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An eye for an eye in construction fatalities

Asbestos today

Psychological safety, mental health and well-being in the workplace

Enforcement as alcohol becomes available at roadside convenience stores

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The Safety First Association is a non-profit making, privately supported, public service organisation which aims to prevent accidents by promoting an awareness of accident situations in day-to-day living amongst members of the community.

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Editor's Comment

Stress Awareness Month is recognised every year during April. Although a stress-free life does not exist, it was taken to a new and overwhelming level during the pandemic with many not able to cope with the challenges both in the workplace and at home. Sudden restrictions over our freedom such as social distancing led to feelings of isolation and loneliness. Many who were used to working in a work space surrounded by colleagues, found themselves suddenly at home alone without their work support system. While one can't avoid stress, some stressful situations can be better controlled whereas others are caused by chemical imbalances which we have no control over.

By changing one's approach and attitude to certain situations, some stressors can be avoided. For example, avoid getting anxious about things that you cannot change. A healthy lifestyle is also a stress avoider - eat healthy, exercise regularly and avoid drugs and alcohol which you think may help. They don't! And most important, don't feel embarrassed about getting help!

In his article "The importance of psychological safety, mental health and well-being in the workplace", Han Wenqi raises the concern that while adults are the most in need of mental attention they are the ones most reluctant to seek help. He believes the problem in the workplace could be dealt with and minimised if leaders were properly committed. Resources must be allocated, risk mitigation strategies must be implemented and intervention programmes must be available. Simply put, looking after the mental health in the workplace will impact the success of the business.

Global Asbestos Awareness week was celebrated the beginning of April. As this deadly fibre continues to plague the lives of far too many, initiatives around the awareness of asbestos exposure have been largely successful. OSHAfrica recently hosted a successful webinar on asbestos that ran for almost two hours while delegates listened to experts in the field including Linda Reinstein founder of ADAO (USA), Dr Moyo Dingani (Zimbabwe), Norman Khoza from NEPAD. A decision to establish the "African Asbestos Prevention and Control Network" was made - another strategic project of OSHAfrica. We will report more on the webinar and the network in future issues.

Dr Claire Deacon in her article "Asbestos today" raises the issue that many countries still mine, import and use asbestos, even though its deadly properties are well-known. And as long as asbestos is still around, needless deaths will continue. In South Africa although asbestos is banned, many buildings still have products containing asbestos. Even though legislation is in place covering its management and removal, compliance is not always adequate. She concludes "A basic level of knowledge is required by all parties to ensure adequate compliance".

Fabian Buckley brings to our attention the alarming number of deaths among workers during the erection of the football stadiums in Qatar and the lack of compassion and care from management.

Simamneke Ngxesha discusses back injuries in construction where workers are at a substantial risk of developing musculoskeletal disorders (MSDs) due to the elevated levels of labour-intensive work, and the ergonomic risks commonly encountered in the industry such as back bending and twisting. Although Industry 4.0 technologies are in place, many are not ready to embrace them.

Dr Bill Pomfret gives us some insight into the missing MH370 flight that captured worldwide attention when it disappeared eight years ago.

Enjoy this issue, and like always please send your comments to magazine@african-osh.co.za. We'd love to hear from you.

COVID-19 RISK ASSESSMENT SERVICES



The COVID-19 pandemic, with its now gazetted legislative requirements and the impact of the COVID lockdown has introduced a series of new risks into the business and workplace arena which need pro-active responses to achieve a health and safe workplace environment.

Benrisk Consulting offers a risk assessment service which includes an assessment of the COVID risks a workplace or project site may be exposed to and provides protective measures guidance and protocols to achieve legal compliance.

The first risk assessment available is the workplace issue /job-task based hazard identification risk assessments (eg. HIRAs) related to managing the detection of and the possible exposure risks to the transmission of the COVID virus in the workplace and during the daily job-task work processes.

The second risk assessment level available is the higher-level Baseline Risk Assessment, where both the inner and external context risks related to the impact of the COVID pandemic are workshopped with the Management Team to obtain risk profiles which can be used to focus the organisational vision, mission, continuity and business strategy for recovering from and surviving the negative impact of the COVID pandemic and the lockdown.

Businesses frequently lack the in-house expertise to perform or to meet these business and legally required risk assessment and COVID risk management requirements.

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MAXIMUM PROTECTION AND PERFECT VISION

GO HAND IN HAND

Fog reduces visibility which can lead to accidents in the workplace.

Whether you use safety glasses, goggles, or a face shield, fog is a regular issue for many workers wearing face masks or respirators with their eyewear. This is typically caused when warm moisture (exhaled breath or sweat) reaches the lens. The quick temperature change turns the vapour into small water droplets that stick to the closest available surface. Wearing a mask tends to create a 'chimney effect' by sending exhaled air through the small air gap at the top of the mask at high pressure. This pressure increases the moisture's temperature and channels it towards the cool lens, where it causes fogging. Anti-fog lenses can help!

Fog reduces visibility which can lead to accidents in the workplace. Here are three tips to reduce this natural phenomenon:

1. USE PPE MADE OF ANTI-FOG MATERIAL

Some material such as PET have fog-resistant properties.

Ultra light, PET is ideal for first responders' needs ensuring a safer work environment for every person who may be in physical contact with others.

Product selection: NINKA, DFS2

2. SELECT SAFETY EYEWEAR WITH A FOG-RESISTANT PERMANENT COATING

Some lens technologies have been specifically engineered to be fog-resistant. These coatings are available on various materials and are a real asset when using eyewear with a mask. These coatings improve visibility and performance while keeping a high impact resistance.

3. USE AN ANTI-FOG SPRAY

Anti-fog solutions are a barrier against misting

Anti-fog solutions are available in sprays. Though their actions are not permanent, they are a great barrier against misting.

They are ideal for use on prescription glasses that are often not fog-resistant and leave a small film on the lenses surface. Washing your glasses might remove some of the film left by the spray.

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B-CLEAN: BOLLÉ SAFETY EYEWEAR'S ANTI-FOG SPRAY & CLEANING RANGE

This range of chemically engineered cleaning and anti-fog solutions is perfectly adapted for both prescription and non-prescription lenses, which makes it a great alternative to a permanent coating.

B-CLEAN products are ideal to improve visibility and comfort in glasses or goggles that have no protective coating.



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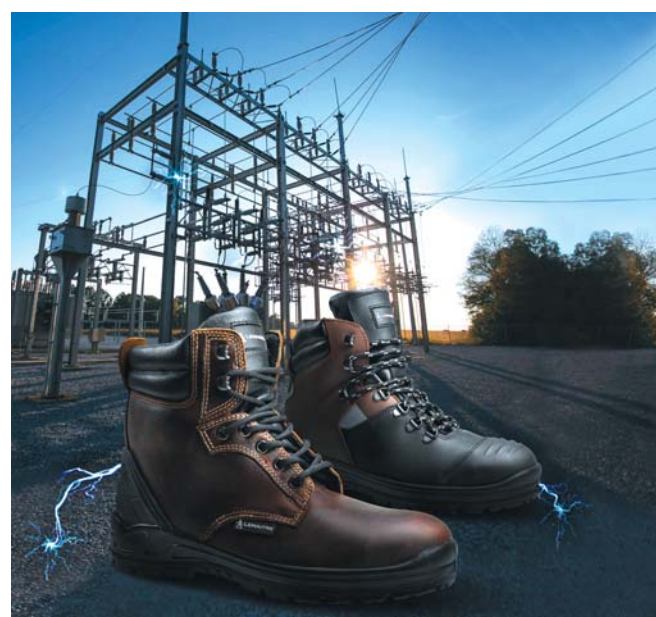
Inyati Lemaitre safety footwear

For 30 years and plus, Lemaitre Safety Footwear continues to be committed to crafting reliable safety footwear that works for you and your workers. We strive towards quality workmanship and work with pride to make a stronger South Africa for those who build it. The Lemaitre shoes are locally manufactured in Port Elizabeth.

Investment into the various industries of South Africa requires a commitment to local procurement which is one of the pillars of Lemaitre Safety Footwear. As part of the BBF Safety Group, we realise the importance of building a stronger and stable economy through local procurement. We support local businesses and SMMEs by sourcing key components from them as well as outsourcing some of our production work. This ensures that we are collaborating with our suppliers, workers and communities to secure a smooth pathway to a greater South Africa with a stronger economy and flourishing communities beyond just our workers.

Our Inyati PU/Rubber range has been specially manufactured to ensure safety in various industries such as the chemical, roadworks, agricultural and mining working environments. After understating the history of unsafeness within the agricultural, chemical, municipal, mining and construction industries, we launched the Inyati range to best fit workers in these environments, to keep their feet protected in any hazardous situation.

The Inyati range is made for protection and comfort offering resistance against chemicals, heat, static shocks and fatigue caused by long work hours allowing the worker to step out with confidence, knowing their feet will be protected in tough working conditions. The 300°C heat-resistant rubber soles will keep the worker safe and grounded for any high-heat situation. It also provides an excellent SRC slip resistance and a tough PU/Rubber sole for optimum durability.



Lemaitre continues to keep workers in mind and safe in unpredictable environments. Every industry requires versatile and durable pairs of shoes that can withstand for long hours and survive the ever changing, uneven, uncertain and hard conditions of their respective industry.



Lemaitre provides hard-working South African feet with the protection they need while wearing any durable footwear from the Inyati range.

The Inyati range are all made with genuine leather uppers and include the Eruption, Spartan, Titanium, Warrior, the updated Dodge and the fresh-out-the-box Urban boot. The range offers an outer sole made from hard wearing PU and an anti-penetration midsole for protection against sharp tools left lying around.

The Inyati range initially focused on the chemical, municipality and agricultural industries, however, through understanding workers' needs we moved into the mining terrains with the updated Dodge and the new Urban boot. These two additions are tough enough for the hardest conditions and can withstand longer hours and yet are comfortable enough to feel lightweight for optimum functionality.

With a particular focus on the Urban boot which is S3 rated, the wearer is provided with extra protection and durability during various weather conditions while being impenetrable to risks. It boasts a PU/Rubber sole which offers resistance to water, oil and heat, and is also cut and abrasion resistant. The Footology Elastopan Climate Control stamp of approval means extra cushioning, lightweight comfort and breathability so that toes can also breathe.

The boots are also ideal for situations where there is a high risk of electric shock. The additional padding on the collar and tongue enhances comfort and protection, making it perfect not just for the mining industry but the electrical and civil engineering industries as well.

The Inyati range offers a variety of features and benefits for all-round protection, comfort and performance for any industry that builds a stronger South Africa for all.

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 in a safe pair of Lemaitre Safety Footwear.

We continue to work behind the scenes on several new ranges for various applications and industries.



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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.



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Enforcement should be top priority as alcohol becomes available at roadside convenience stores

South Africa's problem with alcohol has been starkly highlighted against the backdrop of the country's Covid-19 pandemic response, which included a complete prohibition on the sale of alcohol four times for a collective period of 160 days.

Now that South Africa has almost returned to normal and restrictions on alcohol sales have been lifted, it's back to business for the liquor industry.

With a number of petrol stations in South Africa obtaining a license to sell wine, there is concern that this extended availability will encourage South Africa's drinking problem. However, it must be pointed out that the availability of alcohol for purchase is not in itself problematic. The problem comes in when South Africans purchase and consume alcohol and then get behind the wheel to drive.

To prevent this dangerous situation, it is necessary to deter motorists from drinking and driving which means that law enforcement measures must be visible, and unavoidable.

CONVENIENCE IS NOT THE PROBLEM

As alcohol availability becomes more convenient and extensive, enforcement of road rules needs to become stricter to ensure South African roads remain as safe as possible by deterring poor driving behaviour.

If more petrol stations were to apply for liquor licenses, it would be necessary to consider several factors relating to road safety, before the license can be granted.

Where the location of the garage convenience



By Rhys Evans,
Managing Director of
ALCO-Safe

store is within a suburb, this is analogous to a neighbourhood liquor store and poses no heightened danger to road safety. However allowing alcohol sales at convenience stores on long haul routes could pose a risk for motorists.

LACK OF ENFORCEMENT IS THE PROBLEM

While it's tempting to think that the problem is going to get worse because of alcohol being easily accessible on the road, this does nothing to address the issue. Instead, we should be looking at South Africa's drinking and driving problem as a whole. This means that regardless of where alcohol is being sold, the police have a responsibility to ensure that drunk driving is not permitted.

When granting additional liquor licenses, government needs to increase the rate of roadblocks by monitoring drivers to mitigate the risks that they're creating by allowing more outlets to sell alcohol.

Regulations around licenses for petrol stations should stipulate that a license to sell liquor is

subject to a responsibility to help law enforcement to tackle drunk driving.

Here, garages could be compelled to make a donation. For example, they could be mandated to sponsor a proportionate number of breathalyser kits to their nearest police precinct to show that they're not just there to turn a profit, but rather to show that they are just as concerned with support for anti-drunk-driving initiatives.

ENFORCEMENT THROUGH ROADBLOCKS

Regular roadside testing or roadblocks will need to be increased, which will require more police officers to be trained in breathalyser testing.

This in turn will require more budget to be allocated to law enforcement for training and testing equipment in order to perform breathalyser tests on drivers at roadblocks more frequently and regularly, to decrease drinking and driving.

Penalties for drunk driving range from a fine of up to R120,000 or a maximum of 6 years in prison. Enforcement through roadside testing for alcohol must go hand-in-hand with arrest and stringent prosecution for exceeding the legal alcohol limit to have a proper deterrent effect on drinking and driving.



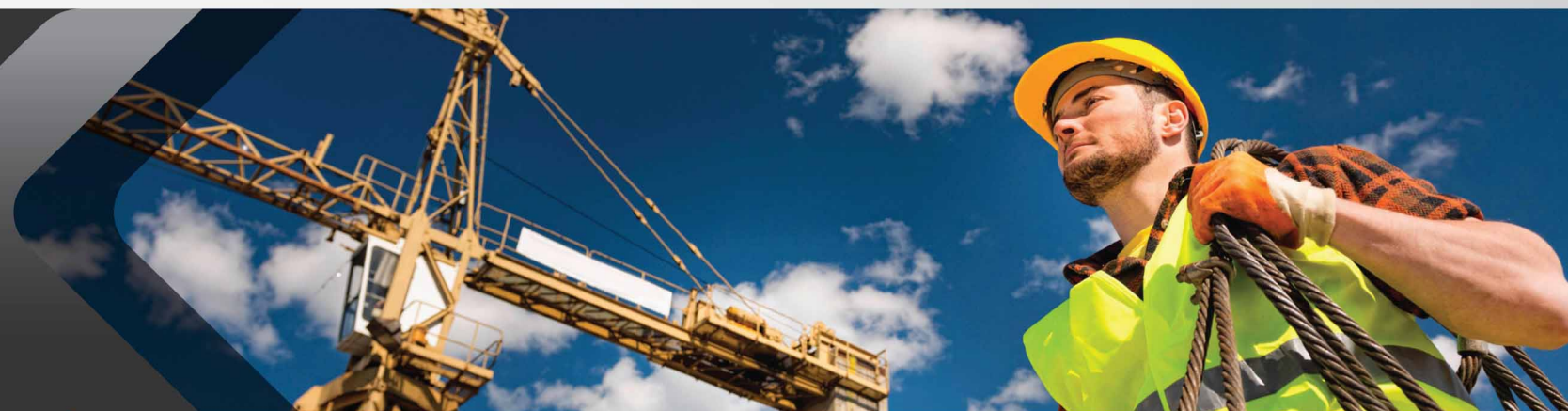


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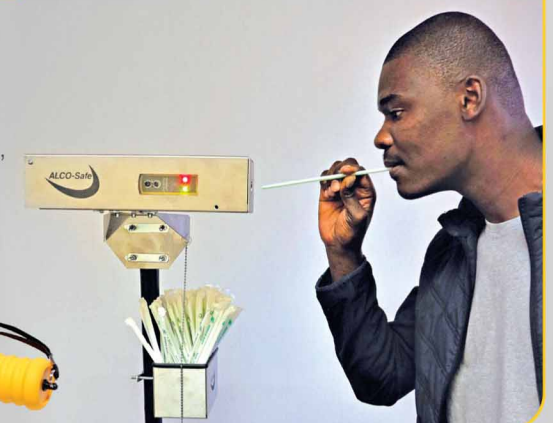
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Incident / accident investigations – a nightmare or a breeze?

CAR incident accident investigation is not always the joy ride that some people make it sound. Before starting it is important to know where to begin and what to do.

First on the report, the investigator must register the incident indicating the date, time, shift (if applicable), name of the company, department and location of the incident.

The origin of the incident must be identified. The investigator must determine if the incident was due to compliance or non compliance.

The next part of the report must indicate where this incident will be grouped: a criminal intent, environmental accident / disaster, health, safety or disciplinary, are just a few examples.

The next step is to determine the impact of the incident: did it cause injury, death, natural, environmental disaster/pollution etc.

After this the investigator must find out or determine how to rate this incident. This will be from a minor non-compliance no reportable incident to a serious / major non-compliance reportable incident. Or perhaps it was anything from a near miss in a minor occurrence rating to a major incident.

THE DETAILS OF THE INCIDENT

The root cause of the incident and what caused it to happen need to be determined.

The next few questions will assist with the investigation if one is necessary:

1. Who reported the incident?
2. Who was affected by the incident?
3. Who responded to the incident?



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.

4. Who was responsible for the incident?
5. Who witnessed the incident?
6. What immediate action was taken?

Once all this information is available, the investigator will be able to determine if the incident is serious enough to report and investigate or what action will follow.

The incident may be minor and solved with a risk assessment adjustment to prevent it from happening again. Or it may be major problem needing a serious intervention and a detailed investigation which needs to be reported to the DEL.

The responsible person here must ensure that all the information recorded is accurate and reliable.

It is important to record what happened the moment after the incident occurred. Was first aid applied? Were fire fighters deployed. Were the power or switches cut off immediately?

The investigator must make sure all the details are available as and when the investigation starts. And according to the OSH Act, the investigation must be concluded within 7 days.

If it is a criminal case, it will be handed over to the SAPS and treated as pending until the conclusion of the SAPS investigation.

Once concluded, the committee will determine whether disciplinary action needs to be taken against the employee responsible, unless of course he has been arrested etc.

The investigation will then determine what actions need to be taken and put in place to prevent this type of incident occurring again.

An incident must never be covered up or ignored. Prevention now will save lives in the future.



Contact: Herman 076 471 4458 or 031764 1515
Alan at 083 326 0894 or 031 767 4891

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An eye for an eye in construction fatalities

There was a King of Babylon named Hammurabi who ruled more than 4000 years ago (1792-1750 BC) and established The Code of Hammurabi. He established rules some of which are still being used in society today. An example of one of his codes was the following:

229. If a builder built a house for a man and did not make its construction firm, and the house which he had built collapsed and caused the death of the owner of the house, then that builder was put to death.

That was how he managed safety during his rule which I know was extreme, but it worked as a huge deterrent.

Another example was if an employee lost a limb, the direct supervisor would lose his limb as recompense.

It was an eye for an eye, but in the working environment. Fast forward to our current times and imagine how many supervisors would be walking around with one less hand or eye today like a pirate.

I was thinking about this as I learned about him in some literature I read a few years ago. Last week we discussed with a few senior HSE professionals the alarming number of deaths of migrant workers during the erection of the football stadiums in Qatar since 2010 and I thought of the many dead supervisors for his period in history.

People marvel at the great designs and monumental structures ready to accommodate the supporters, many unbeknownst to them the numbers of lives lost to build them.

Many will never hear about the numbers, or some wouldn't even bat an eyelid, but we have heard and read of the horrific treatment of employees, poor safety standards, and no concern for human life during the Qatar world cup stadiums and infrastructure projects built to accommodate the influx of people who will be flocking to Qatar to watch these games.

So, if I had to ask you how many migrants had died since 2010, I am sure many would possibly guess less than 100 employees. Some would be so crazy and bold enough to go as high as 1000 taking into consideration that it is the 21st century and safety is of a much higher standard compared to 4000 years ago.

But, the actual figures are far worse than the 1000 mark. In fact, it's 6 times higher sitting at an astounding 6500 plus migrant workers from India, Pakistan, Nepal, Bangladesh, and Sri Lanka who have died in Qatar since it won the right to host the World Cup 10 years ago.

This means an average of 12 migrant workers have died each week since 2010.



Fabian Buckley
CEO HSECP

WHAT HAS LED TO SUCH HUGE FATAL CASES?

An obvious list which always seems to rear its ugly head are the following: Poor safety standards, poor supervision, lack of training, poor enforcement of safety rules and regulations, as well as a poor safety culture.

The question I ask is when is it enough before someone says "we are killing too many workers".

When will someone look at such figures and say "we need to stop, let's regroup, and restart as something is wrong".

Fifa senior executives need to consider these figures and ask if all these deaths are worth a soccer tournament every four years?

The saddest truth is, I doubt they will even mention these fatal incidents during any of the proceedings and even during the opening. I doubt anyone would even boycott the world cup after finding out this information.

The government of Qatar and Fifa must acknowledge that they have blood on their hands and tears from the many families who have lost their loved ones over a sport.

When will another Hammurabi rise again amongst our generations of leaders? I am not saying they should lose their limbs or lives, rather those supervisors and managers who don't care about their employees, especially those who are breadwinners should lose their jobs.

Arise, true safety leaders, arise! Your people need you to arise.



Performing a baseline risk assessment related to the client’s project risks list

As a Pr.CHSA I see many intended Project Baseline Risk Assessments, but most are found to be glorified HIRAs, that do not address the intended project risks.

If this is a list of project risks as seen by a client, how can an HIRA format risk assessment that OHS practitioners usually use, address these risks?

The first issue is that on reading the OHSAct’s CR 9(1) & MHSAct 11(1) both their risk assessment statements are people risk focused on a risks and hazards identification basis. So how can a people focused risk assessment format be used for a total project risks assessment purpose, considering the list of risks cited in Figure 1?

Furthermore, where does this risks list cater for construction work project risks?

Essentially it does cater for the Concept and Feasibility risks from a financial point of view, but nothing in relation to the Design, Construction & Work Execution phases risks.



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At times some of the risks listed will apply to aspects of the construction work, but some additional construction work risks need to be added to the above list to provide for identifying and assessing the normally occurring construction work related risks.

Figure 2 shows three suggested addition risk categories that need to be added to list of risks facilitating the assessment of the construction work risks. Now, a Baseline Risk Assessment (BRA) format can be used to assess the project’s construction work related processes and their risks, which should be identified and risk assessed to cover the following (not exhaustive) project construction work aspects:

- *Project concept and feasibility risks* - business risks, planning permissions
- *Project design risks* - designs compliant and constructable?

Figure 1. List of risks

KEY	RISK CATEGORY
FR	FINANCING RISK - This includes risks related to funding, loans, guarantees and budgets as well as any other risks relating to the financing objective
SEDR	SOCIO ECONOMIC DEVELOPMENT RISK - This includes risks relating to black economic empowerment, procurement policy and developing human capital (not own staff)
BSR	BUSINESS SUSTAINABILITY RISK - This includes risks relating to the political environment, source of supply, reputation, strategic objectives and any other risks as it relates to the core business objective, binding constraints and leadership interventions.
APR	ASSET PRESERVATION RISK - This includes risks relating to operation, use, protection and maintenance of the client’s various current, non-current, physical, intangible, operating, non-operating, movable and immovable assets and other risks as it relates to the core business objective
GR	GOVERNANCE RISK - This includes risks relating to the company’s corporate management, administrative management, legal environment and other risks relating to the corporate management objective.
ITF	INFORMATION TECHNOLOGY RISK - This includes risks relating to internal and external information technology processes such as SAP, Data-bases management, Clouds IT hardware and equipment systems, cyber risks and other related IT networks and telecommunication systems etc
HRR	HUMAN RESOURCE RISK - This includes risks relating to all aspects of human resources and the company’s employment thereof.
ER	ENVIRONMENTAL RISK - This includes risks relating to the company’s environmental policy, generic environmental management plan and other environmental and sustainability objectives
RR	REPUTATION RISK - This includes risks that would affect the company’s reputation, credibility among investors and other stakeholders and will question the company’s ability to deliver on mandate or objectives.
OR	OPERATIONAL RISK - This includes risks relating to the health, safety and reliable operation, use and ongoing maintenance of the company or project’s machinery, equipment and facilities and other risks as it relates to the core business and company’s operational objectives.

Figure 2: Additional risk categories

CFR	CONCEPT & FEASIBILITY RISKS - Project idea of concept must be possible and realistic to achieve and also fulfil the corporate vision (objectives), values (risk level, governance) requirements (quality, continuous improvement) and business case (cost benefit, risk analysis, ROI).
DCR	DESIGN RELATED CONSTRUCTION RISKS - Safety, health and environmental risks introduced by the construction work required to achieve the design requirements. Apply a Protection through Design (PtD) approach
CWR	CONSTRUCTION WORK RISK - Safety, Health and environmental risks anticipated to occur during the construction work phase of the project. The risks associated with performing the construction work, highlighted by the client, but also the risk that contractors identify during their construction work. Contractor’s H&S Plan and ongoing contractor risk assessments

- *Project tendering risks* – poor tendering and OHS Specification documentation
- *Project contractor selection risks* – demos and has capacity, resources and OHS.
- *Contractor assessments & approval risks* – poor Contractor OHS plans and file
- *Contractor site establishment and procurement risks* - equipment, materials
- *Contractor’s works health, safety, ergonomics and environmental risks*
- *Contractor project work set-out risks* – wrong alignments, elevations
- *Contractor communications and compliance* - information and permissions
- *Contractor earthworks/excavation risks* – if no pre-demolition is required.
- *Contractor pavement and/or foundations risks* - wrong materials specs used
- *Contractor construction work risks* – quality, traffic, height work, etc
- *Construction work finishes and services risks* – appearance, durability, fire
- *Contractor completion risks* – delays, punch list, rework, handover, etc
- *Project handover* - ongoing client operational and maintenance risks

The challenge now is, how should one consider performing a Baseline Risk Assessment to address the described BRA’s definition’s intensions?

PESTEL APPROACH

Some may consider using the “PESTEL” approach to facilitate their identification of risks where the acronym means considering the Political, Economic, Social, Technology, Environment and Legal related risks, but these terms are difficult to interpret and apply at a project’s level.

My personal and suggested approach is to consider all the main resources that are required to successfully operate the desired business or to successfully execute the desired project.

Some 7 critical resources are usually identified, but each of these 7 resources are subject to and so are also “AT RISK”.

That provides one with a critical resources framework to perform and brainstorm the actual and potential business and/or project risks.

The 7 critical resources acronym is “PEPMELF” meaning People, Equipment, Processes - procedures - practices - policies, Materials, Environment (macro/micro), Legal – Liability, and Financial. These 7 critical resources terms are easy and user-friendly framework elements to apply for facilitating the identification of risks for any business, project or other Baseline Risk Assessment process.

In conclusion, the risk identification acronym “PEPMELF” can be applied to each of the project work related construction work processes, like those previously listed, to provide a site-specific and comprehensive BRA for the construction work project or any business being risk assessed.

Unfortunately, no prescribed Baseline Risk Assessment (BRA) definition is described in our Health & Safety legislation, ISO/SANS Risk Management standards nor on Google, so I have shared my BRA definition, as a possible insight guide:

A Baseline Risk Assessment (BRA) means a comprehensive high-level risk assessment performed to identify, analyse & evaluate a wide range of & the current status of the risks impacting on & associated with the enterprise, company, business, project or process being assessed, in order to establish a Risk Profile, & Then on evaluation, permit implementing suitable risk management measures to mitigate the assessed risks to an acceptable or tolerable risk appetite level.

Leighton Bennett, Benrisk Consulting



Benrisk Consulting cc

The importance of psychological safety, mental health and well-being in the workplace

Mental health problems among adults in the workplace are of concern. Adults are the most in need of mental health attention but are reluctant to seek help. A better understanding of the help that this sector of the population needs is important to overcome this gap.

There is inadequate attention and commitment from leaders to plan, allocate resources and implement risk mitigation strategies and intervention programmes in the workplace, to engage and care for the long-term psychological safety, mental health and well-being of their employees.

MENTAL HEALTH AND WELL-BEING IN THE WORKPLACE

Mental health and well-being of employees is a crucial determinant in their overall health and poor mental health and stressors at the workplace can be a contributory factor to a range of physical illnesses like hypertension, diabetes and cardiovascular conditions, amongst others.

Poor mental health can also lead to burn-out amongst employees, seriously affecting their ability to contribute meaningfully in both their personal and professional lives.

Mental health issues directly impact employers and organisations through increased absenteeism, negative impact on productivity and profits, as well as an increase in costs to deal with the issue. In addition employee morale is adversely impacted.

Work-related stress is a major cause of occupational ill health, poor productivity and human error. This means increased sickness absence, high staff turnover and poor performance in the organisation and a possible increase in accidents due to human error.

Work-related stress could also manifest as heart disease, back pain, headaches, gastrointestinal disturbances or various minor illnesses; as well as psychological effects such as anxiety and depression, loss of concentration and poor decision making.

Stress is the adverse reaction people have to excessive pressures or other types of demands placed upon them. There is a clear distinction between pressure which can be a motivating factor, and stress which can occur when this pressure becomes excessive. Some occupations are at more risk of mental health problems than others. And occupations with higher stress levels require careful assessment during the mental health risk assessment process. This should be a multi-disciplinary process conducted by the head of



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department, line manager, health and safety manager, HR manager and the psychologist.

WORK STRESS SCALE MEASURING TOOL

A tool to evaluate the level of work-related stress and the measures to be taken have been extensively used. This tool which is known as the Work Stress Scale (WSS) allows individuals to assess for themselves the degree of stress faced in the following broad domains:

- relationship problems with superiors;
- bureaucratic constraints;
- work family conflict;
- relationship problems with colleagues;
- performance pressure; and
- paternalistic superiors.

RELATIONSHIP ISSUES WITH SUPERIORS

The most common reason for office stress is dealing with difficult boss. This may be easy to solve by improving communication skills. Having a sincere conversation may make a difference. Sometimes the boss may be paternalistic where subordinates are being coerced into executing tasks not in accordance with legal requirements and against their values and beliefs.

Tasks that are not part of an employee's role or skill set can also cause stress. Companies often make employees multitask, but this could affect their ability to deliver. Communicating with superiors about this matter at the earliest is the best way to resolve this.

One area that presents an opportunity for conflict for the personality-disordered individual concerns the hierarchical nature of organisation.

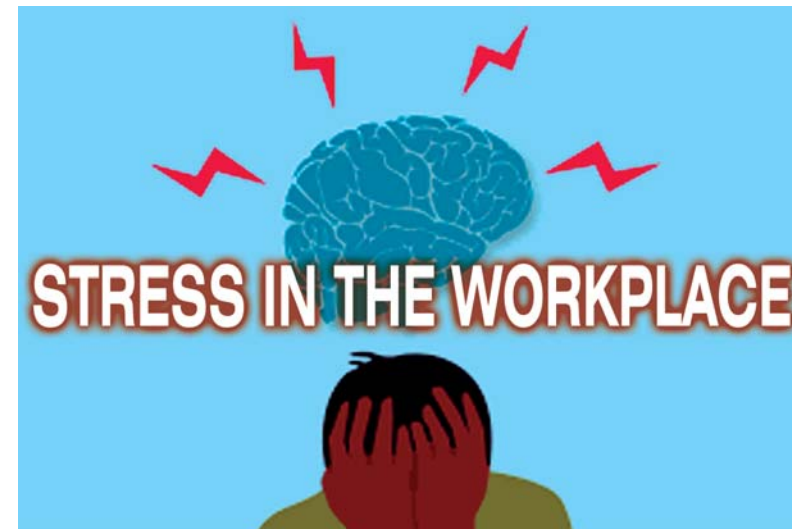
RELATIONSHIP PROBLEMS WITH COLLEAGUES

Another reason could be difficult colleagues or co-workers. Dealing with a difficult co-worker can be a bit more difficult as their performance is often pitted against oneself. This again has to be resolved by an amicable discussion, concluded by a mutual agreement.

Try explain to the colleague that working as a team can have far more benefits than indulging in rivalry. But if things are getting out of hand, it should be brought to the notice of the superior concerned.

WORK FAMILY CONFLICT

Families are struggling to cope with an increasingly complex world. Individuals are struggling to find the right balance between work



and family responsibility. Domestic issues can affect work where balancing work and home by allotting adequate time for both can help reduce stress.

Parents with young children should be given more priority with working hours, and unforeseeable situations such as the sudden closure of childcare facilities, or rejection of entry due to detected fever of child.

HIGH DEMAND FOR PERFORMANCE

Unrealistic expectations, especially in the time of corporate reorganisations which sometimes puts unhealthy and unreasonable pressures on the employee, can be a tremendous source of stress and suffering.

Increased workload, extremely long work hours and intense pressure to perform at peak levels all the time for the same pay, can actually leave an employee physically and emotionally drained. Excessive travel and too much time away from family also contribute to an employee's stressors.

PERFORMANCE PRESSURE

Organised workplaces are going through metamorphic changes under intense economic transformations and consequent pressures. Reshufflings, buy-overs, mergers and acquisitions, rightsizing and other changes have become major stressors for employees, as companies try to survive in the competitive environment.

Strategy of reformatations have indirectly put a demand on everyone's performance, from top down especially the tiers from managing director to function manager.

BUREAUCRATIC CONSTRAINTS

Organisational size and bureaucratic systems have certain rules and regulations, which are inherent parts of the system to serve as checks and balancing forces. However, they are likely to serve as constraints and cause stress for managers.

Other job stressors include uncomfortable working conditions, job overload, lack of control over the work process and sheer monotony.

Decreasing work role ambiguity would reduce job strain and work-related psychological disorders including anxiety disorders.

PATERNALISTIC SUPERIORS

The superior/supervisor in authority of restricting the freedom and responsibilities of those subordinate to or otherwise dependent on them in their supposed interest, are commonly found in the workplace.

Cognitive dissonance is always evolving from the subordinate's side where they are being coerced or forced to execute tasks against their values, beliefs and organisation standards. The most common affected occupations are human resource manager, health and safety manager.

PSYCHOSOCIAL RISK

Psychosocial risks arise from poor work design, organisation and management, as well as a poor social context of work, and they may result in negative psychological, physical and social outcomes such as work-related stress, burnout or depression.

Some examples of working conditions leading to psychosocial risks are:

- Excessive workloads
- Conflicting demands and lack of role clarity
- Lack of involvement in making decisions that affect the worker and lack of influence over the way the job is done
- Poorly managed organisational change, job insecurity
- Ineffective communication, lack of support from management or colleagues
- Psychological harassment
- Sexual harassment
- Workplace violence
- Workplace bully
- Low autonomy
- Low job satisfaction.

When considering the job demands, it is important not to confuse psychosocial risks such as excessive workload with conditions where, although stimulating and sometimes challenging, there is a supportive work environment in which workers are well trained and motivated to perform to the best of their ability.

A good psychosocial environment enhances good performance and personal development, as well as workers' mental and physical well-being.

Workers experience stress when the demands of

their job are excessive and greater than their capacity to cope with them. In addition to mental health problems, workers suffering from prolonged stress can go on to develop serious physical health problems such as cardiovascular disease or musculoskeletal problems.

For the organisation, the negative effects include poor overall business performance, increased absenteeism and presenteeism (workers turning up for work when sick and unable to function effectively) and increased accident and injury rates. Absences tend to be longer than those arising from other causes and work-related stress may contribute to increased rates of early retirement.

Estimates of the cost to businesses and society are significant and run into billions of euros at a national level.

ADDRESSING MENTAL WELLNESS AT THE WORKPLACE

Companies would do well to address mental wellness at the workplace through a clearly articulated workplace policy on mental health. A prototype of such a policy encompassing the vision, values and principles and the objectives is needed.

The development and implementation of a workplace mental health policy and programme will benefit the health of employees, increase the productivity of the company and contribute to the well-being of the community at large.

It has been found that psychosocial intervention courses along with stress management training and health promotion interventions have a positive impact on mental well-being.

A healthy population is an economically productive population, and it is in the benefit of companies to safeguard public health.

Given the heavy contributions of the private sector to the economy, employee wellness

programmes are not only a strategic priority for the workforce but also an economic imperative for corporations.

MAKING A WORKPLACE PSYCHOLOGICALLY SAFE, AND MENTALLY HEALTHY

Organisations should take this chance to revisit and assess pitfalls in work functions. Form a steering committee represented by various departments, discuss and validate a psychological safety, mental health and well-being programme. Guide the entire mid-management and operation level supervisors to transform onto a psychological safe, mental healthy workplace to enable a sustainable business empire through staying competitive in the market by embracing human assets as one of the core values.

With the right approach, psychosocial risks and work-related stress can be prevented and successfully managed, regardless of business size or type. They can be tackled in the same logical and systematic way as other workplace safety and health risks.

Managing stress is not just a moral obligation and a good investment for employers, it is a legal imperative set out in the workplace regulations.

Organisations must embrace and take proactive initiatives to recognise the changing demands and increasing pressures in the workplace and encourage employers to implement additional, voluntary measures to promote mental well-being.

Although employers have a legal responsibility to ensure that workplace risks are properly assessed and controlled, it is essential that workers are also involved. Workers and their representatives have the best understanding of the problems that can occur in their workplace. Involving them will ensure that the measures put in place are both appropriate and effective.

The latent cascading effects between a national culture, organisation culture, and the organisation workplace safety and health culture

National culture

National cultural tendencies for uncertainty avoidance (UA) are negatively associated with organisation and safety culture. This indicates that employee safety-related attitudes and practices may be influenced by national culture, and thus factors outside the direct control of organisational management.

Organisational culture to be influenced top-down by a range of societal factors, for example national culture, language, training, progression systems, access to economic resources, and political environment.

The relationship between organisational culture and the five dimensions of national culture outlined

by Geert Hofstede's Cultural dimensions: Power distance, collectivism, uncertainty avoidance (UA), masculinity, and long-term orientation. Within this model, a country's citizens are conceptualised as developing a shared set of core values and practices (e.g., through education, political and economic systems, religion, media) that influence and normalise how people behave and think.

These are theorised to transfer into organisational life (e.g., through behavioural habits, norms on contradicting those in authority, rewarding individual or collective performance), and to implicitly shape organisational culture and behaviour.

On top of the physical safety and health implementations being emphasised in the work-

place, the psychological safety, mental health and wellbeing, potential cognitive dissonances and psychosocial risks could be mitigated if the national safety and health governing agency put a strong stance and support with proactive enforcement regime for a sustainable national initiative they legislated.

Another related factor that may shape cultural values is the national legislation on safety. The standards for safety vary across countries depending on public policy, which is reflected in the countries' societal norms.

Understanding how this influences the conceptualisation of effective safety leadership behaviours is another area of future research.

Cross cultural dimensions of the organisation

Hofstede Cross Cultural model was derived by Geert Hofstede, a renowned psychologist, cross-cultural management guru since 1980s. His contributions have been adopted by numerous organisations and public offices, while relevancy is applicable till date. Multiple recognition was conferred for his research efforts on cultural differences, cognitive influences on employees of all work environment.

The Hofstede Six Cultural Dimension has initiated future research with wide parameter evolving towards different eras within national and organisation culture aspect. Inter-link concepts which required researchers to dive deep to exploring correlations have been a prolong agenda within the past few decades. Remaining current and applicable is a great remarkable effort which should be embraced to enhance all arena of cultural paradigm.

The power distance dimension which looks at country and workplace inequality, rankings, hierarchical aspects.

Individualism and collectivism dimension greatly assist human resource practitioners to enhance their assessment acumens when recruiting and selecting hi-potentials to minimise unnecessary attrition rates from the start.

Motivating factors within the masculinity dimension complement the feminine aspect found in an organisation through its corporate social responsibility approaches, work-life balance scheme to drive continuous success.

Abiding by the legal requirements impact employee's and citizen's risk appetite, decision-making and conceptual thinking when risk-taking perceptions, investment, and gambling is concerned through an education system with agenda embedded since young.

Education gives people the wisdom and analytical skills to think out of the box and look further with regards to the long-term orientation culture. Lifestyle is a paradigm among all dimensions, while categorised as indulgence but synergize with all dimensions.

Workplace safety and health culture

The workplace safety and health culture is a subculture of the organisational culture and therefore is being constrained and influenced by it.

The workplace safety and health culture may be defined as the vision, mission, values and beliefs that all stakeholders of the organisation perceived about risk, accidents, injuries, and occupational health.

An organisational culture is also the personality of the organisation and is the melding of one or more dominant employee traits, cognition, and emotional patterns with external and internal influencers that encourage and empower positive workplace behaviour and decision-making.

Organisational personality is a vital component of the organisation's culture

INFORMATION RESOURCES

Organisations looking for general guidance on the topic of psychosocial risks, can visit:

- Ministry of Manpower (MOM), Singapore National Employers Federation (SNEF) and National Trades Union Congress (NTUC) - Tripartite advisory on mental well-being at workplaces
- World Health Organization - The health impact of psychosocial hazards at work
- Canadian Centre for Occupational Safety and Health - Psychosocial risk factors in the workplace
- European Agency for Safety and Health at Work - Psychosocial risks in Europe: Prevalence and strategies for prevention
- UK's National Institute for Health and Care Excellence - Healthy workplaces quality standard
- Promoting positive mental health in the workplace - The UK Advisory, Conciliation and Arbitration Service (ACAS)
- International Standard Organization 45002-2 - 2019 General guidelines for the application of ISO 45001 - Part 2 Risks and opportunities
- International Standard Organization 45003:2020 Occupational health and safety management - Psychological health and safety at work - Managing psychosocial risks - guidelines
- Online resources from USA National Institute for Occupational Safety and Health
- Online resources from USA Department of Labour Occupational Safety and Health Administration

Possible solutions of the MH370 mystery

It is now the 8th anniversary of the disappearance of flight MH370 which happened on 8th March 2014. In this article I will unravel this mystery in more detail.

The disappearance of the Malaysian Airlines Boeing 777 on a routine flight from Kuala Lumpur to Beijing carrying 239 passengers and crew has become one of the greatest mysteries of aviation history-especially as no wreckage has been found after several years.

There is only indirect evidence of its flight path for the latter part of its flight after contact was lost, of course there has been speculation as to the causes, so I thought I would add my own theory to the mix.

Initially I will discuss a brief introduction to the relevant features of radar, communications between ground and plane and the role of the ACARS system as they are critical to understand the sequence of events.

However, careful analysis of available data does provide several indicators of what caused the aircraft to disappear. The fact of communications being switched off at a critical time indicates deliberate action by someone flying the plane.

There is also a small possibility of a sudden fire or explosion currently, but this does not seem to satisfactorily explain later events.

UNUSUAL FLIGHT PATH

The path of the aircraft was tracked by primary radar as making several turns which could be interpreted as attempts to avoid detection by radar.



Due to negligence by various authorities (mainly the Malaysian aviation authorities and air force, also the Vietnamese air traffic control) no prompt action was taken to investigate the unusual path of the aircraft. It would have been possible to send up fighter aircraft to intercept the airliner. This would not have prevented the disaster, but a knowledge of its path would have made it much easier to track it until it crashed, and the wreckage would have been recovered promptly, especially if the black boxes were recovered.

A brief description of the analysis of the Inmarsat data is given at this point, so that its implications are understood. From this data, it appears clear that the aircraft flew steadily for several hours in a straight line which would be consistent with flying with the automatic pilot even if the flight crew were dead or unresponsive. An approximate time of the crash could be estimated, but even then, there is



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uncertainty about the point of impact as the aircraft could have glided for a long distance after fuel exhaustion.

Another point which has not been highlighted much is that the satellite communication system was working all the time, but there was no response to two calls made by the Malaysian authorities to the aircraft after it had disappeared from the radar.

PILOT ERROR VS DELIBERATE ACTION

Based on the evidence available today, it can be concluded that the disappearance of MH 370 was most likely due to deliberate action of somebody in the cockpit, which would almost certainly be the pilot or the co-pilot or both. Hijacking by other persons seems to be ruled out as thorough investigations have been carried out on all the passengers. There is indirect evidence which seems to indicate the pilot was responsible, though it is difficult to understand the motives behind such an act.

Another possible scenario involves a sudden intensive fire in the cockpit which incapacitated the pilots and destroyed the communication systems. There has been one instance of a sudden fire in a Boeing 777 cockpit in 2011 which caused destruction of the aircraft. This scenario may explain some of the evidence, but it is strange that there was no distress call made. And it seems strange that a severe fire did not result in the destruction of the aircraft at an earlier stage.

AVOIDANCE OF A REPEAT EVENT

It is possible that the wreckage may never be found. And even if it is found, the exact sequence of events may never be clear. But there are some pointers to what can be done to ensure that such accidents never occur again. These are:

1. Managerial: clearly there was a long delay in realising something was wrong and taking corrective action-for which various agencies were responsible. It is quite likely that such an occurrence in other parts of the world would have been dealt with more promptly.
2. Real-time monitoring of a flight always is possible with the satellite communication systems available today. This has not been implemented yet due to the cost factor, but costs of data transmission through satellite have dropped considerably in recent years.
3. If this is implemented then the need to locate the "black boxes" is less as the data would be transmitted in real time and could be recovered immediately.

4. There have been several incidents where airliners have crashed with heavy casualties due to some deliberate action by the pilot or co-pilot (leaving aside hijackers). This aspect needs to be studied more carefully.

COULD THE PLANE FINALLY BE FOUND?

Richard Godfrey a British aeronautical engineer who has investigated the disaster extensively, thinks he has calculated where MH370 crashed.

He believes the Boeing 777 crashed into the Indian Ocean 2,000km west of Perth, Western Australia and hopes "... to give closure to the next of kin and answers to the flying public and the aviation industry on exactly what happened with MH370 and how we prevent that in the future".

Godfrey combined different data sets that were previously kept in separate domains, to align to this new location in the Southern Indian Ocean. He explains that it was a "complicated exercise", but previously there was simply a lack of lateral thinking, across multiple disciplines, to bring this together.

"No one had the idea before to combine Inmarsat satellite data, with Boeing performance data, with Oceanographic floating debris drift data, with WSPR net data," he said. Work with his team has been progressing for over a year now, and "we've done quite a lot of testing of this new idea, and we've come to the confidence to apply it to MH370". Having "filtered out the needle in the haystack". It looks like the riddle of flight MH370 has been solved, the exact point determined by data calculations is around 33 degrees south and 95 degrees east in the Indian Ocean.

There have been two extensive searches of the Indian Ocean for MH370, which have yielded inconclusive results.

The searches have cost hundreds of millions of dollars, and whilst there is demand from family members to find their loved ones, the costs associated are enormous.

"It's really just been an ongoing nightmare. There is never an end. We just seem to be going in circles and hitting one brick wall after another.

"We've been hoping for the longest time for something new - a new breakthrough, something new that would warrant the search starting again and at least there being a more precise location for the search being conducted at and to increase the odds of finding the plane"

Ms Nathan, a criminal defence lawyer who lives in Kuala Lumpur, wants the new data to be tested by aviation experts who can understand the science and physics behind the location and to test the theory is credible. "We welcome all new findings, especially as in this case it is based on tangible evidence. It's things that can be calculated. It's not based on just Google images or loose things that can't be backed up."

MY CONCLUSIONS

At 4,000 metres deep I believe that the wreckage could be behind a cliff or in a canyon on the ocean floor, and you need maybe three or four passes before you start to pick things up. More than thirty pieces of aircraft debris have been washed up on the beaches of the African coast and islands in the Indian Ocean.

I've done a lot of work on information systems and handling lots of data and that's important with this analysis. There is a huge amount of data to get through and filter out the needle in the haystack.

I expect there will be a new search, saying, but the funding of the new search may be the issue. However it is important to consider that we now have additional accurate data as to where the crash site might be, that appears to be entirely credible and consistent with other theories.

The timing and launch of another search will depend on the availability of specially designed equipment and the sea state.

Realistically we want to be in the Southern Ocean in the southern summer. So the search may still take quite a few months, firstly because the timing needs to be correct and secondly because it is never possible to get the assets together and on site in a short period of time.

I think either the Chinese will take responsibility and look for their victims. Or private companies might search, sponsored by insurance companies.

Any decision to resume the search for the aircraft would be a matter for the Malaysian government, as the state of registry of the aircraft.

It is in the interests of global aviation safety that this plane is found so we can prevent something like this happening in the future. This goes beyond our need for our closure.





Asbestos today

One would think that technology, scientific evidence and the amount of information that is available would have led to the banning of the use of or working with carcinogens. Not so. One such carcinogen, asbestos, is well known. Even though it is a ‘natural’ fibre, it doesn’t mean it is safe to use. Many countries such as the United States of America (USA), India, Russia, Zimbabwe, among others still mine, import and use asbestos as insulation and in a range of products used daily.

The World Health Organization (WHO) (2018) stated that approximately 125 million people worldwide are exposed to asbestos, and that all five forms of asbestos are carcinogenic.

According to the Asbestos Disease Awareness Organization (ADAO) in the USA the Environmental Protection Agency (EPA) is only considering the management of one of the five types of fibres, and considering there is no safe level of exposure needless deaths will continue (ADAO, 2022).

DEADLY EFFECTS OF ASBESTOS EXPOSURE

Asbestos exposure causes cancer of the lung, larynx and ovaries, and mesothelioma, which is a cancer of the pleural linings of the lungs and peritoneum.

Asbestosis is a further disease where the lining of the lungs thicken, form plaques and build up effusions or liquid.

None of these are curable. Treatment is difficult and while there are survivors, there are way too many who do not survive.

One only needs exposure to one whole fibre to



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contract any of the diseases, and the disease can take many years to develop. If one considers the latency period, how does one ever prove where the exposure could have been, and whether work related?

EMPLOYER’S RESPONSIBILITIES

The hierarchy of control requires employers to limit exposure and risk (WorkSafe Victoria, 2020), and is the primary method followed that legislation and guidelines are considered. However, one cannot implement controls if the extent of the issue is not identified. The requirements need to be quantified and carefully considered before actions are taken using risk assessments to protect those who are likely to be exposed.

South Africa instituted a ban on the use of and mining effective from 2000. Many of our schools, hospitals, state buildings constructed pre 2000 have a range of asbestos containing products.

There is South African legislation to cover the management of asbestos. The Asbestos Abatement Regulations (AARs) 2020 (Republic of South Africa (RSA), 2020) were the update to the 2000 Regulations, and classify the management based on volume and how the management of existing asbestos containing structures need to be managed.

The primary requirement is the identification and creation of an inventory of existing asbestos containing materials.

Following the inventory an employer is expected to be able to ensure the structures are safe and will not expose anyone.

Occupational hygienists noted by the



Department of Employment and Labour (DEL) as Approved Inspection Authorities (AIAs) are required to do air measurements of the surrounding environment and categorisation of asbestos for the inventory.

Where asbestos needs to be removed categories exist and need to be followed closely. Most removals would be considered demolition and there are very specific requirements relating to demolition in both the AARs and also the Construction Regulations (CRs) (RSA, 2014).

In the CRs the Professional Construction Health and Safety Agent (PrCHSA) would guide designers and clients to ensure compliance and the appointment of the correct authorities and competent contractors to conduct any works done. Thus one cannot look at any piece of legislation and standard in isolation, as the appropriate Regulations need to be considered in relation to the risks of the hazards identified.

ASBESTOS FOUND IN A STATE BUILDING

This week I attended a site inspection as the PrCHSA on a state building and was horrified to see the amount of damage and exposed fibres in roof and side paneling. Not to mention that the asbestos was supposed to have been removed by a ‘competent’ contractor.

There was also dumping of asbestos sheets and roof tiles on the abandoned and vandalised property. No measurement or monitoring had been done, and the client did not know whether there was any record of the work completed previously.

Going forward on this project will be challenging to ensure compliance with the AARS as no

provision for the costs have been allowed for asbestos management and removal.

The construction programme will also need addressing as the asbestos removal should be completed before any other construction work is done to ensure the safety of workers during the construction phase.

CONCLUSION

Clients, designers and health and safety professionals at all levels need to work together to protect workers and the public where asbestos products are present.

A basic level of knowledge is required by all parties to ensure adequate compliance.

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Construction ergonomics:

Back injuries in the construction industry



Simamkele Ngxesha is a BSc. Honours Construction Health and Safety Management student at Nelson Mandela University. He has completed a Bachelor of Arts degree, majoring in Human Kinetics and Ergonomics and Psychology at Rhodes University.

The construction industry in developing countries is frequently regarded as labour-intensive. The tight work schedules and constant pressure to complete projects on time add to the stress felt by contractors, perpetuating the narrative that the industry is labour-intensive. This can result in workplace stressors, which can have both short and long-term effects on construction workers' health and safety.

The stress experienced by construction workers is exacerbated by the unavailability of machinery and equipment, as well as poor resourcing of machinery, as identified by Keogh and Smallwood (2021).

With the adoption of the Ergonomics Regulations in 2019, the industry will be tasked with adhering to legislation, effectively protecting workers while ensuring organisational goals are met.

MUSCULOSKELETAL DISORDERS

Construction workers are at a substantial risk of developing musculoskeletal disorders (MSDs) due to the elevated levels of labour-intensive work and the inherent ergonomic risks encountered in the industry.

MSDs are a broad category of disorders characterised by muscle, tendon, ligament, joint, peripheral nerve, and vertebral disc damage. MSDs do not typically develop because of a single traumatic event, but rather gradually over time because of repeated wear and tear or micro traumas.

Stack, Ostrom, and Wilhelmsen (2016) identified

three distinct stages in the evolution of MSDs. These stages show a consistent decrease in worker performance because of the symptoms associated with MSDs. Table 1 depicts these stages.

As the first line of defence, ergonomic risk assessments tend to focus on physical risks. It is critical to also consider the psychosocial risk factors that affect workers because Umer, Antwi-Afari, Szeto and Wong (2018) contended that psychological and social factors play a significant role in the development of MSDs such as lower back pain (LBP).

BACK PAIN IN CONSTRUCTION

This article discusses back bending and twisting as an ergonomic risk that is common in the construction industry. This is based on the findings presented by Smallwood and Deacon (2010). Construction workers frequently bend and twist their backs from side to side when loading and unloading materials or moving materials from one work surface to another. Many construction tasks that require workers to work below knee height require bending or twisting of the back.

Smallwood and Deacon (2010) observed that bending and twisting of the back likely occurs 5-8 hours per day in the South African construction industry in a study assessing the extent to which ergonomic problems are encountered on construction sites (MS of 3.88 on the Likert rating scale of 1-5).

Given that each construction worker works 2 000 hours per year (Beale and Smallwood, 2019), it is reasonable to assume that each construction worker

is exposed to this ergonomic risk 250-400 times per year.

The onset of MSDs such as LBP is progressive. Because it is impossible to predict when the MSD will occur, it is difficult to manage, mitigate, or control. It should also be noted that health and safety management systems are designed to analyse accident statistics rather than the seemingly insignificant events that led up to such accidents.

To better understand the effects of bending and twisting the lower back, it is necessary to first explain the biomechanics of the lower back. Bending and twisting the back places biomechanical forces on the lower back while causing the centre of mass to shift. When the centre of mass is shifted, there is more instability and less balance while performing a task. While bending and twisting the lower back, two major forces act on it at the same time. Compression force is caused by bending movement, while shear force is caused by twisting movement. These forces may have an impact on workers at the same time.

The compression forces on the lower back during a bending movement that causes anterior compression of the vertebral discs in the lumbar vertebrae (L1-L5), as well as the lumbar-sacral (L5-S1) joint, can be worsened by twisting of the back, which causes shear forces.

PERMANENT DAMAGE TO THE VERTEBRAE

The annulus suffers mechanical damage because of anterior compression of the vertebral discs, which causes small cracks and tears. As the disc is not given a chance to heal, work continues, and the compression force increases over time. As the compression continues, the space between the vertebrae narrows, putting pressure on the facet joints. This may result in the development of the MSD known as arthritis.



nucleus of a vertebral disc pushes through the surrounding annulus and presses against the spinal cord, it causes pain and inflammation. This process occurs over time and is usually unaccounted for; however, the effects of LBP have been identified as one of the reasons for early retirement among construction workers and have an impact on the industry's ability to retain workers (Deacon and Smallwood, 2005).

CONCLUSION

In conclusion, various mechanisms have been explored as means to address the current issue in the construction industry. Beale and Smallwood (2019) contend that Industry 4.0 technologies can supply the much-needed intervention. However, the application and integration of Industry 4.0 technologies have been found to have challenges as most of the South African heavy industries are deemed as not ready to embrace the technologies.

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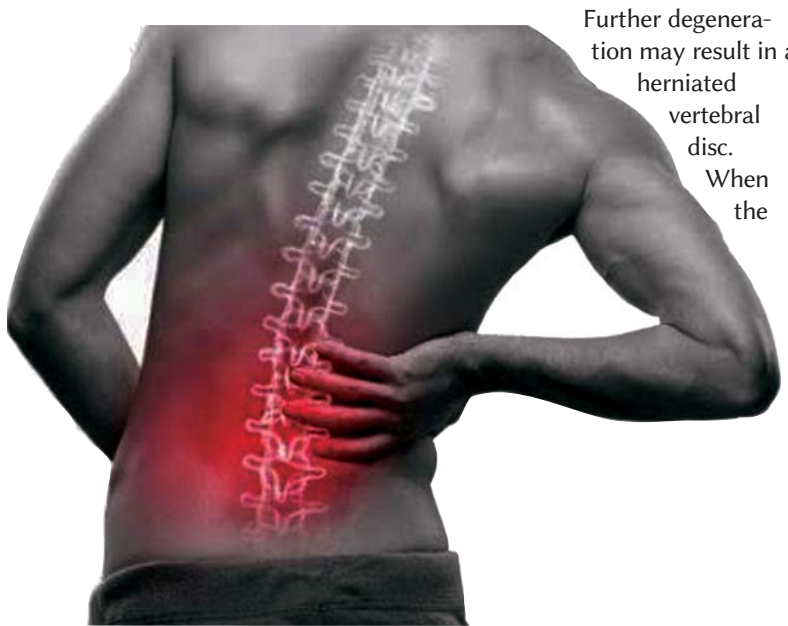
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Table 1. Stages in the evolution of MSDs

Stages of development	Typical symptoms
Stage 1:	
Workers show aches and fatigue during work hours but rest overnight and off days help alleviate pain	1. Workers show no signs of a drop in performance 2. Pain may persist for weeks or months 3. Usually, reversible
Stage 2:	
Workers experience the same symptoms early during the work shift and sleep doesn't settle the pain sleep may be disturbed	1. Workers show slight signs of performance decrease. 2. Pain may persist for a few months. 3. Still reservable
Stage 3:	
The symptoms persist while resting. Pain now is persistent in nonrepetitive movements.	1. The workers are unable to perform even light tasks 2. Pain persists for several months or years 3. Symptoms are not reversible.





Boosting vaccine rollout and debunking Covid-19 myths

Adapted from an article by
Donald McMillan, MD
Allmed Healthcare
Professionals

Dr Richard Malkin, MD
Workforce Healthcare

As government relaxes Covid-19 regulations and businesses start welcoming employees back to their workspaces, it is important for them to understand that the virus has not yet disappeared. The chances of further waves is still apparent and the importance of vaccinations remains relevant.

Although 18 million South Africans are fully vaccinated as at mid April, this only accounts for just over 30% of our total population. In 2020, herd immunity for South Africa was initially estimated at 67% but this was before the emergence of variants. As the Covid-19 virus has increased in transmissibility, our target has moved closer to 90% and while herd immunity seems out of reach with these highly transmissible variants, it's still critical for as many people as possible to vaccinate and protect themselves from severe illness and death.

To achieve this, we must address vaccine hesitancy through educational and awareness initiatives that focus on busting the myths and misconceptions around its safety.

We should also be shifting discussions away from herd immunity toward finding a way to live with the virus, and it is the vaccine that will make this possible, even if we do not reach the herd immunity threshold.

ACCEPTING HARD TRUTHS

Herd immunity is unlikely to materialise during our lifetime. Continuing to push this notion creates a false hope that we can get to a point where the virus is eliminated, which is unlikely as the virus will simply continue to circulate and evolve. Pushing people to think it is possible to achieve herd immunity as a means to drive vaccine uptake, has its own risks. It's likely to damage confidence in vaccines because even if we do achieve our national target of 67% of the population there will still be outbreaks of COVID-19. This will lead people to start doubting the benefits of being vaccinated.

The danger of not reaching herd immunity is that authorities may have to bring back restrictions. As

we have learned, this compromises the lives of all South Africans in every single aspect, whether it be work, home, family, education, mental health or recreation, everything is affected.

Exacerbating the situation is an inequitable distribution of vaccine doses across the world, along with a slow uptake and staggered rollout, which simply allows the virus to keep evolving.

Because it is not feasible for countries to shut their borders indefinitely, the entire global population needs to reach the same vaccination threshold around the same time. This means that vaccination roll-out programmes should be stepped-up, instead of lockdown restrictions imposed.

OVERCOMING HESITANCY THROUGH MYTH-BUSTING

As humans, it's natural to be mistrustful of anything we don't understand. It is therefore important to combat misinformation around the virus and vaccines while focusing on creating some semblance of normalcy by finding a way to live with the virus.

A large part of this involves addressing fears about the safety of the vaccine.

Myth: It takes at least a decade to develop a vaccine. This one was developed and approved too quickly. It can't possibly be safe.

Reality: An international research programme had already started researching the production of the SARS-1 virus vaccine ten years ago.

The main element of the vaccine is the carrier molecule, which had already been through advanced trials.

By switching the SARS-1 antigen for the SARS-2 antigen, scientists were able to conclude trials in under 12 months.

Myth: The risks associated with the vaccination are higher than the risks associated with Covid-19 infection.

Reality: There is an overwhelming amount of evidence showing that the vaccination protects against death and severe Covid-19 disease.

No long-term effects have been reported with the 4 billion vaccine doses that have already been administered.

A US study into vaccine safety across 13.7 million vaccine recipients reported 6 994 persons (0.05%) with an adverse event (i.e: a side effect) of which 91% were deemed non-serious.

Myth: The Covid-19 vaccine will affect fertility negatively.

Reality: Concerns about the vaccine impacting negatively on fertility are misplaced. While studies are ongoing, there is no data nor credible scientific theories to support the fear that Covid-19 vaccines can cause infertility.

Myth: The vaccine will infect individuals with the virus, and they can infect others.

Reality: An infected person spreads the virus through coughing and sneezing, which is why measures like mask-wearing, social distancing, and isolating when sick, are in place. However, NONE of the approved Covid-19 vaccines available are made using a live virus, which means that they cannot infect you.

Myth: There's no point in getting the vaccine if it doesn't protect from new variants.

Reality: Different variants respond differently to various vaccines. Overall, vaccination may not

prevent infection, but it has been shown to significantly reduce infection severity and mortality.

Myth: The vaccine changes an individual's DNA.

Reality: This is not a comic book universe, and the vaccine will not alter an individual's DNA in any way. If anything changes an individual's DNA, it is the virus that infects the cells in the body.

The DNA/RNA of the virus joins the cell's DNA and forces it to start replicating the virus DNA/RNA which eventually destroys the host cell.

The vaccine does NOT change the cell's DNA as it does not cause infection. Instead, the Covid-19 vaccine carries a protein similar to the virus antigen, which is enough to trigger the body's immune cells to produce antibodies to the virus as well as store this information in the immune system for future use.

STEP UP ACCESSIBILITY

Individually and collectively, we have a responsibility to ourselves, our families and others to get vaccinated.

As life returns to a normalcy and people no longer believe it is necessary to get a vaccination, it is even more critical to make the vaccines as easily accessible as possible.

Sufficient vaccination facilities need to be available from the big cities to the difficult-to-access places. In addition a service is needed that will bring the vaccine directly to people, in their homes, workplaces and especially for those who struggle with mobility. Specially trained personnel are needed to staff these facilities who can be deployed anywhere for any duration of time, providing the flexibility and agility to respond to changes in vaccine demand without diverting any critical human resources from frontline Covid-19 healthcare.



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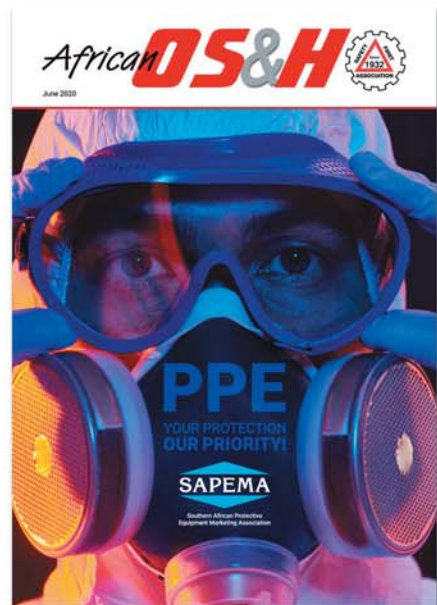
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SAIOH President's Message



Hennie Van Der Westhuizen
SAIOH President

Dear colleagues, by now all of us have shaken off the holiday lethargy and are scurrying to-and-fro, immersing ourselves in our daily undertakings.

With the sun slowly rising over the COVID night, the tension is gradually easing. Sadly, new challenges are illuminating the horizon.

The SAIOH Council wishes you success with your

endeavours, and wisdom to deal with all challenges that may arise through the course of 2022.

As part of our service to our members, we provide feedback on the latest developments within SAIOH, in the paragraphs that follow.

National council feedback

Hennie van der Westhuizen: SAIOH president, e-mail: president@saioh.co.za

Deon Jansen van Vuuren: SAIOH general manager, e-mail: deon.jvvuuren@gmail.com

Nico Potgieter: Co-opted member, email: nipotgieter101@gmail.com

MEMBERSHIP RENEWALS

SAIOH 2022 membership renewals got underway on 3 January 2022 with invoices reflecting a 7% increase in annual fees, and a renewal deadline of 31 January 2022.

Membership certificates for 2022 will not be issued until members have paid their 2022 membership fee, loaded the required continuous professional development points (CPDs) and personal learning profiles (PLPs) onto the electronic membership data base (MySAIOH), and signed the SAIOH Ethics Code of Practice.

2022 membership certificates will not be released until all requirements are met!

COUNCIL MEMBERS AND PORTFOLIOS

SAIOH welcomes our five newly elected Council members: three general Council members (Moses Mokone, Tebogo Mpshe and Wessel van Wyk) and the two new members of the Management Board (Corlia Peens and Dr Ivan Niranjana), the latter two being on the Professional Certification Committee's (PCC) Executive Committee.

SAIOH expresses its thanks to the Council members who have stepped down (Deon Swanepoel, Nico Potgieter, Karen du Preez and Andrew Dickson), for all their hard work and dedication during these complex times.

STRATEGIC PLAN AND COUNCIL PORTFOLIOS

A workshop on SAIOH's strategic plan was held in February, during which progress was reviewed and plans adjusted and updated. The new five-point strategic plan will be approved and signed off before May 2022.

Following detailed discussions, portfolios were allocated to specific council members in-line with SAIOH's strategic plan. Some of the changes are as follows:

- The Technical Portfolio will no longer be responsible for occupational hygiene awareness and will fall under Wessel van Wyk.
- The Marketing Portfolio, now incorporating occupational hygiene awareness, will fall under Tebogo Mpshe.
- The Branch Co-ordinator will take on the Regional Organiser's role for South Africa. Moses Mokone is tasked with this portfolio.
- Norman Khoza will take on the role of Regional Organiser for Africa.
- Nico Potgieter was co-opted onto the Council to look after communications via the African Occupational Safety and Health magazine (African OS&H) and the Occupational Health Southern Africa journal (OHSa).
- The SAIOH administration will be skilled in line with ISO IEC 17024 to meet good corporate governance and improve SAIOH's service to its members.

[This SAIOH Newsletter was originally published in Occupational Health Southern Africa, Vol 28 No 2 (2022)]



MANAGEMENT BOARD AND COUNCIL DECISIONS AND FEEDBACK

- A quotation was accepted from the new legal advisor to change our Constitution to a memorandum of incorporation (Mol) and to assist with the long overdue review of our Code of Ethics, Ethics Policy, and the Ethics Procedure. As soon as the Mol is completed, SAIOH will call a special general meeting to request member approval.
- The contract with Deon Jansen van Vuuren, SAIOH's General Manager, was extended for a further two years, from 1 April 2022 to 31 March 2024.
- Development of the new interactive website is progressing well, and we hope to give you a glimpse of this in the next SAIOH newsletter (via Occupational Health Southern Africa and African OS&H).

SAIOH BRANCH ACTIVITIES IN Q1 2022

A number of SAIOH branches had activities during the past quarter:

- Western Cape Branch held an in-person presentation on EMF radiation, with 42 attendees.
- Gauteng Branches held a presentation on the SABS Noise code of practice (SANS 10083:2021) via a virtual meeting, with 128 attendees.
- KwaZulu-Natal held a virtual presentation on Legionella monitoring, with 35 attendees.

ANNUAL SAIOH SCIENTIFIC CONFERENCE

The 2022 SAIOH annual scientific conference will be a hybrid event (in person and via live streaming) and is scheduled to take place from 24 to 28 October 2022, in Gauteng.

WATCH THIS SPACE!

From the Professional Certification Committee (PCC)

Lee Doolan: SAIOH PCC administrator, e-mail: lee@saioh.co.za

Deon Jansen van Vuuren: SAIOH general manager, e-mail: deon.jvvuuren@gmail.com

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

PCC EXECUTIVE COMMITTEE

The PCC welcomes Corlia Peens, newly elected PCC Chairperson, and Dr Ivan Niranjana, the new Vice-chair, with effect from 1 January 2022.

We also welcome Maryke van der Walt who took over the position of Chief Examiner with effect from 1 January 2022.

Deon Jansen van Vuuren stepped down at the end of 2021, after many years in this position. The PCC and SAIOH Council thank Deon for his exceptional dedication. Deon will remain on the PCC Executive Committee as the Council representative and provide guidance and assistance, as needed.

ASSESSMENT STATISTICS

The 2021 PCC statistics report was included in the African OS&H January / February SAIOH newsletter. As the first PCC assessment cycle commenced on 25 March 2022, there are no statistics presented in this issue.

The PCC had 88 candidates doing the written assessments in March (no results available yet):

- OH assistants, 49.
- OH Technologists, 21.
- Occupational Hygienists, 18.

ASSESSMENT PROCESS

Our information technology (IT) service provider provided excellent service during the last electronic written assessments of 2021, and again in this first round of 2022. The PCC administration received fewer complaints than usual after these sessions, indicating a significant improvement in the electronic assessments.

The PCC examinations team developed three new written assessment papers for the three certification categories:

- occupational hygiene assistant (ROHA),
- occupational hygiene technologist (ROHT)
- occupational hygienist (ROH).

The papers were moderated, uploaded, and checked before the written assessment.

The PCC Executive Committee made the decision to resume all assessments (written and oral) as physical/face-to-face assessments, starting with the June assessments.

Only in exceptional circumstances will assessments be via digital/remote means (e.g. if a candidate is located > 250 km from an assessment centre, etc.).

**OCCUPATIONAL HYGIENE SKILLS FORUM (OHSF)**

The OHSF has approved two tertiary institutions' OH qualifications, i.e. North West University (NWU) and Tshwane University of Technology (TUT), as they met the required occupational hygiene accreditation standard.

A third university is currently under review (University of the Witwatersrand). The OHSF will continue to communicate and work with all tertiary institutions to ensure that their qualification meets

the required occupational hygiene criteria.

The PCC Vice-chair (Dr Ivan Niranjana, of Durban University of Technology (DUT)) will organise a workshop (colloquium) in 2022 where all the lecturers from the various technical universities will meet. This will be a good opportunity for the SAIOH PCC and OH Skills Forum to meet with them and outline the OHSF's mandate.

In memoriam - Johann Beukes (6 October 1941 to 11 March 2022)



It is with great sadness that we advise you of the death of our much loved and admired friend and colleague, Johann Beukes, who sadly passed away on Friday night, 11 March 2022.

Johann's knowledge of the industry and his many roles within SAIOH and the PCC are well known. Johann's positive attitude and desire to be of service to others, even during his darkest hours, has touched us all.



On a personal level, we enjoyed his sense of humour, love of life and above all, his deep love for his family and God.

We know you will join us in offering our deepest condolences to Johann's wife, Clara, his family and loved ones at this difficult and sad time and we ask that you please keep them in your thoughts and prayers.

There was no funeral, only a small intimate memorial service for the family.

PERSONAL PROTECTIVE EQUIPMENT - SAPEMA

In memoriam - Clyde Beattie

by Deleane Luzzatto,
SAPEMA Chairman

It was with heavy hearts that we announced the passing of Clyde Andrew Beattie our Vice Chairman, colleague, valued industry member and above all our friend on 21 November 2021.

Clyde was a gentleman who spoke with intention, who listened, and actually heard. A diplomatic team member he had a special passion for the PPE industry. Having entered into the industry fairly late in life, Clyde immersed himself in learning and growing within its space. He was a longstanding member of the UVEX family.

We will miss his sharp wit and strong will, the input, energy, and sense of humour that Clyde contributed to SAPEMA and the industry as a whole, is invaluable! Those who attended our golf days, will have fond memories of him racing along the fairways with either myself or Roxanne in tow to take photos or have a shot or two!

Clyde was always game for anything even taking centre stage at the SAPEMA Fashion show held at A-OSH! Even though he said he hated standing up and speaking, he loved the mic and always had a joke or two to keep the audiences engaged ensuring that all went smoothly and according to plan.



Clyde looked at life with the glass half full attitude and had a passion for the bush and loved red wine.

He was an ardent supporter of PPE standards and specifications of the safety industry and was actively involved with both SAIOH and SAPEMA.

As with most, we all have our quirks, and knowing Clyde well, I know he hated fish and most vegetables but enjoyed a red cappuccino! This was noticed at a UVEX dinner hosted during an A+A in Germany. The main menu that evening had pretty much fish for starters and mains. Being the gentleman that Clyde was, he politely requested a pasta dish from the waiter and with a smile on his face he then ordered another glass of wine without a soul noticing!

Clyde thank you for the time you gave us, and thank you for being part of our journey. Many people walk in and out of our lives, but only true friends like you will leave footprints in our hearts.

You will be deeply missed. We salute you, Mr Beattie. May your soul rest in gentle peace.

Our full support and love go out to his family and friends on behalf of the SAPEMA Team and our members.



The last ten years and counting: where SAPEMA has evolved from 2011 to 2022

At the pinnacle point of this decade, the PPE industry was thrown its biggest curve ball the world has experienced, since the last pandemic - the 1918 influenza pandemic, commonly referred to as the Spanish Flu - which was the most severe and deadliest pandemic of the 20th century.

In the midst of all of this, the PPE industry and SAPEMA, had its fair journey of forging forward, facing challenges and evolving as an Association.

NRCS

With the NRCS coming into proper affect since being published and gazetted back in July of 2008; the VC 8072 which was the amendment of the compulsory specification for respiratory devices was then gazetted in May 2011. And mere 4 and a half years later, the VC 9002 amendment of personal protective equipment on Safety Footwear was then also gazetted in October 2015.

BRANCHES

The previously known Branch structure (Inland and KZN Branches) which was originally formed back in 1975, was dissolved in March of 2018. The reasoning was because we are one Association and should be working together to be more focused, so why should we have Branches doing different things? With this change, we were able to hold a number of successful regional meetings, two in KZN and one in Cape Town which were all well attended and previously had not been achieved successfully.

WEBSITE

Keeping up with technological change, SAPEMA upgraded their 2009 custom-built webpage to a WordPress webpage in 2018. Further upgrades have been underway to pave the way for our members to have a full database of technical information and specifications, news, forums and a lot more still to come. Unfortunately, due to time restraints and Covid, this will only be launched now in May for all our existing members. This platform is one of the building blocks for SAPEMA's next membership phase that needs to be built on in its journey to one day becoming a SAQA Approved Professional Body.

SAPEMA HANDBOOK

The historical hard work and dedication going as far back to its inception, when it was first printed in 1984; the SAPEMA Handbook on PPE has also taken a new upgraded new look and approach. As PPE has evolved, keeping the Handbooks up to date is a moving target especially when legislation and standards get updated and change. The efforts that the late Rob Ellis had done together with the Technical Sub-Committees on these



by Deleane Luzzatto, SAPEMA
Chairman

handbooks, will form part of the PPE Category Forums' role to keep these up to date as best as possible. They will be freely available to SAPEMA members on the Members webpage portal. They will also be made available to non-members at a nominal fee, which will be a handy tool to both an end user or safety officer that may be wanting more technical information regarding a particular PPE category or PPE item.

PPE AND 2020

2020 was the year that the acronym PPE was the new buzz word, and every household had a stash of face masks in their kitchen or entrance hall. More importantly 2020 was about survival for both businesses and individuals, young and old. 2021 was about anchoring ourselves in a new reality; making 2021 a turbulent and unpredictable year for all. Especially here in South Africa where vaccines were finally received and distributed, vessel shortages, soaring container and shipping costs topped with the devastating looting that took place in KZN!

SAPEMA REGIONAL MEETING

SAPEMA was also able to host its first regional meeting this year, in Cape Town which was held at the Hi-Tec Zonneblom offices on the 16TH of March. It was well attended with Pienaar Brothers, Multi-quip, Uvex and BBF to name a few of our CT Members as well as a number of Members that attended via Microsoft teams.

The main topic of discussion was where we are and where we need to get to in terms of our Membership criteria. As this industry has evolved, so too does our criteria. We have seen a whole bunch of newcomers to this industry who had to diversify in order to survive the COVID-19 pandemic. It is our responsibility as SAPEMA, to educate and impart important information regarding standards and specifications and importance of supplying compliant product that protect individuals whilst doing their job at hand. Membership criteria perimeters need to be set by our Members for our Membership going forward.

GOING FORWARD

An active and engaging Association is created by its Membership. However, as with anything, maintenance and upgrading or technological improvements, need to be actively monitored in order to keep abreast of the industry challenges. Membership Criteria will be at the forefront of SAPEMA's action points for 2022.

The Year of the Tiger denotes strength, vitality and growth, qualities that will hopefully stand SAPEMA in good stead as we look to move past the uncertainty that COVID-19 brought, and turn the challenges into opportunities.

SAPEMA golf day 2022

On a more positive note, the year of the Tiger 2022, which is all about making big changes, which has seen us finding enthusiasm as social progress feels possible again.

On the 10th of March, SAPEMA held its first social event since the onset of the pandemic. Sapema's Annual Golf Day was held at the Serengeti Golf Course in Johannesburg.

It was like an old school reunion where the industry was able to reconnect with one another, on a relaxed and social level. The golf day was yet again very well supported and attended by both our loyal members and our regular industry players of the PPE industry.



Sponsored winning prize



Uvex best dressed. Anton du Bruto, Greg Cullen, Christo Nel, Gunther Verreyne



Uvex best dressed. Edward Kawamba, Christopher Robertson, Sibusiso Khumalo, Jarryd Swanepoel

It was a full field of just under 90 players, 6 sponsored holes and loads of great sponsored prizes.

The SAIOSH 4 ball, took first prize this year and UVEX taking the best dressed with all 3 fourballs dressed for the next Pro-golf modelling shoot!

With the weather having behaved and the prestigious course providing a challenge for most, the day was enjoyed by all.



Uvex best dressed. Wiaan Nel, Jacques Malan, Tiego Kekana, Rafi Jude



Best sponsored hole. North Safety ladies in blue (L to R) Lungi Nkuna, Kiara Haripersad, Retha Groenewald. HSE men in red (L to R) Juan Prinsloo, Franco Cloete, Johan Dippenaar, Michan Botes



SAIOSH winning 4 ball (L to R) Leon van der Walt, Gareth Nortjie, Ockert Fourie, John Terblanche

Safe gas systems and installations prevent deaths

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.

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

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. Using the services of 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 is support and a real sense of comradeship.

"There are numerous groups on social media that you can tap into and ask your questions. 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 and creating a uniform standard" Strauss says.

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.



OHS practitioners need more awareness of gas safety

The South African Refrigeration and Air Conditioning Contractors Association (SARACCA) received a letter from a member based in Kimberley, Northern Cape and feels it would benefit others to know the contents of this letter as it offers a current, insightful perspective on refrigeration and air conditioning in South Africa from a well-respected industry insider.

The member, with many years of industry experience, is an authorised inspector and designer of refrigeration and air conditioning installations as well as qualified to work with refrigerant gases.

They were contacted by an individual who wanted to find out more about SARACCA and the South African Qualification and Certification Committee for Gas (SAQCC Gas).

The member noted in their letter that this individual is a Department of Employment and

Labour inspector.

It is beneficial for government inspectors, who are responsible for regulating Occupational Health and Safety (OHS) matters in all industries, to be aware of crucial bodies like SARACCA and SAQCC Gas. These associations are tasked with the registering of refrigeration and air conditioning practitioners and ensuring compliance according to the "Pressure Equipment Regulations" as part of the OHS Act.

SARACCA saw this as an opportunity to bring to light that the public needs more awareness of this regulatory infrastructure. It is important for the for registered gas practitioners to inform the public how these bodies directly impact them.

Registered practitioners are obligated to issue a Certificate of Conformity (CoC) on completion of installation or maintenance in the prescribed format on the SAQCC Gas App.



CoCs are there to protect everyone. They ensure that all refrigeration and air conditioning maintenance/installation associated with refrigerant gas is done competently and safely, protecting practitioners and those using these products containing high pressure and sometimes even dangerous gases.

In the event of a product causing damage to property, insurance companies require CoCs before paying out claims.

During the last year, there have unfortunately been several accidents and even the death of a technician. This was all because safety regulations

and procedures were ignored, and the gas practitioner was unauthorised. Awareness can drastically limit loss of lives and property damage.

The public can ensure their own safety by always requesting a gas practitioner's unique number registration card, category of registration as well as the practitioner's photo.

All these details are recorded on the SAQCC Gas website which can be verified by a simple search.

Registered gas practitioners can boost public awareness by informing their clients to follow this approach with any gas-related service or product.

Heavy fuel oils are hazardous to human lungs

South Africa's coal-fired plants were mostly responsible for 1.3% of global emissions, and worryingly contributed to roughly half of Africa's total emissions in 2020! But coal isn't the only culprit. Industries requiring large amounts of power for the operation of heavy machinery, furnaces, boilers, ovens and smelters turn to a combination of undesirable hydrocarbon fuels like Heavy Fuel Oils (HFO), paraffin, diesel and LPG.

Consider the negatives of just one of these traditional fuels. HFO has an elevated overall toxicity compared to all other fuels plus it is unable to breakdown when spilt. Not to mention the hazardous effects on human lung cells when exposed to HFO and diesel emissions. This is especially scary during a global pandemic centred around respiratory issues.

While conventional fuels are a cheap operating solution, these nasty truths highlight that the switch to cleaner, greener energy sources is incredibly urgent.

Decarbonisation is often not as high of a priority as economic growth and poverty alleviation for a developing country in Southern Africa. Additionally, gaps in technical and financial expertise, limited resources and poor governance makes the implementation of wind, solar and electric energy challenging to say the least!

In the 2022 World Economic Forum, Yemi Osinbajo, Nigeria's vice-president, said that for African countries, "gas as a transition fuel is absolutely crucial, not just for an effective transition but also for our economies." He went further to say that natural gas is "without doubt the only pathway" for Africa to transition out of more hazardous fuels like coal and HFO.

Africa's abundant natural gas is an untapped resource. So instead of looking to first-world countries for cut-and-paste environmental answers, "we should be focusing on the solution right on our doorstep," says Stephen Rothman, LNG Hub CEO.

Liquefied Natural Gas (LNG) is a transition fuel crucial not just for an effective transition to green energy but also for our economies.

That solution is Liquefied Natural Gas (LNG), which can be effectively combined with solar, wind and other energy sources.

"We are not reinventing the wheel. There is solid infrastructure, proven equipment and there is already success in other parts of the world," adds Rothman.

In the past, Rothman successfully trailblazed the introduction of compressed natural gas as an alternative energy. Now he is making waves by calling for LNG to be a reliable, greener energy solution for southern Africa's big industries.

Harmful greenhouse gases resulting from petrol emissions

Vehicles are major contributors to pollution as petrol and diesel emissions produce harmful greenhouse gases. In a mere 8 years' time, an estimated 127 million vehicles will be produced globally. By 2035, the total number of vehicles could be 2 billion! There is no stopping the essential need for transportation. But a change must be made to alternative fuels that minimise and even eradicate further environmental harm.

NEGATIVE IMPACTS OF AIR POLLUTION

Why start now?

Studies have shown that traditional vehicle fuel consumption, like diesel exhaust, negatively impact pollination. Without it, humans and the earth's ecosystems would cease to exist. Of the 1400 crop plants grown worldwide, i.e. those that produce all of our food and plant-based industrial products, almost 80% require pollination.

South Africa has set a development plan for 2030 to diversify the energy mix and reduce carbon emissions. Companies therefore now have to be more transparent about their carbon transmissions and take environmental recommendations on board. This is especially true for the logistics industry where there is an urgent need to reduce or remove emissions of carbon dioxide and/or other greenhouse gases made by fleets in order to compensate for emissions made elsewhere.

SOLUTION FOR FLEETS

To accomplish this, fleets need to be environmentally optimised by tapping into an energy mix that minimises the use of traditional combustion engines which run on petrol and diesel.

NATURAL GAS AS AN ALTERNATIVE

Another green energy solution especially suited to large-scale fleets is natural gas. Natural gas consists mostly of methane and is drawn from gas wells or pockets underground. While used in industrial and domestic settings, Compressed Natural Gas is an alternate fuel for vehicles.

Natural Gas Vehicles (NGVs) do not contribute significantly to pollution and smog, because they emit low levels of nitrogen oxides, and virtually no particulate matter (droplets of metals, acids, soil, and dust) into the air. For this reason, NGVs can be used to help combat air pollution in areas where air quality is poor, which is an issue in cities worldwide.

SYMPTOMS OF TB

The most common symptoms of TB include a persistent cough that can bring up mucus and blood. Other symptoms include fatigue, night sweats, fever, loss of appetite and weight loss. Symptoms can remain mild for several months, which often delays treatment and helps spread infection. A rapid molecular diagnostic test should be done if these symptoms present, as they are highly accurate and lead to quick treatment.

THE AFRICAN BURDEN

Twenty five percent of all TB cases are in Africa as are 25% of deaths. Those infected with HIV are 18 times more likely to develop TB. Eighty five percent of TB patients in Africa are also HIV positive.

THE END TB STRATEGY

The WHO Global Tuberculosis Programme aims to end the TB epidemic which is a developmental challenge as well as a public health issue. The WHO adopted the End TB Strategy in 2014, highlighting that the way forward requires universal access to patient-centred prevention and care, multisectoral action and innovation.

The goal is to reduce TB incidence by 80% and TB deaths by 90%. The strategy is tailored to each country's diverse needs and contributing factors.

Roche plays a significant role in the fight against TB through its Global Access Programme, which focuses on sustainable solutions that can help diagnose infections by expanding access to diagnostics in high-burden countries.

Ultimately, all humans should have access to high-quality diagnostics through meaningful partnerships – both public and private. Reliable and accurate diagnosis reduces the risk of further transmission, delays in treatment and additional burdens on the healthcare system.

End tuberculosis in the workplace and save lives

“World Tuberculosis (TB) Day takes place on 24 March to raise awareness around the health, social and economic consequences of TB.

TB is one of the most infectious and deadly diseases globally and a leading cause of death for those infected with HIV. In 2020 alone, 9 900 000 people were diagnosed with TB, and 1 500 000 deaths were recorded. The good news is that since 2000, global efforts to end TB have saved an estimated 66 000 000 lives. Unfortunately, the COVID pandemic hindered this progress and 2020 saw an increase in cases for the first time in over a decade.

“Invest to End TB. Save Lives.”, the theme for World TB Day 2022, highlighted the urgency for investment in the resources required to fight TB and the commitment needed from global leaders to help put an end to TB altogether.

Employers must become involved in the fight against TB. Employees suffering from TB must be correctly treated to prevent its spread in the workplace.

WHAT IS TUBERCULOSIS?

Tuberculosis is caused by Mycobacterium tuberculosis, a bacteria which effects the lungs. Because it is airborne, it is highly infectious and spreads when people cough, sneeze or spit. By just breathing in the infected air particles, someone may become infected. TB is preventable and curable, yet 10 million people fall ill with it annually.

Low to middle-income countries account for 98% of TB infections. Although it is estimated that as much as 25% of the world's population is infected with TB at any given time, only 5-15% will fall ill. However, an asymptomatic person is as infectious as one with symptoms.

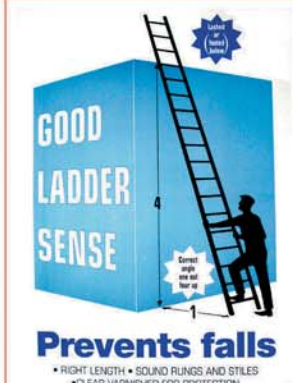
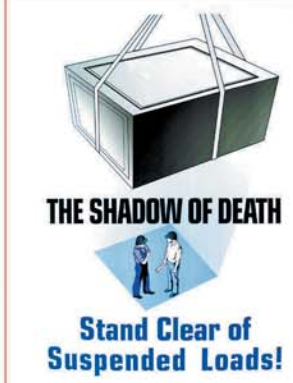
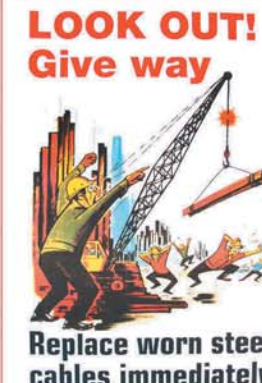
TB has been prevalent for many years, and many of the antibiotics available are proving futile. The various strains have become drug resistant.



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POSTERS FROM THE SAFETY FIRST ASSOCIATION



After two years A-OSH returns

When 31 May to 02 June 2022 | **Where** Gallagher Convention Centre in Johannesburg

The excitement is mounting behind the scenes as the confirmed exhibitors for the continent's leading occupational health and safety (OHS) show continue with their preparations after a two-year gap. Specialised Exhibitions, the largest trade show organiser in Southern Africa, announced earlier this year that A-OSH Expo was confirmed to go ahead in 2022.

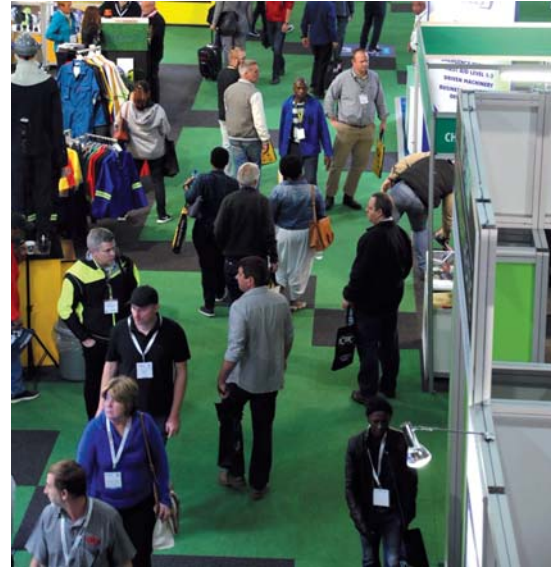
Once again it will be co-located with Securex South Africa and Facilities Management Expo, together with the exciting addition of Fireexpo to the Securex show. The 'one roof, four industries' together present a 360° view of the built environment.

Securex South Africa presents the latest technology and information in the security sector for both physical as well as cyber security, while Fireexpo covers fire safety. Facilities Management Expo brings together all aspects of products and services associated with property and building management and maintenance.

Mark Anderson, portfolio director at Specialised Exhibitions, explains: "We are celebrating more than a decade of A-OSH Expo and will once again focus on all things occupational health and safety related. The exhibitor interest has been high, showing that key players in the OHS industry are keen to re-embrace the opportunities presented by the face-to-face interaction that trade shows offer.

"We have been very pleased to welcome back a significant number of organisations and companies who have been part of A-OSH Expo previously, and we look forward to welcoming additional new exhibitors who are keen to take their place at Africa's biggest OHS trade show for the first time."

Anderson confirms that Dromex, a major company in the supply of technology solutions for personal protective equipment (PPE) is again the platinum sponsor, while BBF Safety Group, an integrated workplace safety solutions provider, has



similarly stepped forward for a repeat performance as the show's gold sponsor.

The South African Institute of Occupational Safety and Health (Saiohs) is one of the A-OSH Expo silver sponsors, and will once again be offering its free-to-attend seminar theatre.

From 31 May - 01 June, Saiohs will be hosting its 10th Annual International Health and Safety Conference (a paid-for event) in parallel.

"We are so pleased to welcome back these 'old friends' in their familiar sponsorship roles," says Anderson, "and we also extend a warm hand to Pinnacle Welding and Safety as a silver sponsor."

He clarifies that A-OSH Expo's exhibitor groupings to date include - but are not limited to tried and trusted suppliers of all PPE, cleaning and industrial supplies; protective hearing systems; working at heights; information and technology related to alcohol and drug safety testing; dealing with dangerous snakes in the work environment, and consulting services for workforce management systems.

"Specialised Exhibitions has demonstrated previously under the new Covid-19 regulations that it is still possible to hold organised gatherings in a controlled, safe way.

"There is still some space available for those organisations wishing to exhibit, and thereby boosting their brand awareness and engaging directly with potential clients. We are very excited to be back in 2022 and, together with our confirmed exhibitors so far, are looking forward to an excellent show!" concludes Anderson.

For more information, visit www.aosh.co.za.
To book an exhibition stand contact
Zelda Jordaan on tel: +27 (011) 835-1565
or email: zeldaj@specialised.com



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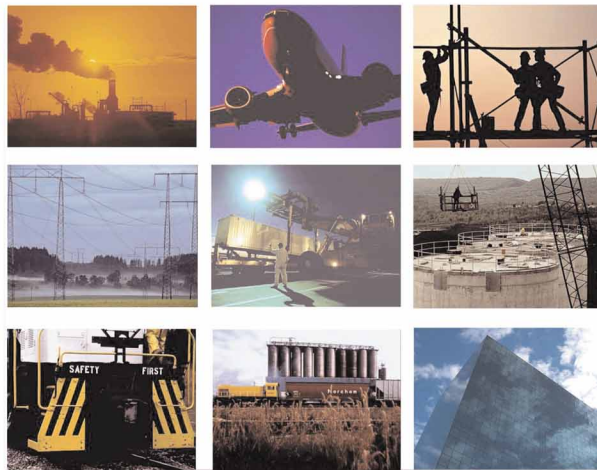


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Co-author: D. NIESING



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