety legal non-compliances at their premises.



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He is Vice President Safety
First Association

LET'S REVIEW SOME ASPECTS OF LEGAL HEALTH, SAFETY AND FIRE DUE DILIGENCE REQUIREMENTS

Under the Occupational Health & Safety Act of 1993 (OHSAct), the Employer shall provide a safe and healthy workplace for his/her employees. This means ensuring compliance of the health and safety legislation, national building regulations, local authority by-laws and requirements. The OHSAct also binds the state to comply. So what compliance aspects must be addressed by all employers?

The employer or the business CEO or the state's departmental director general are responsible, under OHSAct section 16(1) to ensure the legal health and safety compliance at workplaces. Where there are several remote located workplaces, the 16(1) responsible person can and should designate responsible people as 16(2) appointees, to act on the 16(1)'s behalf, to ensure health and safety compliance is maintained at the remote workplace sites. Usually this is not done, so health, safety and fire protection aspects are not implemented and maintained to ensure compliance at many workplace premises and sites. The recent fire incident media reports made it clear that these fire safety non-compliances have been the cause of these sites suffering higher fire damage losses.

All workplaces should have a specified number of wall-mounted fire-fighting extinguishers installed per square meter of floor space, which must be provided relative to the type of building occupancy category risk (SANS 10400-A, table 1).

Fire hose reels must be installed in single and multi storey buildings with a floor space over 250m², with a hose reel provided for every 500m² and/or part thereof floor area. This fire equipment must be operationally available 24/7 (must not be empty, must have gas pressure, must have water supply, must be serviced, etc) and also must be serviced at least 12-monthly. My audits have found this to be an ongoing problem. I have even found fire hose reels with damaged hose drums, short hoses with metres cut off (should be 30m long) and/or perished hoses, hose nozzles missing and even hose reels not connected to a water supply.

The National Building Regulations and Codes requires fire sprinklers to be installed for premises where there are higher fire risks related to the type of occupancy and the height of the building, basements, or operational process and storage risks, etc. The sprinkler system and valves must be over-hauled 3-yearly, while insurers normally require the sprinkler "gluk" valves condition operation to be tested monthly (register book shown in photo). The valve seals can perish and stick closed under the system's pipework water





pressure. Furthermore, all the sprinkler valve handles must be light chain locked (like in photo) in the sprinkler system's fully operational configuration to avoid any intentional system isolation risks. If the valves are not locked anybody can isolate the sprinkler system and its water driven fire alarm. A recent media fire report claimed that due to this, the fire spread unabated and destroyed more of the premises. Also at the sprinkler valve, a legible sprinkler system diagram must be displayed (in photo) to show the sprinkler system protected zones, so that if the fire is extinguished in a zone the water can be insulated to stop unnecessary further water damage to the fire damaged area.

Smoke detector systems are often installed in buildings. But here I have found the smoke detection panel fire alarm buzzer is often silenced



(see photo arrow) to stop a defective smoke detector giving a permanent false alarm, especially if the control panel is in an occupied area like at security or reception. The condition of the smoke detection panel should be visually monitored daily, by a suitably knowledgeable person, and its condition recorded, for example in the security "Occurrence Book". Again smoke detection system annual maintenance is required and immediate maintenance must be done if a defective detector is noted or encountered. Both push-button fire alarm and smoke detection systems must be



- Missing symbolic signage
- Escape door's Redlam bolt glass missing
- Fire extinguishers missing
- Fire escape behind a lockable room's access door

interfaced to switch off the building's air-conditioning (HVAC) systems to prevent smoke being distributed throughout the building, and to reduce the air/oxygen feed to the fire.

Another concern is that the layout of partition walls in buildings are often changed during revamps such that the original design of a smoke detector per room is often not upgraded in the new layout design, leaving areas with no smoke detection protection.

During partition layout changes some new layouts prevent easy access to a fire escape which is now through and located behind a lockable office's door. (See photo below).

Fire doors are a fire and smoke spread protection method which is regularly abused in many buildings. I have encountered many fire door non-compliances during my audits. Fire doors are often wedged in the open

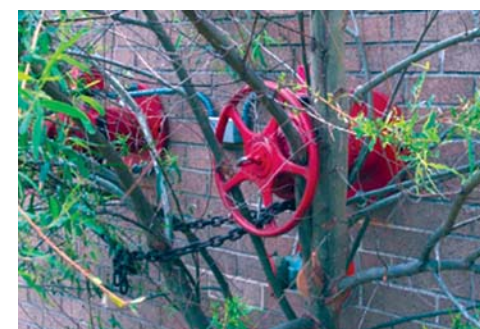


position due to pedestrian traffic, or have holes cut through the door to have a glass windowpane fitted (not a fire-resistant wire reinforced glass pane fitted), or even have air-vent panels fitted, like in the photo, which totally defeats the purpose of having any fire door on site. Fire door frames have wider door frame flanges than normal door frames and usually have 3 hinges (due to the door's weight) and a fire door specification label on the door edge. Fire doors are used and installed at building locations to achieve fire-design control compartmentalisation, for example from lift lobbies causing fire compartment separations from the building's surroundings wings and fire escapes. Wedged/latched and open fire doors allow a fire to spread from one building area or wing to another, like the media reported at the Charlette Maxeke hospital.

Fire compartmentalisation should also include utility services ducts in multi-storey buildings where fire-stopping materials will stop fires spreading up such ducts to other floors, and where cables and pipes pass through building fire walls and along in cable trenches.



Fire hydrants should be provided on all floors of multi-storey buildings and/or on the premises of large structure buildings. Often I have seen the hydrant water supply turned off or the water supply pressure too low for effective hydrant hose fire-fighting purposes. To prevent the hydrant handles being stolen, they are sometimes chained making them unusable, and at times they have vegetation growing through them which prevents



the hydrant being opened. The rubber seal in the hydrant is often missing or perished so cannot form a water seal when a fire hose is coupled to the hydrant. To overcome poor water supply and pressure issues many premises have installed water tanks and fire pumps.

Fire water tanks and fire pump systems are often found not in an operational condition due to defects like, closed water supply valves, broken fire pump motors, diesel-driven fire pump fuel tanks near empty (should be >80% full) or the motor start battery is flat or stolen. Security staff in a major brand's warehouse in Gauteng were requested to perform monthly fire pump tests which draws motor start power from the battery. But because they only ran the test for a short time the battery ran flat which resulted in the sprinkler system failure during a fire and the warehouse burnt down. Fire pump batteries must be on a trickle charger. Another challenge is the use of electric fire pumps during load shedding. Such fire pumps must have a standby generator power supply which presents another problem: how well is the generator power system operability maintained?

Loadshedding is a problem for all electrical based fire detection and fighting systems, so the battery backups need to be regularly checked, and tested. All such systems should be linked to generator standby power systems.

Fire escape routes and doors are other serious concerns. Fire escape routes and passages are frequently cluttered with boxes, cupboards, and storage stuff, etc, which will impede people evacuating during a fire drill (if one is ever held) or during a real fire emergency. I have encountered steel security gates welded shut at fire escape route doors and/or both locked with no key-box provided to facilitate an escape. Some escape routes exit into enclosed court yards where escaping employees are trapped and in danger from the possibility of objects and glass falling from the upper floors onto them

A high rise building I audited with a primary school had a steel fire escape staircase where many of the steps had rusted off. In the event of a fire evacuation, the kids would fall through to their

deaths. In a high school ground floor dormitory for some 40 girls, spanish security bars on the windows will prevent any window escape. At night they are locked-up in the dormitory, with no keys and no fire extinguishers provided.

Often there are no emergency procedure plans established, or the emergency team employees have either retired or left the company. Some municipal fire protection bylaws require fire evacuation drills to be performed at least annually and in some cases 6-monthly. In many cases employees don't even know where their fire escape routes are, even if routes have the symbolic sign displayed.

Few employees even know of the "PASS" method to operate a fire extinguisher. Test your colleagues and ask if they know about their fire evacuation and fire-fighting procedures. It is important to ensure that the health, safety and fire procedures and requirements are communicated to all the employees.

The article title is "WHAT BUILDING HEALTH, SAFETY & FIRE LEGAL DUE DILIGENCE?" Based on my experience and audits, I have attempted to provide an outline of good practices and highlighted the non-compliances and pitfalls, should health, safety and fire compliance practices not be implemented, maintained, or communicated in the workplace.

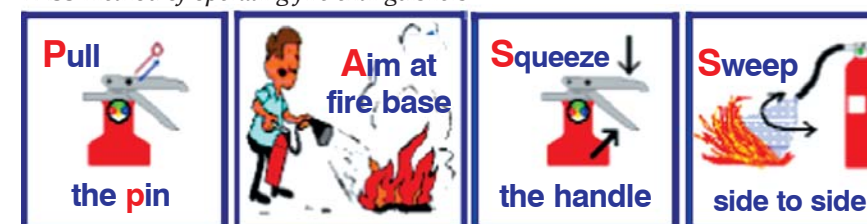
There is another serious risk to all businesses and this risk relates to building insurance. I understand that the state building's maintenance and insurance is managed by the Department of Public Works. Media reports suggest that due to the high insurance cover costs, no insurance of State buildings is in place, so the taxpayer will have to pay the bills to re-build and repair the fire damaged state hospital and parliament buildings. To me, it is surprising that a State Fire Loss Captive insurance programme is not in place to risk finance such fire loss events.

Furthermore, all building insurance policies have a "materials fact" clause, which requires the insured (owners, companies, etc.) to maintain the fire protection systems as part of the policy requirements. So if such fire protection systems are not maintained in an operational condition, a fire loss claim can and will be repudiated. Therefore, ensure that your insurer is informed should any of your fire protection systems be out of service for any period beyond a minor maintenance repair issue. Also, if a building's value (business to domestic) is under insured an "average" will be applied to the loss claim payout calculation, which

will reduce the payout based on a ratio of the under-insured loss value vs the actual loss value. Be warned!

In closing, I trust you will find the information and insights mentioned in this article useful to help you with the monitoring of your health, safety and fire due diligence.

PASS method of operating fire extinguishers



Reaching industry milestones on noise induced hearing loss in the South African Mining Industry

This article is adapted from a paper presented at ICOH 2022. 33rd International Congress on Occupational Health. Melbourne-Rome Digital Congress. 6-10 February 2022. Theme: Sharing solutions in occupational health through and beyond the pandemic.



Dr Thuthula Balfour is a qualified medical doctor and public health medicine specialist with an MBA. She has a wealth of management experience that spans 30 years with 12 years in the mining industry. She is the Head of Health at the Minerals Council South Africa and currently leads the mining industry's response to Covid-19. In 2020 Thuthula was appointed to serve on the Ministerial Advisory Council for COVID-19. She had the honour of being named as one of the Top 100 Global Inspirational Women in Mining in 2018.

Noise pollution is very common in the mining environment and NIHL which is biaural develops very slowly over many years of exposure. Susceptibility varies quite widely, but 10 years or more of exposure is generally required for significant hearing loss to occur.

Figure 1 shows that from available statistics, the decline in NIHL is not adequate.

COMPENSATION CRITERIA IN SOUTH AFRICA

The date of the commencement disease shall be the date of the first audiogram showing an increase from the baseline in percentage loss of hearing (PLH) by 10% or more for each of the following frequencies: 500, 1000, 2000, 3000 and 4000 Hz.

MILESTONES

The South African mining industry has a tripartite body - the Mine Health and Safety Council (MHSC) advises the Minister on all occupational health and safety issues in mining industry including legislation, research and promotion.

- In 2003, the industry agreed on a set of milestones for 2003 - 2013 which included targets on NIHL.
- The 2013 targets were reviewed in 2014, and the 2014 -2024 milestones on noise are as follows:
 - By December 2024, the total operational or process noise emitted by any equipment must not exceed a milestone sound pressure level of 107dB(A).
- By December 2018, no employee's Standard Threshold Shift (STS) will exceed 25dB from the baseline when averaged at 2,000 3000 and 4000 HZ in one or both ears.

MINERALS COUNCIL INTERVENTIONS

- In 2008 the MOSH Learning Hub was established.
- In 2006 a CEO Zeroharm Leadership Forum was established to monitor health and safety performance.
- In 2016, an electronic occupational health reporting system that included the milestones was commissioned.
- The MOSH leading practices adopted were:
 - HPD_TAS Tool
 - IBMQI
 - Tyre Deflation Noise Reduction SLP
 - Guidelines

MOSH

MOSH is a Leading Practice Adoption System that was developed to assist the South African mining industry in its efforts to meet the mining industry tripartite occupational health and safety targets and milestones set in 2003 and 2014.

It was recognised that mines would need to adopt new technology or practices in order to bring about the required occupational health and safety improvements.

The MOSH Leading Practice Adoption system is designed to facilitate an eager adoption of new ways of working (LPs) of all involved employees, including management as opposed to reluctant compliance.

This is achieved through a process devised to ensure that the right people receive the **right information** in the **right way** at the **right time** within the **right organisational climate**.

Simple logic of the MOSH process

The MOSH Leading Practice Adoption system process may be characterised by the three main steps shown in Figure 2.

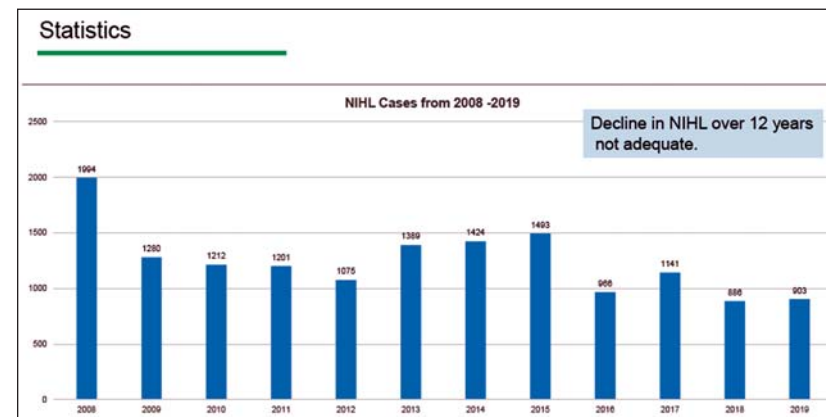


Figure 1. Decline in NIHL is not adequate

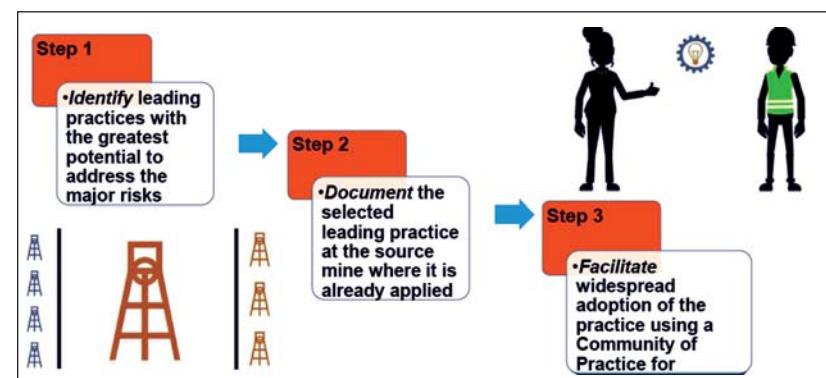


Figure 2. Simple logic of the MOSH process

What is the HPD_TAS Tool?

Hearing Protection Device Training And Selection Tool.

This is the elimination of Noise Induced Hearing Loss (NIHL) by improving the effectiveness of mine Hearing Conservation Programme (HCPs).

INDUSTRY BUY AND MAINTAIN QUIET INITIATIVE (IBMQI)

What is it?

A standing decision from mining companies to procure equipment and maintain existing equipment to comply with specific noise emission requirements

What is its purpose?

To provide the mining industry leaders with a consolidated industry-wide strategy for an industry-wide Buy and Maintain Quiet Initiative (BMQI) as well as a practical path forward on the execution of the strategy.

MANAGE NOISE AT SOURCE - "CRITICAL CONTROL"

- Noise is an engineering problem
- Noise source measurements, after-effect analysis etc. occupational health domain
- It's more cost-effective to manage noise at source

Tyre deflation noise reduction simple leading practice

Tyre maintenance normally involves the deflation of vehicle tyres which has been identified as one of the highest noise generation activities during tyre maintenance.

Peak noise emissions equalling 118dB have been recorded during deflation which is a high risk for permanent hearing loss. With this result, the use of hearing protection devices is compulsory during tyre deflation.

There are two options during tyre deflation which reduce noise emissions. These focus primarily on mitigating the noise risk to employees by isolating the noise source position and remotely releasing it away from the employee's potential exposure position/zone. See Figures 3 and 4.

RESULTS: ELIMINATION OF NOISY MACHINERY

The industry is on track to eliminate individual pieces of machines ≥ 107 dB (A) by eliminating noisy machinery. See Figure 5.

RESULTS OF STANDARD THRESHOLD SHIFT

The industry had a milestone: By December 2018, no employee's Standard Threshold Shift (STS) would exceed 25dB from the baseline when averaged at 2000, 3000 and 4000 HZ in one or both ears. But from cases recorded since 2020, it is obvious that this milestone has not been met.

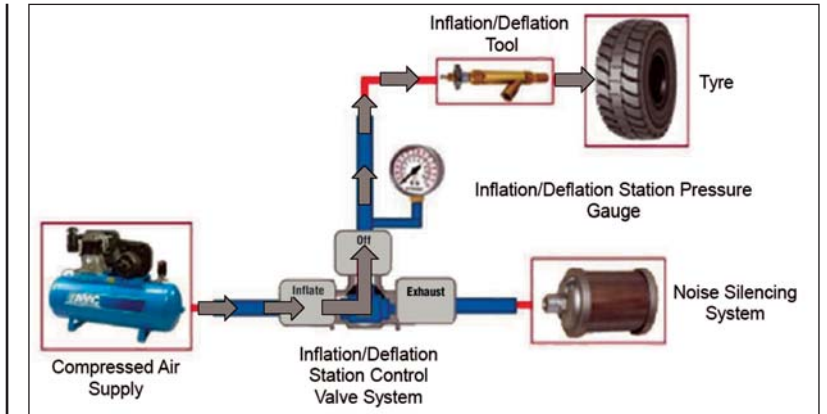


Figure 3. Tyre inflation

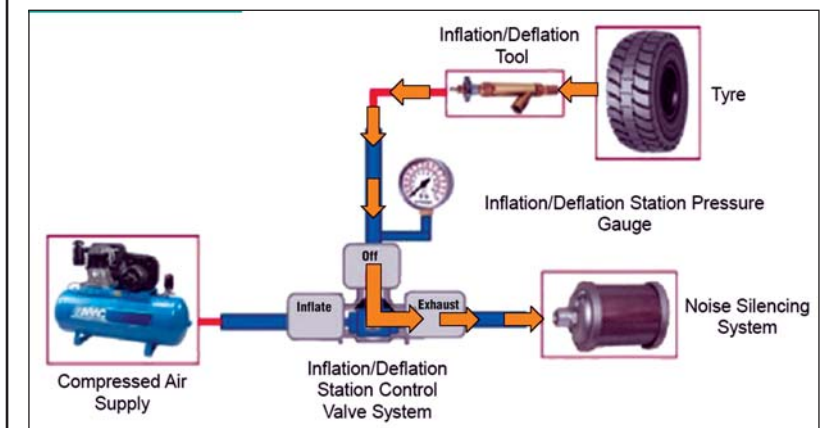


Figure 4. Tyre deflation

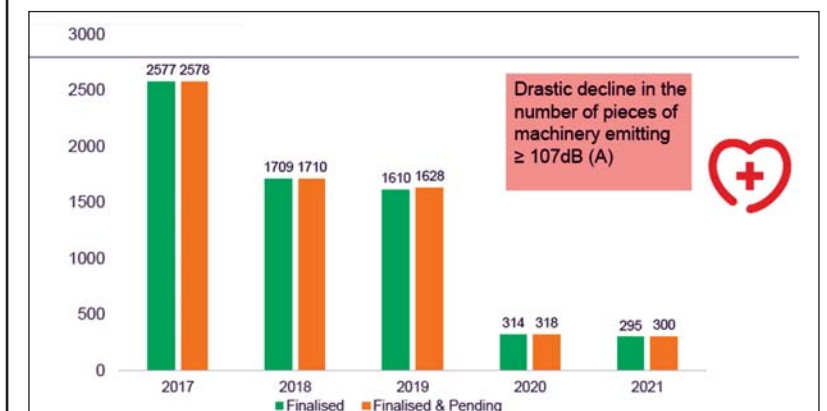


Figure 5. Elimination of noisy machinery

CONCLUSION

- NIHL is still a challenge for the South African mining industry
- The industry through the tripartite MHSC has set milestones (targets) for the elimination of NIHL by 2024.
- The Minerals Council has put in place measures to accelerate the elimination of NIHL in the industry
- There is progress being made in reducing exposure to sources of noise but cases of early NIHL were detected from 2020
- The industry needs to do more to achieve the milestone set for 2024.



The author acknowledges the work of colleagues in the MOSH Learning Hub

Health promotion in construction: Does it have a place?

The World Health Organization (WHO) defines health promotion as: “The process of enabling people to increase control over, and to improve their health.” The aim of health promotion is to persuade people to adopt and maintain healthy life practices, thus preventing ill-health and promoting health and overall performance.

The benefits of health promotion are well documented and include, among other: improved health and fitness; reduced health care costs; reduced absenteeism; improved productivity; increased job satisfaction and enhanced self-responsibility.

OCCUPATIONAL SAFETY AND LEGISLATION

Traditionally, occupational safety has been addressed in the South African construction industry through current legislation.

Efforts have been made to focus on occupational health (OH), and although the industry has yet to manage this important component of the ‘OH&S’ equation, the overall health and well-being ‘challenge’ continues to rise.

Initially HIV / AIDS constituted the first level, followed by health, which is linked to both the former and OH. COVID-19 could be added as a third level following 2 years living with varying levels of lockdown affecting every society, and the construction sector itself.

COVID-19

In 2020 the corona virus was identified in China. The corona virus or SARS-CoV-2 now commonly known as COVID-19 is a highly infectious disease, and where individuals who work in close proximity remain at increased risk of contracting the disease. The result of the rapid spread of COVID-19 across the world, resulted in South Africa following many other countries and implementing a lockdown under the National Disaster Management Act (NDMA). The NDMA is still enforced in South Africa, as the virus is not yet completely contained, however the numbers and the levels of restriction are very diminished.

IMPROVING LIFESTYLE

Lifestyle factors account for 50% or more of premature deaths in the USA and adopting healthier lifestyles extends years and quality of life. Given that a change in lifestyle needs to be engendered, and that adults spend most of their waking hours at work, the workplace is an ideal venue to undertake health promotion.

International authors contend that the approaches and objectives of health promotion can enhance OH&S programmes - improvement of lifestyle can lower the risk of certain job hazards,



Professor John Smallwood, PhD (Construction Management) and Dr Claire Deacon, PhD (Construction Management)



such as smoking and occupational respiratory disorders, drinking and workplace accidents, and poor fitness and musculoskeletal stress in lifting.

HEALTH AND BEHAVIOUR RISK

An emphasis on self-care in health promotion programmes can also translate to increased self-protection against workplace hazards. Furthermore, several of the most common work-related disorders, namely cancer, lung disease, traumatic injury, cardiovascular disease and psychological disorders, would probably be mitigated by reducing behavioural risk factors through health promotion programmes.

Lifestyle factors that have been mentioned are a risk for suffering severe forms of COVID-19. Those who have respiratory disorders, metabolic diseases such as diabetes, are obese, have different levels of heart disease are considered as high risk to contracting severe forms of the virus, or having more serious effects. Many with such co-morbidities have succumbed to the disease from complications while ill. The NDMA required all employers to develop plans to ensure workers are protected in the workplace, requiring ongoing training and monitoring to ensure the spread of the virus is contained as far as possible.

HEALTH PROMOTION IN CONSTRUCTION

While COVID-19 studies are still required, most projects do comply to varying degrees to the remaining levels of the NDMA. Workers are required to be trained and to understand the wearing of masks in public and maintaining a working distance when working in groups. Absenteeism statistics appear to be poorly monitored as many of the general labour of contracts are contractors and therefore actual numbers of those ill or affected would be difficult to ascertain.

Pre-COVID-19, a survey was conducted among general contractors (GCs) by the authors, who investigated: the extent of health promotion; the perceived extent to which employees would derive benefit there from, and the perceived holistic benefits. The findings indicate that little or no health promotion is undertaken in South African construction. However, GCs perceive that health promotion would benefit employees, the benefits including improved health and project performance manifested in, among other, lower absenteeism, and improved productivity and quality. Approximately half of the respondents had comments in general – selected comments include: “Construction industry possibly employs most unemployable people, least educated, therefore health education is vital if we



want skills to remain and a return on training”; “It does not exist and should be introduced”, and “An industry driven health programme would be successful in creating a healthy workforce – and benefits to the industry, organisation and individual would accrue.”

CONCLUSION

In conclusion, clients, contractor and employee associations should evolve or promote health promotion programmes on all projects, as a matter of course.

- Programmes should be coordinated with the national annual health observances calendar evolved by the Department of Health (DoH) to

engender linkages between OH&S and non-OH&S interventions.

- Health promotion should be included in OH&S programmes as an identifiable component.
- Induction should address the salient issues, namely HIV / AIDS, STIs, TB, alcohol and drug abuse, and smoking, and include COVID-19.
- ‘Toolbox talks’ should address the health issue prevailing on the health observance calendar at the time of their presentation.

Workers would therefore benefit from health promotion programmes, have an opportunity to improve their own health, limiting the side effects of serious diseases, improving their quality of life.

SAPEMA Annual Golf Day



SAPEMA’s annual golf day will be held at the Jack-Nicklaus Signature Golf Course at the Serengeti Golf & Wildlife Estate

DATE	Thursday 10th of March 2022
COURSE	Serengeti Golf Course
REGISTRATION	Starts at 08h00
FORMAT	4 Ball Alliance 2 Scores to count Scramble on the Drives (Only on Par 4’s & 5’s)
T-OFF Time	10h30 Sharp SHOTGUN Start

If you are sponsoring a hole

• Sponsorship of a Hole - Cat A

(SAPEMA Member R6500; Non SAPEMA Member R6950)
Includes 1x 4 ball and corkage for sponsored hole.
This allows you to bring your own drinks and snacks onto the golf course.

• Sponsorship of a Hole - Cat B

(SAPEMA Member R5500; Non SAPEMA Member R5950)
Includes 1 X 4 Ball and no corkage.
This allows you to only order your drinks and snacks from the golf course. They will then deliver directly to your hole.

- The golf club will provide each sponsored hole with one table and two chairs.
- No trucks will be allowed onto the golf course without prior arrangement and permission from the club. Once permission is granted the truck may only drive onto the course with an escort from the Golf Club. Bakkies and cars may be used to get to the holes but at all times must remain on the cart paths. If any damage is caused the cost will be added to the final Invoice
- Branding may be dropped off the day before your event and stored in our events storeroom.
- It is your responsibility to provide the coordinator with a list of all the items that has been stored in the store room. The representative of the company will sign as well as a representative from Serengeti Estates - once all items have

been checked the store room will be locked at all times; the key can be collected from the coordinator.

- Banners can only be put up on the day of your event.
- Banner bags to be stored in the storeroom once all banners have been put up.
- All branding needs to be taken off the golf course directly after play.
- Under no circumstances will Serengeti Estates be held liable for any loss of goods/banners or banner bags.
- If any branding was left behind by mistake, it is your responsibility to come and collect it the day after the event.
- All branding that is left at Serengeti Estates for more than 5 working days will be disposed of without any prior notice.

To complete your participation details for the golf day

<https://forms.gle/Ys5o8R16vYREo45D9>

Electrical safety from DuPont

For more than 50 years, DuPont has been at the forefront of FR fabric technology and has continued to develop innovative lightweight fabrics which exceed the needs of end-users in industry.

“Electrical workers require their garments to meet the arc rating which safety engineers have outlined for a particular risk area. However, the emerging trend in our region is to provide higher arc-rating with heavier fabrics, resulting in arc garments becoming stiffer and more uncomfortable, and that’s not necessarily what the end users want” comments Dharmesh Lakmidas, Sales Manager for DuPont™ Nomex®.

So how does DuPont using Arcman™ technology meet the needs of the Sub-Saharan Africa market?

“DuPont is focusing on what makes the difference to the electrical worker in executing his tasks in a safe and effective manner. Our goal is to develop fabric solutions which are lighter and more comfortable, yet deliver the highest level of arc protection and this is what we are bringing to the Sub-Sahara Africa region” explains Dharmesh.

What is the DuPont™ Arc-Man® test?

The DuPont™ Arc-Man® test helps manufacturers assess and compare the protection that various materials provide against the thermal effects of an electrical arc.

Understanding the end user requirements plays a vital role in the design of arc garments in the harsh working environment and the high temperatures experienced in the Sub-Sahara Africa region. That’s why comfort and durability play an integral part when designing garments for end users.

Durable fabrics like Nomex® help organisations reduce costs, ensuring less garment replacements.

DuPont™ Arcman® facilitates the design of such garments to test how these designs can withstand such conditions.

Figures 1, 2 and 3 show a typical example of how end user information can assist with designing arc garments for specific requirements.

Providing workers with the protection they require for the hazards they face is a major responsibility for both the manufacturer and employer.



Figure 1. Before an arc test

Figure 2. After an arc test

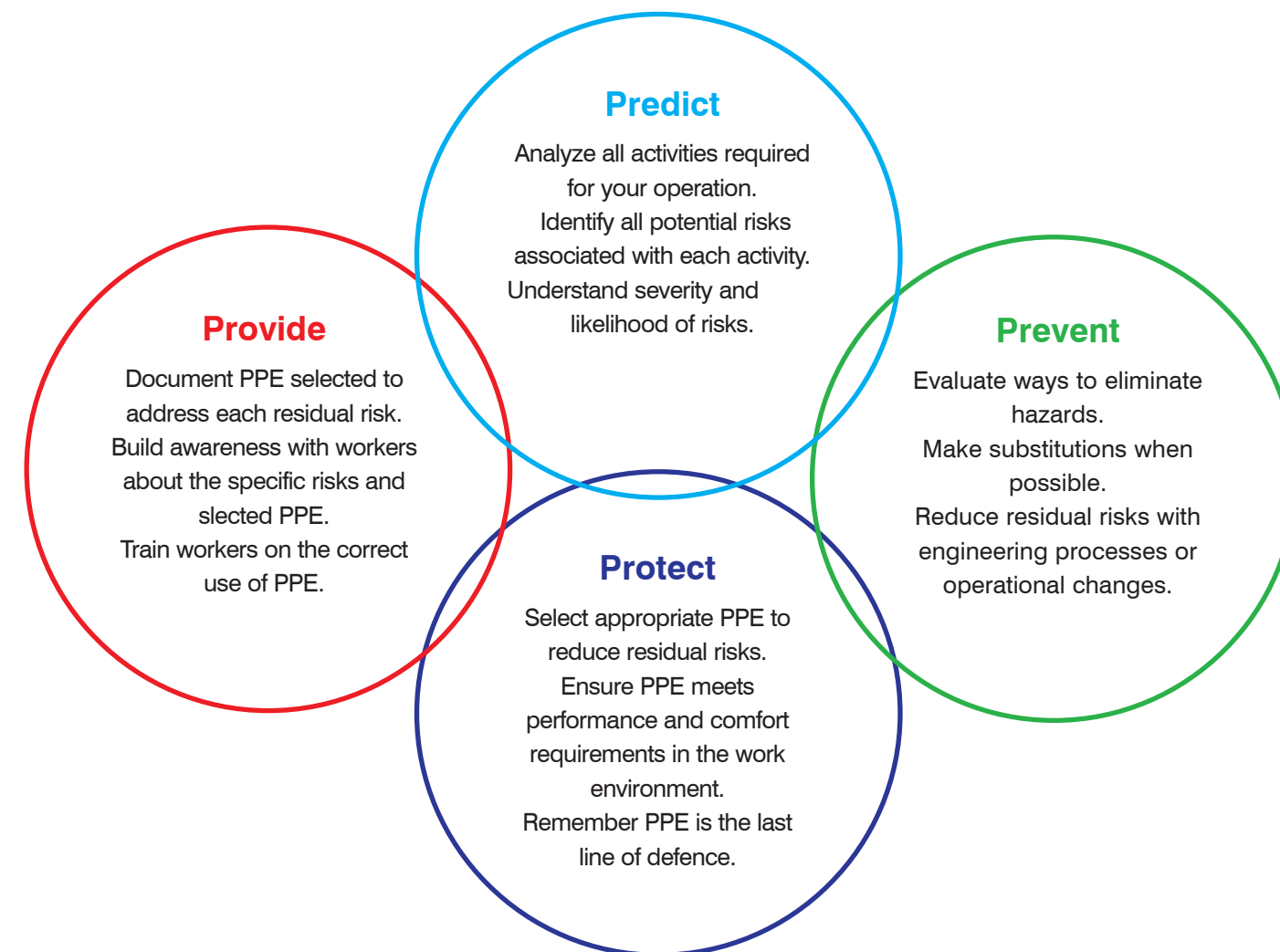


Figure 3: Fabric tested after arc exposure indicating heat transfer

DuPont Personal Protection has the in-depth knowledge, unparalleled expertise and broad portfolio of PPE solutions to help keep your workers safe.

- ArcMan® Test Facility is located in Switzerland
- Determines ATPV of fabrics and garments
- Our products are certified to IEC & ASTM standards
- In addition to ArcMan™ we do third party testing for certifying our fabrics.

To help one in their decision-making process from risk assessment through implementation we recommend using the **4P** methodology below



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Lemaitre expands into new terrains

Driven by passion, dedication, and a commitment to high-quality products, Lemaitre has always been a brand committed to keeping those who build South Africa safe.

For 30 years, we have helped build a nation with the toughest workforce.

Lemaitre's launch of new styles with modern designs and a refreshed look appealing to a wider audience and targeting new sectors.

That's why we are proud to announce the addition of new styles to our range of safety shoes, designed to offer you more support, comfort and performance in the toughest environments.

RAPTOR RANGE

Our Raptor range is synonymous with torsion control and keeping you sure-footed in environments where uneven terrain is prevalent, such as construction and agriculture.

We've expanded our offering in this range with the **Osprey Hiker** and the **Falcon** shoe and boot.

The **Osprey Hiker** has a full grain genuine leather upper for enhanced comfort and durability and is perfect for the agricultural industry.

The **Falcon** shoe and boot also made with a genuine leather upper, with TPU inserts in the arch of the foot with enhanced ladder grip design. Their Dual Density PU sole unit and TPU inserts allow for an aggressive grip and torsion control.

PARABOLIC RANGE

Our Parabolic range comes with a durable polyurethane midsole and is perfect for workers who need extra support when spending a lot of time on their feet.

The **Concorde** shoe and boot are our latest offerings in this range, with an S3 rating, provide comfort and alleviate fatigue for workers who spend long hours on their feet in industries such as manufacturing. They also come standard with an anti-penetration midsole (APT) to prevent sharp objects from penetrating the boot.

MAXECO RANGE

Our iconic Maxeco range, a legacy of South African safety footwear, has built-in arch support and is designed for all-around safety. The

redesigned **Maximus** gives you the all-around safety with the addition of a memory foam insole and reflective strip. It has a lightweight sole unit, wider fit and improved ergonomics.

The square cleat design of the shoe improves the slip resistance rating and provides better stability and reduced shock impact.

APOLLO RANGE

The Apollo range with SRC slip-resistance rating offers maximum slip-resistance and is suited for environments where slip potential is a high risk.

The two new styles added in this range are the **Clog** and the **Ben**.

While the **Clog** has been designed to provide superior slip-resistance to those working in kitchens and hospitals.

The **Ben** incorporates the benefits of the Apollo sole as well as no metal or hard plastics on the upper which minimises the risk of scratching metal and other smooth surfaces. It is ideal for industries such as manufacturing and automotive.

INYATI RANGE

New to the Lemaitre range is the **Inyati** range which offers high heat resistance, cut and abrasion resistance and SRC rated slip resistance and has an injected PU/Rubber sole which provides all-round safety and protection in hazardous working environments. The two new styles to this range are the **Dodge** and the **Urban**.

The **Dodge** has a stylish leather upper and comes with a TPU support system on the outside counter for reinforced support.

The **Urban** boot is S3 rated and boasts a genuine duo-tone leather upper with additional padding on the collar and tongue for enhanced comfort. An anti penetration insole board comes standard with this style.

BENEFITS OF OUR PROUDLY SOUTH AFRICAN RANGE

Our range of products offers a variety of features and benefits for all-round protection, comfort and performance.

As a proudly South African brand made for workers, by workers, we understand what is needed to carry you safely through tough industries and working environments. With the expansion of our new range and styles, Lemaitre expands into new terrains.

Lemaitre, from one worker to another...

<https://www.lemaitre.co.za>



LEMAITRE
SAFETY FOOTWEAR



LEMAITRE
SAFETY FOOTWEAR



LEMAITRE
TREADS INTO
NEW TERRITORY

URBAN

INYATI RANGE

Tough durable rubber sole for any situation.

LEMAITRE EXPANDS INTO NEW TERRAINS

Lemaitre's range of products offers a variety of features and benefits for all-round protection, comfort and performance. The latest addition to Lemaitre – the Inyati range on a PU/Rubber sole offers resistance, protection and durability in the toughest environments.

As a proudly South African brand made for workers, by workers, we understand what is needed to carry you safely through some of the toughest industries and working environments. With the expansion of our new range and styles, Lemaitre expands into new terrains.



**OSPREY
HIKER**
RAPTOR RANGE
Torsion control that keeps you
sure-footed on uneven ground.



BEN
APOLLO RANGE
Maximum slip resistance.



MAXIMUS
MAXECO RANGE
Providing all-round safety, all the time.



**CONCORDE
BOOT**
PARABOLIC RANGE
Comfort and anti fatigue support.

**FROM ONE WORKER
TO ANOTHER**



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SOURCED AND MANUFACTURED
IN SOUTH AFRICA



Making eyewear a priority

Our eyes are one of our most important organs but also one of our most fragile. Sight is arguably our most important sensory process, critical to navigating our modern lifestyles. We rely on sight when we walk and drive, when we read and write, and when we work and play.

There are increasing levels of exposure to heat and light, dust and chemicals, as well as biological contaminants in a wide variety of industrial and commercial workplace settings. These and other factors may lead to range of eye injuries, from simple eyestrain to severe eye damage, making day-to-day activities more challenging or changing someone's life completely.

OUR FRAGILE EYES

Our sight is dependent on our eyes but they are only protected by a thin, transparent skin called the cornea. The cornea acts as a natural barrier against foreign particles and also plays an important role in vision - it is responsible for 65--75% of the eye's total focusing power, according to the UK's National Eye Institute. The cornea and the lens, combine to focus light on the retina, a photo-sensitive tissue that surrounds the back of the eye. The retina then converts light into electrical impulses that are sent to the brain via the optic nerve, where they are interpreted as images.

Blue light can also damage the eye but a layer of pigmented cells known as the retinal pigment epithelium (RPE) nourishes retinal nerve tissue forming a pair of biological sunglasses that can absorb some blue and UV light. When the RPE is exposed to high levels or long periods of blue light, their ability to repair the damage is reduced, leaving the retina unprotected.

TYPES OF EYE RISK

The eyes are vulnerable to a variety of hazards. Being made of soft tissue they are at risk of physical elements, especially sharp objects, and small particles. Their sensitivity to light is fundamental to sight but also makes them vulnerable to bright light and heat. In addition, their fragile moisture and pH balance mean that common chemicals found in a variety of different workplaces could cause serious harm.

IMPACT & DUST

The eyes are vulnerable to physical dangers such as sharp objects that could scratch or puncture the thin natural layer that

protects the eye. This includes tools and materials that can pierce the eye. However, there is also a risk from small chips, fragments, particles, sand and dirt that may be made airborne through wind and other processes.

This small and potentially sharp particle may get caught in the eye causing punctures, abrasions and contusions of the cornea. In fact, corneal abrasions are the most common type of eye injury, especially in dusty environments. Damage to the eye may range from minor scratches that can heal in several days to more severe abrasions that can cause permanent damage.

The BLS found that almost 70% of the accidents studied resulted from flying or falling objects or sparks striking the eye. Injured workers estimated that nearly three-fifths of the objects were smaller than a pinhead. Most of the particles were said to be travelling faster than a hand-thrown object when the accident occurred.

LIGHT & HEAT

Our eyes are also sensitive to radiation in the form of light and heat. Burns can occur immediately or cumulatively when the eyes are exposed to bright light or high temperatures. This could be from fires, furnaces, welding torches, molten metal or sparks. "UV radiation in the 295-325nm range can cause photo-chemically induced opacities of the lens of the eye. Radiation above 315nm also causes cataracts," says a 2016 study by Gregg M. Stave, Peter H. Wald.

Recent research has shown that high levels of blue light exposure can damage receptors in the eye and have a variety of implications for health and wellbeing. The use of artificial light at night can trigger a variety of sleep problems, as well as physical, emotional issues. "Workers may even need protection against ordinary sunlight," Jim Johnson, CSP, safety manager for Black & Veatch highlights.

CHEMICAL EXPOSURE

The eye's soft tissue is vulnerable to many chemicals that are common at home and in the workplace. Acids, alkalis, strong solvents and cleaning agents are now used in a variety of settings. Even a splash of bleach or a hairspray, for example, could have serious implications if it entered the eye.

Even short exposure to the mists, vapours and fumes of many

industrial chemicals could be strong enough to cause irreversible eye damage. Contact with chemicals causes one fifth of eye injuries in the workplace, according to the BLS.

WORKPLACE HAZARDS

Potential eye hazards are present in nearly every industry. Workplace eye injuries send 300,000 people to the ER each year in the US, according to the CDC. Eye injuries alone cost more than \$300 million per year in lost production time, medical expenses and worker compensation in the U.S., reports the Occupational Safety and Health Administration (OSHA).

Construction



Construction sites encompass many of the dangers listed above. Sharp tools and materials are everywhere, being used and moved in potentially unpredictable ways. Construction sites are extremely dusty environments with many forms of dangerous particulate matter. Mandatory use of hard hats help protect workers but for the best defence against workplace hazards, eye protection is also essential.

"In construction, more than 10,600 eye injuries each year force workers to miss work. Construction has a much higher rate of eye injuries than any other industry," says The Center for Construction Research and Training. While just over 20% of workplace eye injuries come from the construction sector, according to the BLS. "The [construction] work site itself is a hazard," claims Johnson, safety manager for Black & Veatch and a member of ASSE's Construction Practice Specialty Group.

Manufacturing



The manufacturing industry is broad and diverse but generally involves the assembly and finishing of physical products in the presence of human workers. Almost half the injured workers were employed in manufacturing in one way or another. Over 30% of the total eye injuries were working as operatives of assemblers, sanders, and grinding machines, according to the BLS.

The eyes of workers in manufacturing facilities may be at risk of impact by tools, machinery or materials. Factories can be full of dust and other particles that can be dangerous when in contact with eyes. There may also be harmful chemicals from the manufacturing or cleaning processes. While bright lights often bombard the eyes with harmful blue light frequencies for long hours.

Automotive



According to the BLS, more than 40% of workplace eye injuries occurred among craft workers, like mechanics, repairers, carpenters, and plumbers. A large section of this comes from automotive repair where welding for example, can cause an acute condition called photokeratitis if the eyes are not protected.

Not only are these workshops dangerous environments, they also have a reputation for a relaxed approach to eye safety.

"Many automotive mechanics are never taught the basics of safety," says George Swartz, former safety director for Midas International. "Eye injuries may be the most common mishap in the business. Garages are often full of sparks flying from cutting torches and airborne pieces of metal launched from bench grinders, but most mechanics rely on nothing more than their eyelids for protection. A lot of guys just close their eyes while they're welding," continued Swartz.

Healthcare



Healthcare may not be the first industry you think of for eye injury hazards. However, healthcare facilities present the highest risks for viral and bacterial infections that can be caught through the eyes. Surgeons, who work with the open wounds of patients, already wear protective eyewear as a rule but this has not spread to other healthcare workers as much as the risk demands.

Three out of every five workers injured were either not wearing eye protection at the time of the accident or wearing the wrong kind of eye protection for the job

Our eyes are fragile and our workplaces are becoming increasingly hazardous

Healthcare workers are also exposed to bright lights for long hours as they go about their work. As discussed, the blue light frequencies emitted by bright lights and screens have serious short and long term implications for health. Be it for light or biological dangers, healthcare facilities like hospitals are environments where eye protection is important at all times.

Office



The key danger to the eye health of office workers is high levels of exposure to blue light. Time spent looking at screens, especially computer screens increases significantly in many office based professions. And in many offices it has become normal for employees to spend their entire working day looking at computer screens.

Computer monitors and other electronic screens emit approximately 35% blue light, that's 10% more than is emitted by the midday sun. Furthermore, many people work on a computer, spend breaks on a smartphone, and the evening watching television. These high levels of exposure to blue light from screens can have serious and potentially irreversible impacts on eye and general health.

PROTECTING EYES IN THE WORKPLACE

While eyewear is a key element of protection when it comes to your vision, there are many other things you can do to ensure you are safe from potential hazards. Reducing hazards in the workplace is essential and there are tools made to help do so.

REDUCE HAZARDS

Much can be done to reduce hazards in the workplace:

- All areas should be assessed for potential risks to eye health.
- Efforts should be made to reduce falling and flying debris, as well as smaller particles like chips and dust.
- Lighting should be adapted to better suit worker health and wellbeing.
- First-aid kits should be readily available.
- Eye wash stations should be carefully positioned around the facility.
- Eye safety policy, training and drills will help educate and reinforce eye health best-practice.

PROTECTIVE EYEWEAR

Our better understanding of eye health is leading to stricter rules and standards within occupational health, namely the use of appropriate protective eyewear. This is for a good reason, all the evidence suggests that glasses and goggles designed for specific workplaces, are the best way to protect eyes from the wide the range of hazards.

An estimated 90% of eye injuries are preventable with the use

of proper safety eyewear, according to the American Academy of Ophthalmology. While BLS reports that approximately three out of every five workers injured were either not wearing eye protection at the time of the accident or wearing the wrong kind of eye protection for the job. They also confirmed that more than 50% of workers injured while wearing eye protection thought the eyewear had minimised their injuries.

Some eyewear may protect against debris but dust and microscopic particles can also cause serious eye problems. "Safety goggles are the only effective type of eye protection from nuisance dust because they create a protective seal around the eyes," according to OSHA. If dust is due to the nature of the work operation, then there will be continual exposure. If this is the case, workers need a goggle that will seal.

SAFETY FIRST



Our eyes are fragile and our workplaces are becoming increasingly hazardous. Measures can and should be taken to reduce hazards in the workplace. However, to provide workers with the highest levels of safety at all times, employers must demand the appropriate forms of eye protection for the specific hazards of the workplace.

"As Ben Franklin once said, 'an ounce of prevention is worth a pound of cure,'" quoted ophthalmologist Anne Summers, MD, clinical spokesperson for the American Academy of Ophthalmology. "It takes very little effort to protect yourself from on-the-job hazards that can cause blinding eye injuries. We strongly advise workers and their employers not to let their guard down when it comes to eye protection."

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bolle[®]

SAFETY

Bollé Safety is always innovating to bring you more performance. Our complete range of glasses is designed to adapt to all working environments while providing style, comfort, lightness and modularity for optimum protection.

BAXTER

BAXTER, the alternative to the TRACKER model, offers total comfort thanks to its highly wraparound frame. With its waterproof foam and ingenious system for attaching the strap, BAXTER offers effective protection from sprays of solids and liquids, and from dust.



TRYON

Ultra-wrap-around, sporty design, co-injected FLEX 160° temples, adjustable and non-slip bridge, PLATINUM® coating. TRYON perfectly combines style, innovation and absolute protection.



ATOM

Compact, lightweight and extremely comfortable thanks to its modular TPR frame, the ATOM offers enhanced protection. Uses: safety goggles or face shield.



VOLT

Suitable for welding MIG / MAG, TIG and Grinding VOLT is the ideal compromise between safety, protection and comfort. Available with a variable auto-darkening shade filter and a comfortable 5 position headband, VOLT meets all the requirements of a powerful & multipurpose welding protection.



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BOLLÉ EYEWEAR

Identifying zone 0, zone 1 and zone 2 hazardous areas

Hazardous area classification (HAC, formerly electrical area classification) impacts the design and operation of petroleum, chemical processes, and other industrial operations that utilise flammable materials in potentially ignitable atmospheric concentrations in air by requiring ignition source controls.

Uncontrolled ignition of air can result in a loss of life, property damage, business interruption, and legal liabilities.

There are numerous regulations used in a variety of industries to address hazardous area classification. Not only is it important to select the appropriate code, but the findings of the classification analysis need to be documented.

DEFINITION OF HAZARDOUS AREA

A hazardous area can be defined as any location where there is risk of an explosion. But every hazardous area is different, and each has specific requirements depending on the nature of the atmosphere and the elements that are present.

Fundamentally, for an explosion to take place, flammable or explosive gases, vapours, mists or dusts will be present.

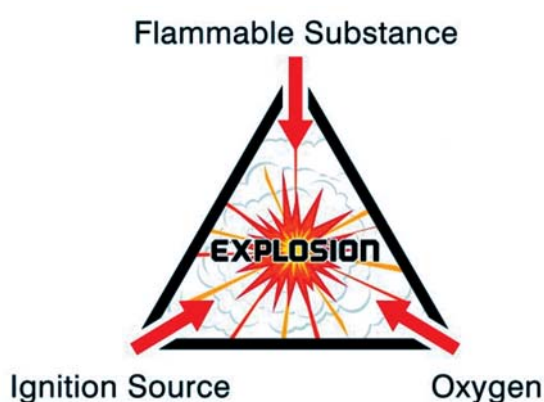
Then, the level of risk of an explosion is based on the frequency and duration of the occurrence of an explosive atmosphere.

This level of risk is represented by classifying the hazardous area as Zone 0, Zone 1 or Zone 2 (for gas, vapour and mist atmospheres) or Zone 21 or Zone 22 for dust atmospheres.

In this article we will look at what defines Zone 0, Zone 1 and Zone 2 hazardous area classifications and the considerations for specifying lighting into



Dr. Bill Pomfret brings an unrivaled perspective on risk, regulation and liability from over 50 years of experience as a safety consultant working for leading companies around the world. He also spent nearly a decade in the North Sea exploration and production as a safety manager. Dr Bill is a passionate advocate for safety training.



each area. But first, we must consider what is likely to cause an explosion in the first place.

There are three necessary components for an explosion to occur:

1. FLAMMABLE SUBSTANCE

This needs to be present in a relatively high quantity to produce an explosive mixture (e.g. gas, vapours, mists and dusts).

2. OXYGEN

Oxygen is required in high quantities and in combination with the flammable substance to produce an explosive atmosphere.

3. IGNITION SOURCE

A spark or high heat must also be present. Where there is potential for an explosive atmosphere, special precautions are needed to prevent fires and explosions. Electronic equipment, including lighting, needs to be purpose designed for use in hazardous

areas to prevent a spark occurring and igniting any flammable substances.

Although every application is different, for the ease of monitoring and specification each hazardous area is classified as a particular level or "zone". As a result, all hazardous area equipment must be designed with hazardous area zone classifications in mind, as the "zone" governs the level of protection and precaution required.

It is essential to know which zone you are working in, so that you can specify the most appropriate equipment.

For gases, vapours and mists the zone classifications are recognised as Zone 0, Zone 1 and Zone 2 areas. See Figure 1.

To make this even easier to understand, look at the diagram of a typical petrol station below left where we have identified the areas that are classified as Zone 0, Zone 1 and Zone 2.

Whenever you are filling up your tank you are standing in a Zone 1 hazardous area. That is why the use of mobile phones on petrol forecourts are banned. Your phone isn't rated for use in hazardous areas. Think about that the next time you're filling your car!

It is essential to install a range includes dedicated luminaires for both Zone 1 and Zone 2 areas as well as industrial applications. The colour of the luminaire body indicates the level of protection. Zone 1 fittings are supplied as silver, Zone 2 as dark grey and industrial fittings as white. All emergency versions, whether Zone 1 or Zone 2 can also be visually identified easily by their red end cap, encapsulating the emergency battery back-up.

The part codes for each variant also differ

ZONE 0

Zone 0 is an area in which an explosive atmosphere is present continuously for long periods of time or will frequently occur.

ZONE 1

Zone 1 is an area in which an explosive atmosphere is likely to occur occasionally in normal operation. It may exist because of repair, maintenance operations, or leakage.

ZONE 2

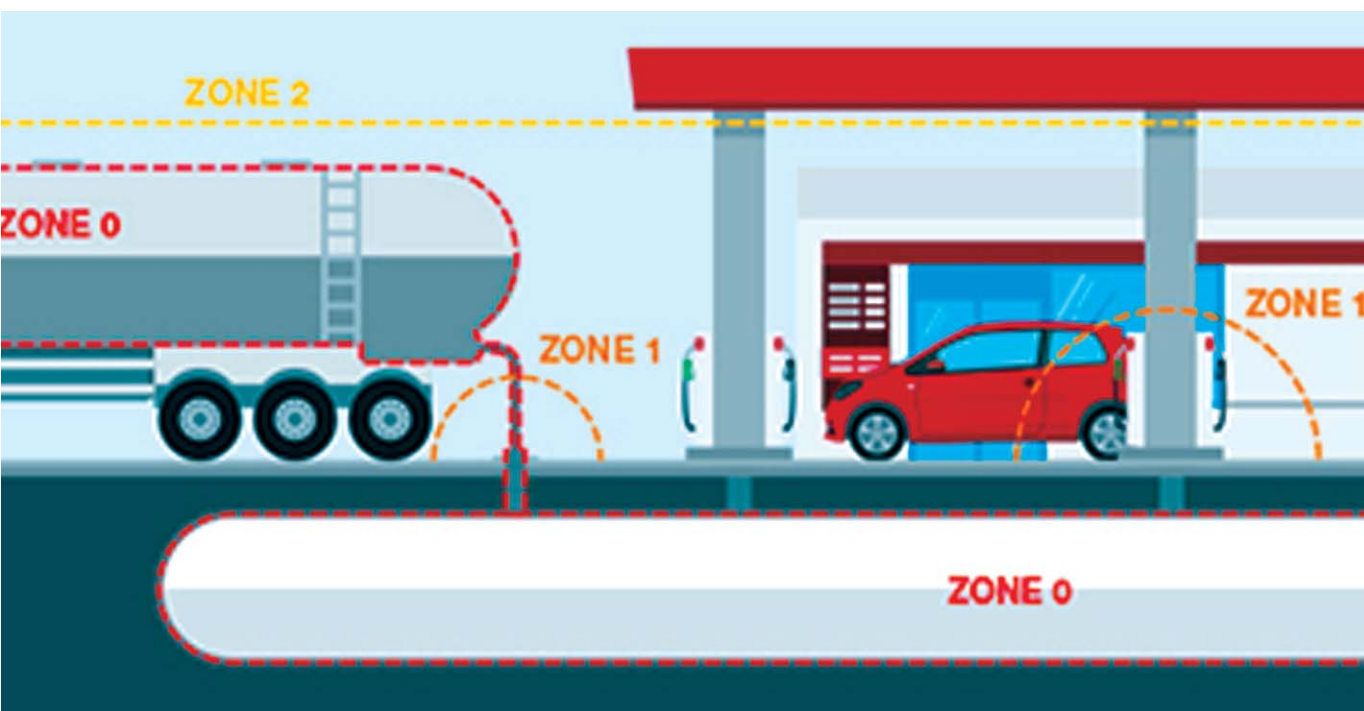
Zone 2 is a place in which an explosive atmosphere is not likely to occur in normal operation but, if it does occur, will persist for a short period only. These areas only become hazardous in case of an accident or some unusual operating condition.

Figure 1. Zone classification

depending on the level of protection required A Zone 1-part code begins SPX, Zone 2 SPZ and industrial products having a SPI prefix.

Most companies do not currently offer any lighting solutions for Zone 0. This is because Zone 0 usually classifies areas for gas storage or containment, and any lighting required would be used on a small and portable basis for visual inspection, e.g. a headlamp, rather than a dedicated fixed luminaire.

Therefore, it is very important to make sure that you are using a suitable luminaire for your application by choosing your fitting based on its suitability for the Zone in which it will be located.



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Leading OHS from behind

Throughout history, we have been leaders leading from the front. There are many photographs that come to mind of iconic revolutionary leaders positioned in front of the people they were leading towards a shared vision, common objective or desired goal.

One such image of leading from the front is that of Dr Martin Luther King Jr during the second Selma to Montgomery march of 1965 alongside other civil rights activists who were fighting against racial injustice, racial discrimination and inequality. Dr King was a bold, courageous and revolutionary leader who led from the front.



(Dr King on the Edmund Pettus Bridge in 1965 - Source: USA Today)

Without a doubt, leading from the front has been a successful leadership approach that transformed the world and afforded the current generation with many of the freedoms, rights and privileges that we enjoy today. Many things were accomplished by leaders that led from the front.

For occupational health and safety, leading from behind has slowly emerged as the most desirable leadership approach. In May 2010, Linda Hill wrote a paper entitled 'Leading from behind' for the Harvard Business Review as part of a six-week blog series on how leadership might look in the future. Now that it is 12 years later in 2022, much of what Hill wrote back then is relevant today for OHS leadership.

In this article, I will look at some of the key issues shared by Hill (2010) in her paper and elaborate on how these lessons can be applied in OHS leadership today.

To start with, Hill (2010) indicated that the most effective leaders lead from behind and not from the front and referenced Nelson Mandela equating a great leader to a shepherd that 'stays behind the flock'. In addition, Hill (2010) also noted that leaders who are exceptional at leading from behind are likely to be different to those who excelled at leading from the front.



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Leading from behind is a concept present in the 1993 Occupational Health and Safety Act. Although section 16 of the Act gives overall accountability for occupational health and safety to an organisation's CEO and their designated appointee, sections 17 to 20 of the Act clearly give employees the responsibility of driving health and safety within organisations as health and safety representatives who are part of a health and safety committee.

The Act therefore allows OHS Leaders to lead from behind and provide support to health and safety representatives and the health and safety committee. This approach allows the employee driven committee to take ownership of workplace health and safety with the employer providing the training, resources and tools to control occupational health and safety hazards in the workplace.

Hill (2010) pointed out that one of the realities about leadership from behind is that the psychological contract between companies and employees is changing and people are looking for more meaning and purpose in their work lives and increasingly expect to be valued for who they are so that they are able to contribute to something larger than themselves.

As Hill (2010) indicated, in present day workplaces, employees place greater value on employee wellness and mental health which is a fundamental aspect of healthy workplaces. OHS leaders must take this into cognisance and work closely with HR and production to enable employees to have a say in how the workplace can achieve a work-life balance that keeps people productive while managing their work and personal lives.

Furthermore, Hill (2010) stated that leaders can build communities that can innovate and do not just follow the leader.

In OHS, every workplace has unique occupational hazards and risks associated with the organisation's operations. Effective OHS leaders support their teams and encourage them to continuously identify sources of occupational hazards and determine the best safety controls to prevent injuries and illness. It is not the leader alone but the team that has this responsibility.

According to Hill (2010), leading from behind does not mean that leaders abrogate their leadership responsibilities as "a shepherd makes sure that the flock stays together by using their staff to nudge and prod if the flock strays too far off course or into danger". Many OHS leaders use punitive measures to enforce OHS policies, safe work procedures and other protocols. Instead of 'nudging' and 'prodding' as Hill put it, they dish out warnings and sit in endless safety violation hearings. This is not effective OHS leadership. Leading from behind

provides a good vantage point from which the OHS leader can see where people are going wrong and enable them to guide their team on corrective actions to take.

Leaders that lead from behind harness people's collective genius (Hill, 2010). The first step in doing so is by ensuring that their organisations are willing to innovate. OHS is a multi-faceted field. Risks to health and safety are dynamic and ever changing therefore organisations should not be static but adopt new ways and methods to control workplace health and safety hazards.

The emergence of artificial intelligence and other forms of technology has occurred in the last decade since Hill wrote her article for the Harvard Business Review, therefore effective OHS leaders should also ensure that their organisations keep pace with these developments and innovate by adopting best practices and new innovative ways to manage health and safety.

Lastly, Hill (2010) outlined that leaders must build the organisational capabilities necessary for engaging in the innovation process by generating ideas through intellectual discourse and debate (creative abrasion), refining ideas through quick pursuit (creative agility) and making decisions in an integrative manner (creative resolution).

The OHS leader of today must therefore be a collaborative, interactive and multi-skilled individual who recognises that safety leadership is about the team and not the individual.

Ideas to improve workplace health and safety come from the team and are refined by the team before decisions are integrated into existing safety policies, procedures and processes.

Leading from the back in OHS is not only strategic but has emerged as the most effective leadership approach.

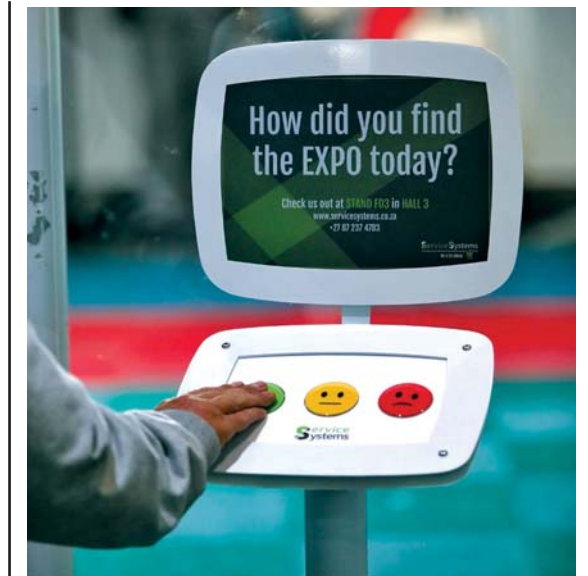
A-OSH Expo confirmed for 2022

Specialised Exhibitions, the largest trade show organiser in Southern Africa, is pleased to announce that its Securex South Africa, A-OSH Expo and Facilities Management exhibitions are confirmed to go ahead for 2022, with the exciting addition of Fireexpo to the Securex show.

The four trade shows will take place from 31 May to 02 June 2022 at Gallagher Convention Centre in Johannesburg.

Says Mark Anderson, portfolio director at Specialised Exhibitions: "The current rules around larger gatherings of people have allowed for the cautious reopening of the local business tourism sector, specifically relating to meetings, incentives, conferences and exhibitions (Mice).

"These new regulations, as well as the success of our Restart Expo, which successfully demonstrated that it is possible to hold organised gatherings in a controlled, safe way, have made it possible for us to



go ahead with exhibitions planned for 2022."

"An exciting new development for Securex is the addition of Fireexpo section, which will focus exclusively on fire-related products and services," Anderson explains.

"A-OSH will be in its 10th repetition and will once again focus in on all things occupational health and safety related.

"We're expecting to see thousands of visitors attending the free-of-charge events and seminar theatres," he adds.

"Interest from exhibitors across the four expos has been high, but there is still some space available for those organisations looking to engage directly with potential clients and boost brand awareness."

For more information visit www.aosh.co.za



Cognitive Dissonance:

A mental health and well-being risk in the workplace

WHAT IS COGNITIVE DISSONANCE?

Cognitive dissonance is a theory in social psychology referring to the mental conflict that occurs when a person's attitude, behaviours and beliefs do not align. It may also happen when a person holds two beliefs that contradict one another.

Attitudes arise out of core values and beliefs we hold internally. Beliefs are assumptions and convictions we hold to be true based on past work exposure and experiences. Values are worthy ideas based on things, concepts, education, legal requirements and people. Behaviours are how these internalised systems (attitudes, beliefs and values) are expressed.

Cognitive dissonance causes feelings of unease and tension, and people attempt to relieve this discomfort in different ways. Examples include "explaining things away" or rejecting new information that conflicts with their existing beliefs, high resignation rates, arguments and workplace conflicts, workplace bullying.

Cognitive dissonance leads to long term mental stress and poor well-being of employees when they are stranded by family commitments and have to struggle to stay in their jobs.

Leon Festinger, a psychologist, published his theory of cognitive dissonance in his 1957 book, *A Theory of Cognitive Dissonance*. In it he proposed that people experience discomfort when they hold conflicting beliefs or when their actions contradict their beliefs.

IMPACT OF COGNITIVE DISSONANCE IN THE WORKPLACE

Cognitive dissonance in the workplace is common and a significant cause of stress for professionals working in organisational support functions, such as risk management, health and safety and the human resources. In those functions, people are sometimes exposed to, or coerced towards tolerating, supporting and executing tasks which are in deep conflict with their sense of right and wrong, training, ethics, or personal values.

The fundamental importance of those internal beliefs needs to be emphasised, because in the majority of cases, they are the primary factors responsible for people choosing those occupations as a career path. For many of them, being health, safety and environmental advisors, trainers, nurses, paramedics, or human resources professionals is far more than a profession, it is a calling. When faced with conflicting beliefs and practices and the



Han Wenqi is an experienced workplace safety and health professional from Singapore, and an advocator with 15 years of industrial safety experience. 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.

pressure to tolerate them, those professionals often experience deep personal dissatisfaction, distress and a state of permanent tension which can result in a range of personal health effects as well as chronic impairments to individual work performance.

WORKPLACE SCENARIOS OF COGNITIVE DISSONANCE

Scenario A

A health and safety officer who is asked by his health and safety manager to ensure that a health and safety inspection "turn a blind eye", "do not write too much non-compliances in the inspection report" and "do not send out so much email about non-compliances" which on certain factors will experience similar symptoms.

In many cases where a person makes a conscious choice to execute a particular task (stressor) against his beliefs and values, the stress does cause them to lose his / her moral centre, embedded long-term, and with variable intensity. This often leads to workplace related depression.

Scenario B

A health and safety supervisor who is asked by his health and safety manager to ensure that he coached the subcontractor by slowly explaining it to them, rather than instructing for a temporary work suspension and providing a fall prevention barricade for an open side of an excavation with 4.5 metres depth.

Scenario C

In a mega-scale construction project of a new gasification plant, a construction manager getting the health and safety supervisor, to shut his mouth by not raising any findings through his health and safety walkthroughs, in front of all subcontractors and stakeholders during a coordination meeting.

The health and safety supervisors later were further coerced to sign off on the Permit to Work, in the meeting, to expedite all administration work for subcontractors.

Scenario D

A health and safety manager asking his subordinates why they need to comply to all the local legal requirements. Also asking about each and every clause, so that he can justify himself in front of his superiors and other stakeholders.

NOTE: local legal requirements is a minimum requirement which a health and safety manager should know on his / her fingertips.

NEGATIVE ORGANISATION SAFETY CULTURE EVOLVES

Often, a big percentage of health and safety professionals when encountered with cognitive dissonance stressors of this kind, will still choose to execute tasks they deeply disagree with.

They will do this for several reasons such as:

Positional obedience

Justifying their actions because instruction has been given from a person of greater authority / capacity in the organisational structure;

Normalisation

Process of internal justification (trying to convince oneself that "others do it too"); and

Emotional trading

Calculating that a future reward (family commitments, sole breadwinner pressure, work pass constraints) for obedience is worth the compromise of beliefs and values.

Another powerful reason for a decision not to challenge uncomfortable instructions is a natural human tendency towards avoiding a confrontation with an authority figure and the negative emotional experience which comes from it. All personnel in positions of authority need to be aware of this in terms of their leadership style and approach.

HEALTH AND SAFETY PROGRAMMES ARE PERCEIVED AS FACADES

Health and safety programmes in the workplace are the essential bolts and nuts of a machine (the safety culture, safety and health policy, safety and health objectives, the workplace safety and health management system). However, many perceive them as a facade, by having a generic programme developed and placed in the wardrobe as a white elephant. The implementation in the physical workplace is not verified on the tally of what is stipulated in the programmes.

Cognitive dissonance evolves in the workplace when health and safety programmes are perceived as facades and not implemented effectively. Stakeholders then struggle between their personal beliefs, values and perceptions of the law against the "facades" in the workplace.

A psychologically safe work environment must first be provided in order to accept feedback, suggestions and red flags raised to reduce or eradicate cognitive dissonance or even high attrition risk ("Empower staff to speak up freely on concerns about workplace safety" - ST 1 November 2021).

TRAITS OF THE UNADDRESSED COGNITIVE DISSONANCE

When cognitive dissonance is neglected and left unaddressed in the workplace, the following effects will often surface and evolve:

Increased absenteeism

This is one of the most common effects of cognitive dissonance in the workplace. People are finding it emotionally easier to justify their absenteeism than to be exposed to stress causing factors. In my opinion, the existence of cognitive dissonance related absenteeism is under-recognised and under-reported, which decreases any opportunity for the introduction of various corrective actions.

This early indicator of workplace stress is often masked by excuses and is often only discovered when formal processes of performance management are applied. Financial losses to organisations arising from this type of absenteeism are obvious and significant

Withdrawal and disengagement

Stressed employees are not productive employees. They often withdraw, cease to put their ideas forward and if they remain in the organisation, they function primarily in employment preservation mode. This has a significant impact and influence on other employees and the overall organisational culture. Employees suffering from cognitive dissonance often alienate themselves and others, and are disengaged from the key organisation processes they are meant to support and drive

Significant reduction in performance

This directly results from the above two points

Negativity and inappropriate behaviour

In addition to stress, people suffering from work-related cognitive dissonance also experience a range of other negative emotions such as disappointment, anxiety and anger which can manifest in a range of counterproductive behaviours such as:

- **Silent obstruction** – intentional actions (failing to do) aimed at disrupting various organisational processes and causing damage
- **Malicious compliance** – intentional actions aimed at causing damage such as following all rules into the finest possible detail, even when it is completely counter productive and
- **Sabotage** – Although relatively rare, these are intentional actions aimed purely at causing organisational or personal damage
- **Aggression** - and other disruptive behaviour

High staff turnover

Eventually if not addressed, most cases of chronic cognitive dissonance will result in people departing from organisations. This is often a significant business loss in terms of organisational knowledge and resources used in recruitment, training and development. It also has an adverse impact on organisational reputation and the future hiring of high calibre candidates

Adverse health effects

Chronic workplace stress caused by cognitive dissonance often results in a range of negative health effects such as depression, fatigue, anxiety and much more. Those are especially likely in situations where a person feels that he or she is “out of options” and has to continue exposure to a stress-inducing environment due to financial or other constraints

Workplace stress claims

If not addressed in a timely manner, some cases of cognitive dissonance can easily alienate a person from the organisation and create a perception that the only way out of the situation is through making a workplace stress claim. Undoubtedly there are cases where this appears to be the only option.

In the presence of specific events and witnesses, the likelihood of the workplace stress claims can dramatically increase, often with very expensive results.

Common causes for cognitive dissonance in organisational support functions are factors such as particular management or leadership style, bullying, discrimination, application of double standards, inappropriate or unethical business practices and many others. Addressing those is the key for reduction of the cognitive dissonance in the workplace.

SOLUTION: INTERNAL RATIONALISATION THROUGH CIRCLES OF CONTROL & ORGANISATIONAL EMPOWERMENT

For a practicing risk management or an HR professional, coming to terms with certain organisational decisions, instructions and practices can often be a matter of professional survival. In the majority of cases, causes for cognitive dissonance can be traced to organisational deficiencies and culture, as well as substandard and inappropriate leadership behaviours and practices which are sometimes tolerated at certain organisational levels.

As cultures in organisations can take years to change, support professionals are instrumental in facilitating this process. As a result, dealing with cognitive dissonance becomes a necessary survival skill, especially since in reality there are only two choices available: dealing with cognitive dissonance and winning the battle, or leaving the organisation.

Many outstanding professionals depart organisations long before they have had a chance to have a maximum positive organisational impact. Therefore, a conducive and psychological safe workplace with empowerment and authority to speak up freely is needed.

Mental Health Risk Assessments must be conducted to address and mitigate cognitive dissonance and all psycho-social risk in the workplace.

PPE Covid-19 waste - a risk to the environment

This report was led by WHO Water, Sanitation, Hygiene and Health Unit in collaboration with the following WHO teams: Infection Prevention and Control, Emergencies, Medical Devices, and Immunizations. Technical input was provided by WHO partners, Health Care without Harm, the United Nations Development Programme (UNDP), the Global Fund, and the International Solid Waste Association (ISWA), a global, independent, non-profit association, working in the public interest to promote and develop sustainable waste and resource management in the transition to a circular economy.

According to a WHO report, tens of thousands of tonnes of extra medical waste used for the COVID-19 pandemic is threatening human and environmental health and exposing a dire need to improve waste management practices.

These estimates are based on the approximately 87,000 tonnes of personal protective equipment (PPE) that were procured between March 2020–November 2021 and shipped to support countries’ urgent COVID-19 response needs. Most are expected to have ended up as waste.

The authors note that this just provides an initial indication of the scale of the COVID-19 waste problem. It does not take into account any of the COVID-19 commodities procured outside of the initiative, nor waste generated by the public like disposable medical masks.

They point out that over 140 million test kits, with a potential to generate 2,600 tonnes of non-infectious waste (mainly plastic) and 731,000 litres of chemical waste (equivalent to one-third of an Olympic-size swimming pool) have been shipped, while over 8 billion doses of vaccine have been administered globally producing 144,000 tonnes of additional waste in the form of syringes, needles, and safety boxes.

As the UN and countries grappled with securing supplies of PPE, less attention and resources were devoted to the safe and sustainable management of COVID-19 related health care waste.

“It is absolutely vital to provide health workers with the right PPE,” said Dr Michael Ryan, Executive Director, WHO Health Emergencies Programme. “But it is also vital to ensure that it can be used safely without impacting on the surrounding environment.”

This means guiding health workers on how to dispose of PPE and health commodities.

Today, 30% of healthcare facilities (60% in the least developed countries) are not equipped to handle existing waste loads, let alone the additional COVID-19 load. This potentially exposes health workers to needle stick injuries, burns and pathogenic micro-organisms, while also impacting communities living near poorly managed landfills and waste disposal sites through contaminated air from burning waste, poor water quality or disease carrying pests.

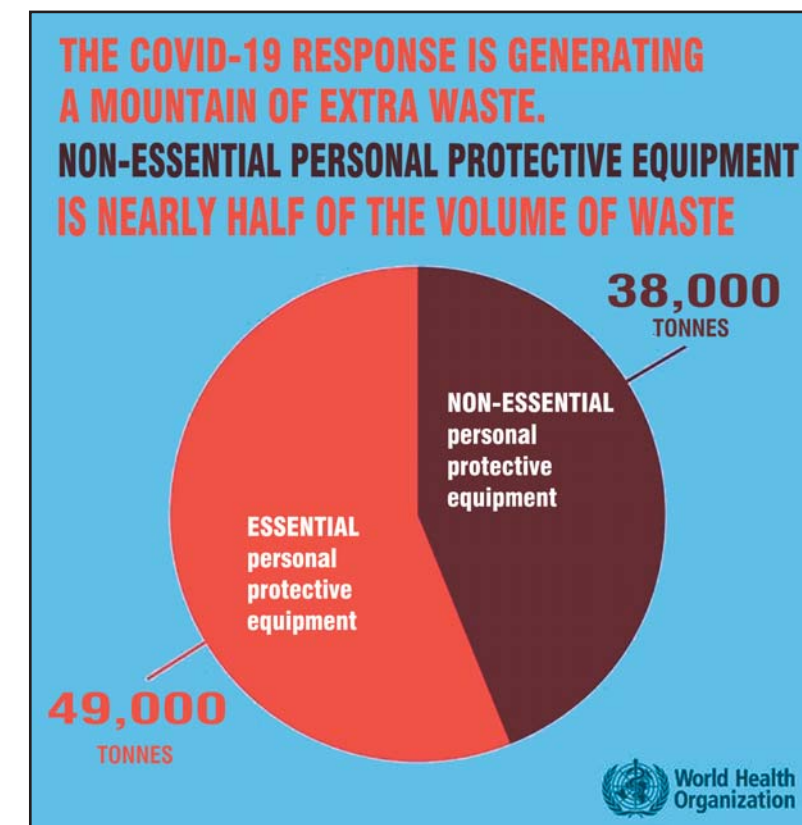
“COVID-19 has forced the world to reckon with the gaps and neglected aspects of the waste stream and how we produce, use and discard of our health care resources, from cradle to grave,” said Dr Maria Neira, Director, Environment, Climate Change and Health at WHO.

Recommendations by the report include using eco-friendly packaging and shipping, safe and reusable PPE (e.g., gloves and medical masks), recyclable or biodegradable materials; investment in non-burn waste treatment technologies, such as autoclaves; reverse logistics to support centralised treatment and investments in the recycling sector to ensure materials, like plastics, can have a second life.

The COVID-19 waste challenge and increasing urgency to address environmental sustainability offer an opportunity to strengthen systems to safely and sustainably reduce and manage health care waste. This can be through strong national policies and regulations, regular monitoring and reporting and increased accountability, behaviour change support and workforce development, and increased budgets and financing.

“There is growing appreciation that health investments must consider environmental and climate implications, as well as a greater awareness of co-benefits of action. For example, safe and rational use of PPE will not only reduce environmental harm from waste, it will also save money, reduce potential supply shortages and further support infection prevention by changing behaviours” said Dr Anne Woolridge, Chair of the Health Care Waste Working Group, International Solid Waste Association (ISWA).

The analysis comes at a time when the health sector is under increasing pressure to reduce its carbon footprint and minimise the amount of waste being sent to landfill.



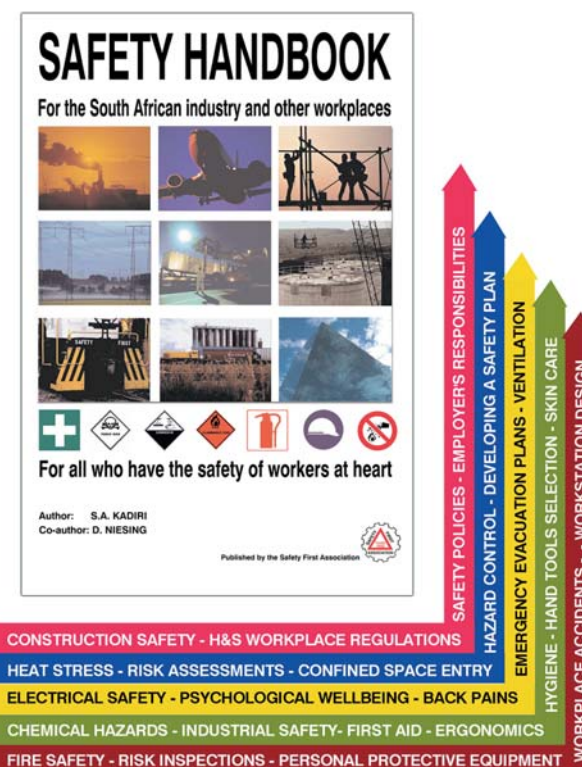
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Mandatory vaccinations at the workplace

Is this a ticking time bomb?

On June 11, 2020 DEL issued Government Gazette 44700 NO.R.499. Consolidated Direction on Occupational Health and Safety measures in certain workplaces.

Objective: definition - (of a person or their judgment) not influenced by personal feelings or opinions in considering and representing facts.

Covid-19 is one of the hardest things I have had to face concerning occupational health and safety. Since vaccinations were first introduced, the internet has been flooded with many different views and scientific evidence for and against the vaccinations. And unfortunately it is often the safety officer / consultant who is the one left with the elephant in the room.

When making our recommendations, it is important for us to consider that each workplace is different, operates in a different way and has with different risks. With the result, the health and safety officer / consultant has to stay objective and investigate all options before he/she can come to a conclusion and make an objective decision.

As a start, the risk assessment must cover the entire basis to ensure that the employees and the visitors on the premises are safe. It will conclude with recommendations whether all employees need to be vaccinated, or in which areas of the workplace employees need to be vaccinated and which areas they do not. Most important, the risk assessment needs to remain objective and must not be influenced by the personal feelings of the health and safety officer / consultant.

In the process, the risk assessor needs to consider the following questions:

- Will vaccinations of employees make a difference to the risk / health and safety in the workplace?
- How effective is the vaccination?
- How often will the employee have to receive a booster shot?
- Will it make a difference to the infection rate at the workplace if anyone becomes infected?
- How did all previous infections occur and were they investigated by the safety officer or the Covid compliance officer?

Another factor that needs to be considered is who will be legally liable should any of the employees have an adverse effect because of the vaccination which was mandated by the company. There may also be legal problems from employees who get infected because vaccinations were not mandated and the person they work with closely was not vaccinated.

The risk assessment plan should accommodate reasons for refusal to be vaccinated which may



Herman (Harry) Fourie has a passion for occupational health and safety and has been working in the industry for many years. He has several diplomas and certificates and continues his studies through different organisations. He is a member of several professional organisations throughout Africa and beyond. Herman is a part time consultant creating software systems.

include personal, religious, constitutional or health reasons. According to the Government Gazette the employer should not terminate the services of these employees but should find alternatives for his/her employment.

This is it in a nutshell. But in reality, in many cases this is not happening.

I have received many emails and messages of employees complaining of retrenchments, immediate dismissal, unfair labour practices and the list goes on. These have been from executives in top notch companies to employees in coffee shops forcing their staff to get vaccinated against their will or face unemployment.

One of my clients, "Company AB" gave its employees until the end of October 2021 to get fully vaccinated or face dismissal. Some employees declined, the employer refused to accept medical certificates giving valid reasons and the employees were suspended without pay. They were however given a chance to get their first shot to lift the suspension. Those who declined are now unemployed.

As an occupational health and safety officer / consultant/ practitioner we have the duty not only to uphold the law but to protect the employee as well. We have to understand the scientific reasons for vaccinations, but we also have to take into consideration people's reason for refusing vaccinations.

A back-up plan needs to be put in place for both scenarios. If you recommend vaccinations, do you have a backup plan to assist those who are unable to or decline the vaccine? What will you do about the employee who refuses to work with a person who is not vaccinated?

In many ways Covid-19 has put the HSE practitioner into a difficult position. We have to uphold the law, keep our employees and the public safe without violating anyone's rights.

The recommendation of the HSE practitioner will help determine the direction the CEO will take. But what will be your recommendation? Will it be your personal view and beliefs that everyone should be vaccinated? Will it be your personal view and beliefs that no one should be vaccinated? Or will you keep strictly to the law without being subjective?

Most important, The HSE must be objective. The recommendations of the HSE must be in the best interest of the employees and the workplace. In many ways the country's employment system will depend on how we as HSE handle it the situation as it unfolds.

Training and certification is required for safe food and food products

The recent issues experienced with listeriosis, leaking cans, expired nuts and fruit are examples that demonstrate the need for food manufacturers, producers, retailers and every organisation involved in the handling of the supply chain to be trained and certified in Food Safety System Certification 22000 (FSSC 22000). The South African Bureau of Standards (SABS) offers FSSC services in training, testing and certification of food and food products.

"When one considers the millions of various food products, their distribution, their manufacturing, their handling and the growing processes, it is understandable that a comprehensive food safety management system is should require to assure the end users of its safety and quality. Currently, the global standard for food safety is the Food Safety System Certification 22000 (FSSC 22000). The FSSC Certification is a complete food, feed and packaging safety certification scheme for the auditing and management of Food Safety Systems (FSMS). The new Version 5.1 of the scheme is offered and managed by the Foundation FSSC, which is a non-profit independent scheme owner, which is recognised by the Global Food Safety Initiative (GFSI)", explains Dr Sadhvir Bissoon, Divisional Head of the SABS Standards.

Dr Bissoon says that the FSSC 22000 V5.1 scheme consists of three components, namely the implementation of the ISO-based management system (ISO 22000:2018); together with relevant prerequisite programs (PRP) specifications (ISO/TS standards and BSI PAS) and the FSSC additional requirements. The comprehensive Food Safety Scheme is a globally recognised food safety control mechanism necessary to support the attainment of Sustainable Development Goals (SDGs) and to provide trust and deliver impact to the consumer goods industry. All organisations involved in the food chain should be familiar with the requirements of this standard through training and to ensure that food production and products are certified,

The SABS has the capability to test and certify food products. Our suite of laboratories can identify the nutritional percentage of ingredients, pesticides and chemicals, bacteria, microbes, fungi and any other substance that may be of benefit or harm to consumers.

"There are certain processes in the food value chain that need to be controlled despite challenges that may be experienced such as, excessive periods of no electricity which may compromise refrigeration and thus food quality, food warehouses that may have experienced rodent

infestation or chemical leaks, retailers that fail to remove expired products from their shelves, or delays in transportation of produce.

Having a comprehensive food management system such as FSSC 22000 will ensure that staff are trained to identify and manage risks that could compromise food safety. SABS Training Academy was the first in the African continent to be recognised to offer training in FSSC 22000 and remains a licensed training partner with Foundation FSSC. SABS recommends that FSSC 22000 V5.1 become entrenched in every organisation that deals with food and food products.

The certification scheme is accredited under ISO 17021-1 and the three pillars of FSSC 22000 scheme requirements. This allows food manufacturers to use the FSSC 22000 standard to meet the requirements of several global retailers or major branded food companies under a single, internationally recognised food safety management system

The SABS is a national standards body and does not have the regulatory authority to promulgate FSSC 22000 or any other standard as a compulsory requirement, however, the SABS works with policy makers and regulators and other industry bodies to set the requirements or standards for products and processes as well as provide independent conformity assessment services to the industry, that is Testing Certification, Inspection and Training Services.

Dr Bissoon explains that regulators such as the National Regulator for Compulsory Specifications (NRCS) and the National Department of Health (NDOH), the Department of Agriculture Land Reform and Rural Development (DALRRD) and related agencies have the authority to regulate certain types of food and food products, conduct inspections and when there is a potential health risk and market failure of a product, have the power to recall products.

Food manufacturers already certified against ISO 22000 will only require a review and the implementation of compliance mechanisms enough to meet the additional FSSC requirements in order to transition to the FSSC 22000 standard. FSSC 22000 can be applied to organisations of any size or complexity in food manufacturing.

SABS

SAIOH President's Message



Hennie Van Der
Westhuizen
SAIOH President

The aspiration of occupational hygiene, as part of the occupational health and safety fraternity, is to uphold and promote health and safety of workers in all occupations. At times, our actions are so focused that we tend to forget that we, ourselves, are exposed to stressors - in some cases, more so than the communities that we serve. We are well versed in reducing physical, chemical, biological and ergonomic stressors. This knowledge is applied in helping others and ourselves in the workplace. However, we are all also exposed to psychological stressors of varying degrees, daily. Dealing with these stressors is not easy as individual coping mechanisms vary, as do solutions. Regrettably,

when defence mechanisms fail, prolonged stress can lead to mental fatigue. We had our fair share of challenges in 2021, which placed a premium on our health and especially our mental health. The extended effect of COVID-19 added to frustrations and exacerbated psychological stressors in the workplace. One of the coping mechanisms to deal with stress is to take a break, and I know that all my colleagues were looking forward to a break at the end of the year. We, as the SAIOH National Council, trust that the December holiday season offered the much-needed break and an opportunity to relax and revitalise. We wish you a successful and blessed 2022.

Dunning-Kruger effect and SAIOH

The Dunning-Kruger effect is a concept that has been receiving vigorous attention in the electronic media recently. The Encyclopaedia Britannica defines the Dunning-Kruger effect as "a cognitive bias whereby people with limited knowledge or competence in a given intellectual or social domain greatly overestimate their own knowledge or competence in that domain relative to objective criteria or to the performance of their peers or of people in general".¹ Kendra Cherry, an educational consultant, neatly translates this definition into understandable English by stating that the Dunning-Kruger effect is a type of cognitive bias in which people believe that they are smarter and more capable than they really are.² She further states that this frame of mind leads to under performance in certain areas and to the inability to recognise mistakes that are made. From a professional perspective two questions arise:

1. To what extent does this effect prevail in a professional group with high quality and ethical values, such as SAIOH?

2. How does one counter this effect within SAIOH?

Recognising my limited knowledge of the effect and being wary of falling into the trap of becoming a victim of the Dunning-Kruger effect, I wish to venture an opinion on these questions. Members are welcome to ponder these remarks and form an opinion for themselves. The question as to what extent it manifests itself within our profession or poses a risk to our quality is difficult to answer without thorough research. What we do know, is that structures are in place in SAIOH which dictate knowledge, skills, competency, and ethics of individual members. The Professional Certification Committee (PCC) safeguards the occupational hygiene sector and provides basic qualifying criteria for the various levels of certification and ensures

continued development of members by way of the continuous professional development (CPD) system. In addition, the PCC has developed a technical self-evaluation tool, available to members on the SAIOH website. As SAIOH realigns itself, along with its strategic objectives, mechanisms are revised or added to ensure quality. Knowledge of ethics has been identified as a point of focus. As a result, a certificate as proof of successful participation in ethics modules, will be a requirement for professional certification every two-five years (final decision still pending). Opportunities to achieve ethics certificates will be made available to members on the SAIOH website. Apart from the above mechanisms there are external influences that will assist members to assess exactly where they are regarding knowledge and skills. These influences can be found in occupational health and safety legislation and the related South African National Standards (SANS) codes, as well as in the assessment system of the South African National Accreditation System (SANAS).

In summary, without being complacent, I wish to state that the systems in place should, to a great extent, reduce the risk of the Dunning-Kruger effect. I conclude by suggesting to prospective Masters students or Doctoral candidates in search of a research topic, consider investigating the statement: "that the system that has been put in place by SAIOH reduces the risk of a negative Dunning-Kruger effect", as well as the questions that were posed.

Members who wish to read more on the topic can find information on the following websites:

<https://www.britannica.com/science/Dunning-Kruger-effect>. Accessed 17 January 2022

<https://www.verywellmind.com/an-overview-of-the-dunning-kruger-effect-4160740>



Council activities

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We have come through a year that was filled with challenges and achievements. On behalf of SAIOH, we extend our genuine appreciation to each one of you for your valuable contributions and continued dedication to our organisation. Working with you during 2021 was a pleasure and we are proud to have all of you with us on our 2022 journey.

It is that time of the year again where members are required to submit their CPD points and pay their annual membership fees. Please read the information below and ensure your profile and membership information is up to date. Your annual membership invoice was sent to you via e-mail on 3 January 2022. Please verify your SAIOH profile and download a copy of your invoice.

Please note that:

- Annual membership fees have increased by 7%.
- It is each member's responsibility to ensure that

personal and billing information is correct and current. This will ensure that the correct information is reflected when invoices are generated. Failure to update your SAIOH profile will cause unnecessary delays in the processing of payments and the issuing of certificates.

- Annual membership fees must be paid by 28 February 2022; late payments will incur interest.
- Continuous professional development (CPD) points (with supporting documentation) must be uploaded by 31 January 2022.

- Registration fees and assessment dates are available on the SAIOH website:

<https://www.saioh.co.za>.

TAKE NOTE!

2022 MEMBERSHIP CERTIFICATES WILL NOT BE RELEASED WITHOUT BOTH PROOF OF PAYMENT AND THE SUBMISSION OF CPD POINTS

National Council 2022/23 – Announcement of new SAIOH Council members

During the SAIOH AGM held in November 2021, the below mentioned nominees were elected to the SAIOH National Council. We would like to wish them each heartfelt congratulations and a warm welcome to the SAIOH Council! We look forward to working together for the betterment of SAIOH.

1. Wessel van Wyk

Wessel is a University of Stellenbosch graduate, with an Honours degree in Conservation Ecology. He started his career as an occupational hygiene assistant in 2009, but soon progressed to the level of occupational hygienist. He also has a certificate in Intermediate Mine Environmental Control from the Chamber of Mines.



Recently, Wessel was elected as the chairperson of SAIOH Western Cape branch, after serving as vice chairperson and a member for 12 years. Wessel also served as a member of the COVID-19 Risk Assessment Task Force set up by the Department of

Health in early 2020 to perform emergency risk assessments at quarantine sites.

Wessel's passion is improving the lives of people who may not be aware that they have the legal right to a clean, healthy and safe work environment. Wessels is also passionate about inspiring people to make positive changes in their lives and to have a positive outlook on all situations that arise.

2. Tebogo Mpshe

Tebogo has a BSc degree in Human Physiology and Genetics, an Honours Degree in Occupational Hygiene/Health from the University of Pretoria, and is currently registered for a National Diploma in Safety Management. He started his career in occupational hygiene as a consultant for various OH approved inspection authorities (AIAs) in the Northwest and Gauteng provinces, later joining Sasol SA (Pty) Ltd as a safety, health and environment (SHE) principal practitioner.



Having worked with and/or under the leadership of some of the great hygienists in the industry, such as Deon Jansen van Vuuren, Jaco van Rensburg, Tatjana Radojevic-Rogowski and Oscar Rikhotso, he has been exposed to a vast and deep pool of knowledge and experience for which he will be forever grateful. His past experiences have prepared him for the role he now has: Assistant Director - Occupational Hygiene Risk Management, in the Gauteng Department of Health. He plans to use and share his knowledge and experience to change how occupational hygiene is perceived in the healthcare sector.

3. Moses Mokone

Moses Mokone is a SAIOH registered occupational hygienist, and holds a Bachelor of Technology degree in Environmental Health. Currently, he is studying for a Masters degree in Public Health (MPH), in the field of occupational hygiene, at the University of the Witwatersrand. He is employed at the National Institute for Occupational Health (NIOH) as an occupational hygienist/technical manager.



Moses has more than 10 years of work experience in the field of occupational and environmental health, having worked as an occupational hygiene consultant, and occupational hygiene specialist in various sectors, including consultancies (mining and industries), the petrochemical industry, and government. He in the previous term, served as a council member for SAIOH; his portfolio was to manage/coordinate all activities of the SAIOH national branches. His hobbies include reading, singing, listening to music, playing football, and running marathons.

4. Corlia Peens

Corlia Peens is a senior manager in Occupational Health at Sasol in Sasolburg, and at Ekandustria Operations. She is a long-standing member of SAIOH and the PCC. She started her occupational hygiene career in the metal products sector before joining the Petro chemical division.



Nowadays, she mainly provides technical knowledge, guidance and coordinating services with regard to planning, synchronising, sustaining, and improving the broad spectrum of occupational medicine and hygiene, in managing health risk impacts. As the newly elected PCC chair, Corlia is on the PCC executive committee and, consequentially, has a seat on the SAIOH Council. Corlia is also a Director on the SAIOH Management Board.

5. Dr Ivan Niranjana

Dr Ivan Niranjana is a senior lecturer in the Department of Community Health Studies at the Durban University of Technology. He lectures in occupational hygiene/health and safety.

His focus is the four-year professional degree in environmental health, and the supervising Environmental Health Masters students' research.

Ivan is a long-standing member of SAIOH and the PCC, and is a past chairperson of the SAIOH KZN branch.

He has worked at the Department of Employment and Labour, in three provinces (Gauteng, KwaZulu Natal and the Eastern Cape) in the capacity of occupational health and safety inspector. He is a SANAS technical assessor for SANS 17020. As the newly elected PCC vice chair, he is a member of the PCC executive committee and, consequentially, has a seat on the SAIOH Council. Ivan is also a Director on the SAIOH Management Board.



Annual National Conference

The SAIOH Annual Scientific conference will take place in Gauteng this year. Provisional dates are **24 - 28 October 2022**. Please diarise these dates.

MAKE YOUR MARK

The SAIOH Council invites topics and inputs to the technical committee from its members. If you have any suggestions or contributions in this regard, please e-mail them to our President at president@saioh.co.za or to the Chief Administrative Officer at info@saioh.co.za.



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.jvuuren@gmail.com

Corlia Peens: PCC chairperson, e-mail: corlia.peens@sasol.com

We welcome our new PCC chair, Corlia Peens and vice-chair, Ivan Niranjana, and look forward to this new chapter.

The SAIOH PCC ended 2021 on a high note, welcoming 20 new hygienists to the fold. It has been a challenging five plus years for these new registered occupational hygienists (ROHs), and excitingly their hard work paid off. Unfortunately, our technologists did not fare as well, with only 25 out of the 47 assessed, passing their oral assessment (Table 1).

They now have some tough decisions to make, but we look forward to re-assessing them in 2022. Our occupational hygiene assistants (incl. W201) continue to amaze us and delivered an excellent 92% pass rate for 2021. We welcome these new members to SAIOH and look forward to watching their progress in the field of occupational hygiene.

Assessment dates and fees for 2022 (Table 2) have been published on our website: www.saioh.co.za; we encourage you to familiarise yourself with these new details.

Table 1. Summary of SAIOH PCC certification assessment results for 2021 YTD (March to December 2021)

Certification Categories	Written assessment results (Mar - Dec 2021)				Final and oral assessment results (Mar - Dec 2021)			
	Assessed n	Passed n	Failed n	Pass Rate %	Assessed n	Passed n	Failed n	Pass Rate %
OH Assistant	120	113	7	94.2%	120	113	7	94.2%
W201 - Assistant	36	31	5	86.1%	36	31	5	86.1%
OH Technologist	57	31	26	54.4%	47	25	22	53.2%
Occ. Hygienist	41	26	15	63.4%	34	20	14	58.8%
TOTAL	254	201	53	79.1%	237	189	48	79.7%

Table 2. SAIOH PCC assessment and membership fees, 2022

Assessment type	Fee (Rands)*
Application and evaluation fees	472.40
Assessment fees	
OH assistant	676.78
OH technologist	1 292.27
Occupational hygienist	1 292.27
University student	1 149.17
Remark/review of assessment paper	864.13
Annual certification fees	2 254.64
Pro-rata – 6 months	1 127.32
Pro-rata – 2 months	375.79
Non-certified member - annual	1 352.79

Note: Certificates issued during the year to new members (occupational hygiene assistants) are calculated on a pro-rata basis. This will ensure that certificates are only valid for the current year. Re-assessment fees are based on the assessment fees in the table.

Towards the end of 2021, we met to discuss the new website and are happy to report that, although we are running behind schedule, you will soon enjoy the new tailored layout, designed with ease of access in mind.

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Don't just train your employees, train their families



Ehi Iden is the President of OSHAfrica and Occupational Health & Safety Management Consultant in Africa.

Workplace health and safety processes, patterns and scope will continue to evolve along with the new workplace realities.

Trends have made us realise the need to adopt an employee/employee family approach as a decent workplace management system.

When we employ a man or a woman, by extension we have employed their families. This should be given due consideration in our management systems.

CONSEQUENCES OF NEGLECTING THE HOME

Employees' productivity, mental health and well-being are not an exclusive issue that has to do with the workplace, the home and family also account for a huge part of the outcome, whether positive or negative. For example, "I am able to work and deliver comfortably because my home front is okay, but the moment this changes, my work will suffer".

Understandably, in most organisations, employee's annual health assessment programmes only cover the principal (employee) and are never extended to his or her spouse. In some cases these are extended, but even then only a skeletal part of the programme get approved.

The truth is, when an employee's spouse or any of his or her children suffer ill health, that employee suffers along with them, and by extension the employer also suffers.

CASE STUDY

A certain organisation saw it necessary to train every employee on fire safety and response and at the end of the training, they bought extinguishers for all their employees to take home. I thought this was fair enough, but the employees' families were not trained. While the principal now knew how to respond to a fire should it happen in the office or home, his family did not, so their safety was not properly catered for even though there was an extinguisher at home.

Remember, employees spend a higher number of their awake hours at work than in the home.

One day there was a fire outbreak in the residence of one of its employees. Thanks to the organisation, there were fire extinguishers but no one in the house knew how to operate them. The spouse took the children and ran to safety while they watched in tears as everything that they had laboured for went down in flames. Though fire fighters did come to the rescue, not much could be salvaged. It would have ended differently if the employees family had also been trained in fire prevention and response.

CONCLUSION

We need to make workplace management systems more flexible and innovative. We need to consider employees' families as extension of the workplace?



OSHAfrica

HSBS registration now open don't miss out

OSHiversity

Training and Development



The registration for Health and Safety Business School (HSBS), an 8 weeks virtual class by @OsHiversity is open. Register early to secure a space in this class. Only 20 admissions will be allowed.

Class commences on 17th March 2022 and the rush is on!

Click on the link <https://lnkd.in/dEDgaPXr> to register now. You will then proceed to the payment link.. Please note, registration alone is not enough to admit you into the class, completion of payment confirms your admission.

The course box on the registration link lists the courses but you need to scroll to the end to find **HSBS** which is the course you are registering for.

This class will commence on 17th March 2022 at 4.00pm (WAT). Admissions will close on 4/03/2022 and will work on a first come first served basis.

This course promises to be a life changing experience. We are drawing experiences from experts across different countries.

For more information about this course visit <https://www.oshiversity.com/hsbs> or email info@oshiversity.com



OSHAfrica

Training for labour inspectors



OSHAfrica

The pilot class of the OSH and Labour Inspectors Virtual Training programme as initiated by OSHAfrica in partnership with Workplace Health Without Borders (WHWB) commenced on 23rd February 2022.

This is a seven week training programme and ends with an examination.

This pilot class will only allow for 30 admissions while subsequent ones could be expanded to 40 participants. We have been working on this for close to one year now and thanks to collective hard work, we are happy with the outcome.

The project aims to help bridge the existing knowledge and competency gap amongst OSH and Labour Inspectors across Africa. It was for this

reason that OSHAfrica set up a strategic forum known as "African OSH and Labour Inspectors Network". We currently have over 230 Inspectors from about 30 African Countries.

Once we are able to improve the skills of OSH Inspectors, they will offer decent workplace inspections which will improve health and safety in our workplaces.

We may not have solutions to all the challenges within the African workplace health and safety, but we will keep making contributions in line with our mandate.

Once again, we want to thank everyone for their continuous support towards achieving this goal. We believe in Africa.

International Vision Zero Conference

The International Vision Zero Conference held in Nigeria hosted three days of intense activities.

Day 1 which started with the opening ceremony and goodwill messages moved onto plenary sessions, a choreography dance with a huge safety message, mind stimulating technical sessions and networking.

Day 2 was another day jam-packed with technical sessions, the conference closing ceremony and the announcement of the next country to host this event. We are glad to welcome you to Zambia in 2023.

Day 3 was a technical tour to Egbin Power Plant at Ikrodu. We accessed this location through the Lagos Atlantic by ferry from Falomo Ikoyi. We spent 2.5 hours touring the plant which was an eye opening event.

A huge thank you to the management and staff of Egbin Power PLC. We saw great safe processes and were impressed with the employment demography.





A greener fuel alternative

There is a global push towards sustainability and green initiatives, especially in the automotive industry. Every second, two brand new vehicles enter the roads increasing the environmental impact of one of the biggest contributors to CO₂ emissions and air pollution. Between 80 to 90% of vehicles' negative effect on the environment stems from fuel (petrol and diesel), which produces air pollution and greenhouse gases.

Countries around the world are setting green goals that involve decreasing the number of traditional combustion engine vehicles on the road and encouraging investment in new automotive technologies.

In 2021, two-thirds of Norway's new car sales were electric. China is currently the globe's largest market for electric cars due low-cost offers and regulatory incentives, which include driving bans on certain days that apply to combustion engine vehicles in megacities.

For developing countries like South Africa, where only 0.02% of all domestic automotive sales were electric in 2020, there needs to be a combined approach. One which utilises fuel alternatives that are cleaner and greener in combination with electric powered automobiles.

The USA is just one example of a country making use of a combination of alternative fuels. As of 2020, nearly 1000 public compressed natural gas (CNG) fuelling stations have been available in the United States, and 2021 saw an increase in the nation's electric car sales.

CNG is a naturally occurring product in underground pockets in bedrock structures. As a vehicle fuel, natural gas can lessen greenhouse gas emissions over conventional fuels, depending on vehicle type, duty cycle, and engine calibration.

CNG Holding's Head of Group Sales and

Marketing Manager, Wayne Williams, explains that natural gas vehicle (NGVs) conversions will be suitable to fleet vehicles which accumulate many kilometres, such as fleet vehicles.

Besides being good for the environment, CNG is also an economically viable. Towards the end of last year, CNG was about R8 cheaper than diesel and R11 cheaper than petrol. Unlike liquified petroleum gas (LPG),

CNG is not a by-product of crude oil and consequently, is not subject to crude oil-related price adjustments. CNG pricing is also not linked to the exchange rate. Williams says there have only been four price adjustments in the past five years for CNG.

"CNG fuelled vehicles can therefore significantly reduce the cost to businesses in the long run and ensure that they are shielded from future increases", adds Williams.

An additional bonus is that CNG is a safer alternative to LPG. Furthermore, diesel is often stolen which is costly for businesses, whereas CNG cylinders are much harder to move, have limited resale value so are less likely to be stolen.

CNG holdings has successfully converted large-scale fleets for both government and businesses to NGVs in South Africa.

The conversion kit for a vehicle does not require any mechanical changes to the engine, consequently allowing for an easy transfer of the kit to another vehicle. When the kit has been fitted with the appropriate number of gas cylinders onto the vehicle, it is then programmed to optimise the fuel saving, maximise the substitution level and set the kit to accommodate the specific conditions in which the vehicle primarily travels. The lifespan of a kit is about 20 years and can be transferred between vehicles at a nominal cost.

The importance of using authorised gas practitioners

As a consumer, a registered practitioner gives you peace of mind—knowing that they are competent and legally permitted to work safely with gas.

Joining the SAQCC's official database, which displays details of registered and authorised gas practitioners who work with a variety of gasses and gas systems, protects the South African public from unqualified practitioners carrying out unsafe gas work.

Whatever gas product is being worked on; safety must always come first. Kevin Crawford, a Technical Trainer for Refrigerant Gases at the South African Sugar Association, emphasised; "it's not just your life, it's also others' lives around you too." Safety is crucial as carbon monoxide poisoning, faulty gas systems and installations which kill many people each year. Clearly, there are huge risks involved and an incredibly small room for error when lives are at stake. Having an authorised gas practitioner greatly diminishes the chances of incompetence. "Understanding your product and being properly qualified to handle your product" means that you are fully aware of the high risks associated with gas work, according to ACS Gas and Water's Technical Manager, Andre Strauss.

From a gas practitioner's perspective, being registered is also great for business. A multitude of potential customers access SAQCC's online database looking for trustworthy service providers. Strauss says that newcomers in the gas industry need to find a mentor to guide them in acquiring the proper knowledge, skills and accreditation. Gas practitioners who want a future in the industry need to back up their service with credibility. "There

are numerous groups on social media that you can tap into and ask your questions," Strauss says. There is support and a real sense of comradery. "We all need to achieve one goal and make sure that it works for everybody and that everyone is on the same wavelength—working with the same regulations, creating a uniform standard." Becoming and staying registered keeps gas practitioners well informed and enables them to maintain sound practice.

By respecting your own life and those around you, registering and staying authorised is promoting the value of life, not only within the gas industry but in our communities too! Crawford highlighted the additional motivation of protecting the environment: practitioners who are authorised and therefore trained to work with gas do so responsibly, such as not unnecessarily releasing gases into the atmosphere that contribute to the greenhouse gas effect.

Registered gas practitioners uphold the foremost concern in the industry: safety for everyone involved. Promoting respect for life positively affects our community. Additionally, authorised practitioners have a network of support from the associations and fellow professionals as well as knowing their good practice is not harming the environment.



ARE YOU MEETING ALL OCCUPATIONAL AND ENVIRONMENTAL CHALLENGES?

Occutech is an inspection authority for the work and business environment surrounds

approved by the Department of Employment and Labour

- Indoor air quality assessment
- Risk assessors
- Occupational hygiene
- Environmental consultants

Occutech is able to recognise, evaluate and recommend cost-effective controls of occupational and environmental hazards



PREVENTION IS BETTER THAN CURE!

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Businesses who wish to restructure and/or outsource their non-core operations, now have the opportunity of outsourcing the co-ordination of their Occupational, Health and Safety functions to Benrisk Consulting cc, who provides a “3P” Service; a **Personalised, Practical and Professional** service to cost effectively manage these liabilities, within the Occupational Safety, Health and Environment (SHE) Risks and Risk Management fields.

In this process, the onerous financial, legal and moral liabilities of **Occupational Safety, Health, Environmental (SHE) and General Risk Management**, which can impact on the competitiveness and reputation of a business, tend to be overlooked as the production and profitability imperatives receive priority. Businesses frequently lack the in-house expertise to meet these business liabilities.

The Benrisk Consulting services available include:

Occupational Safety, Health and Environmental Services:

- ☐ Construction H&S Agent (SACPCMP Pr.CHSA)
- ☐ Construction Work H&S Specifications & H&S Plans development
- ☐ Fall Prevention Plan development
- ☐ SHE programme design and implementation services
- ☐ SHE and construction inspection and legal compliance audit services
- ☐ SHE management and advice services (SANS 45001)
- ☐ Baseline (risk profiling) and Issue-based risk assessment services
- ☐ Incident investigation services (basic to comprehensive)
- ☐ Emergency procedures plan development

Risk Management Services:

- ☐ Risk management process implementation services
- ☐ Risk assessments (Basic to sophisticated: Baseline/ Issue-based/ HAZOP/ What-it/ FMECA/ FTA)
- ☐ Enterprise-wide Baseline risk assessment workshop facilitation
- ☐ Risk control survey inspection and audit services
- ☐ Management risk assessment and risk profiling workshops

Insurance Underwriting Survey Services:

- ☐ Business Site insurance underwriting survey reports
- ☐ Insurance underwriting loss estimates

Training Courses

- ☐ SHE courses:
 - Excavation Safety – specific for construction work supervisors & excavation inspectors
 - Risk assessment (Baseline & Issue-based)
 - OHSAct; Section 16(2) legal liability & H&S Representative courses
 - Comprehensive incident investigation
 - General Maintenance Safety Induction – specific for artisans & maintenance staff
 - Risk Assessments and Risk Management Training courses (SANS 31000)

Other Services Available:

- ☐ Services customised to suite client needs - just ask!!
- ☐ Regular OHS or Risk Management seminar, conference presenter

OUTSOURCING YOUR NON-CORE OSHE REQUIREMENTS?

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