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Editor’s Comment

In this issue, Dr Bill Pomfret covers the sensitive topic of suicide in his article.

Many people think that suicides increase during the holiday Christmas season and new year, but this is not the case. Suicides are a year round problem affecting families and organisations alike.

Work place stress is a high contributing factor towards suicides, with the top occupational diseases being heart attacks, suicides and strokes. Many people have regular suicidal thoughts, but luckily only the minority act on them. After an employee commits suicide, colleagues are left grieving the loss with feelings of guilt that they should have been able to prevent it, which may impact negatively on staff morale and productivity.

Organisations should be more proactive in investing in mental health programmes for their employees. Not only will this help employees who are unhappy and therefore not productive, but this will increase productivity on-the-job. An outreach programme will give employees the confidence that their company cares about them, their health and welfare. It will encourage them to talk about their problem, and therefore help them overcome the obstacle and so increase their contribution to the organisation.

One’s immediate reaction after a colleague has committed suicide, is that the victim was in a failed relationship, had huge financial problems, or other family problems. But, the truth is that suicide is often as a result of multiple challenging situations, one of them being unhappiness at work and lack of job satisfaction. For example, one reason may be - the employee has been promoted to a position where he is out of his depth and not able to deliver.

It is generally unlikely that employees will voluntarily discuss their feelings with their employers for fear of losing their jobs, bonus or creating antagonism with colleagues. Organisations may dismiss the idea of a structured suicide prevention programme, purely because they may not have had any suicides amongst staff, or perhaps only one. Rather, organisations must recognise suicide prevention and mental health as part of the larger employee wellness programme. It is also essential to recognise suicide as an occupational issue, assess its impact on the organisation, and create a structured plan to deal with it. The services must be available to all employees and show that there is support from management.

It is not only a structured programme that can help employees cope with distress. Colleagues must also learn to identify an employee who is crying out for help. It is often the people closest to them, or those who work close to them who are able to pick out the cues from their behaviour.

Equally important to note is that suicides are not limited to workers only, plenty in middle-management and senior management also become victims.

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The devastating affects of suicide

E) How can I forgive them for such a selfish act?
F) Why didn’t they ask for help?

There are many more questions, too many to list, but I think everyone should keep an open mind either at school or in the workplace.

Depending on where we are in life and what we’ve had to endure, our understanding of this type of pain will differ.

Imagine a suffering so deep, so transformative that the pain and mental anguish would cause you to feel as though your head were about to explode. Unbearable and unsplicable pain that would drive you to want to escape permanently, so that the pain or suffering will end. You don’t necessarily want to die but are desperate and willing to do anything to make the pain stop. This is not a cowardly or a selfish act, this is an act of desperation.

While the young man was in this state, his mind was simply not capable of seeing events as it would in a healthy state.

There are many different types of illnesses, but mental health is the most tragic. Your mind begins to rationalise that your loved ones will be okay (or even better off) without you. You reason that they are strong and have plenty of support. You begin to devalue yourself. Without realising it, you have now convinced yourself that it’s okay to put a stop to this suffering. It’s not that you want to hurt others, your family and friends, it’s just that you are tired of being in pain yourself. Of course this is not the act of a person with a healthy state of mind.

Of course, I can’t speak for everyone, but I know many people who would join me in the quest to help anyone in need.

If you are struggling with thoughts of suicide, please stop. Know that the struggles in life are for a reason and are meant to make you stronger. Stop looking at the small screen of life where all you see is pain. From the outside looking in, it’s hard to understand.

From the inside looking out, it’s hard to explain.

Years later, most people who attempted suicide will look back and say “I made it, I survived what I once thought was the impossible.”

These people can take this gift and play it forward so that others who’ve suffered similar pain can know it doesn’t have to end in suicide.

For those who have lost a loved one via suicide, please stop questioning, please stop blaming yourself, and please don’t hate them. Often family members or friends cannot let go of the anger, the guilt, and the shame. These feelings may be holding them a prisoner so that they are not able to experience the joy of life again. If you are in this situation, the weight of this burden is not yours to bear. There is already one victim, don’t make it two or more. If you don’t let go, those who are still here with you, will suffer along with you. We do mourn our loved ones but don’t let it consume you.

Whoever manner suicide has touched your life in the past, it is important to move on so that you, your family and your loved ones come together as never before. That you may live your life fully and with a sound mind.

The end of the year is now near and with it Christmas which is unfortunately a time when incidents of suicide tend to be higher than usual. A time when we should be aware of those around us who seem unusually depressed, stressed or lonely.

As, this is my last column for the year, I wish that your heart be full so that you may love unconditionally, forgive easily and trust, that no matter what comes your way, and that you have the strength to overcome. Your life is valuable and irreplaceable, use it to make a difference.
Beware of bargains
- cheaper is not always best

With the South African economy struggling to grow and many companies tightening their budgets, it is very easy for businesses to fall into the trap of choosing price over quality when making purchase decisions.

On the surface, cheaper equipment may offer most of the features and benefits that the more expensive model offers, without the steep price tag. Sometimes the transaction is even termed a ‘great bargain,’ whereby the buyer believes they got more value than what they paid for. But is it a bargain? Or are we sometimes unknowingly deferring the full payment, costing the business more in the long-term? When it comes to practical equipment, have you ever wondered why one option is so much cheaper than another?

WHY CHEAPER IS NOT ALWAYS BETTER

It is well known in industry that substance abuse related accidents cost companies hundreds of thousands of Rands every year. So we can look at something simple like a breathalyser. Why does one brand with similar features cost significantly less than another brand. Build quality and the quality of materials used is one reason but what most people don’t know is that the more expensive products go through various accreditation ratings. These accreditations include things such as vibration testing, moisture, humidity, dust and drop testing. These accreditations and tests are expensive to put instruments through and of course the instrument will cost more to manufacture to meet and pass those tests. Unfortunately most people don’t know about these type of accreditations and therefore jump at the first cheap product that has “all the features”. W hat they fail to understand is that the cheap product is cheap for a reason and the cost of the product over its life span can easily be triple that of the initial outlay.

A cheap instrument or piece of equipment is also more likely to break quickly and require frequent repairs. It may also need to be replaced much faster than a quality instrument as it might not be robust and withstand industrial wear and tear.

Cheaper breathalyser’s may also need to be recalibrated more often than quality machines and a failure to recalibrate the machine could also affect the reliability of the readings, or even, its ability to operate at all.

Where the equipment is used for tests and the results have legal or life-changing results, a cheap machine can also cost the business in legal fees should someone successfully dispute the results. For example, according to the Occupational Health and Safety Act of South Africa of 1993, employers may not allow any person who is, or appears to be, under the influence of alcohol or drugs to enter into the workplace.

While the law provides the legal basis for employers to implement alcohol and drug testing on their employees, there is no room for faulty/unreliable results. In a case of where there is an employee dispute, the company could incur legal costs should the employee successfully argue that the results or the equipment was faulty.

EMPOWERING PROCUREMENT MANAGERS TO MAKE PURCHASING DECISIONS

For many companies, the most popular purchasing method is for the department using the equipment to provide the procurement department with clear specifications of what they require. The procurement department is then tasked with finding the cheapest supplier that meets those requirements.

Unfortunately, this is not always the best approach as inferior products may feature the same specifications. However, they are manufactured to a lower standard of quality and won’t last as long as a better quality product.

In some instances, the end-user does not provide their input into the purchasing of testing equipment. In such cases, the procurement department may choose equipment that is the most financially viable and because of their lack of experience on the qualities to look for, they may end up choosing the cheapest model or one that looks impressive but lacks substance.

It is therefore prudent to consider business equipment purchases as an investment and to empower the people who make purchasing decisions so that they are better able to consider the overall impact of choices. Here are some of the issues to take into consideration when buying business equipment:

• Does the model we would like to choose offer all the features needed to be able to efficiently execute the intended tasks to the best quality we can afford?
• What is the expected life-span of the equipment? This includes manufacturer guarantees, warranties in place and anecdotal history from previous users.
• What is the projected cost of ownership of the equipment.
over its lifetime, when including estimates for repairs and estimated maintenance costs? Based on this, do you still believe that your cheapest buy is the most cost-effective option?

- Is this particular model accredited and well-respected by the industry? Does the use of the equipment or the results from it have legal or life-saving implications?
- Can the business afford to operate for more than one day without the equipment in the event of equipment failure?
- Would equipment failure directly hurt the business operations or even its reputation among employees, clients and where relevant, affected legal and regulatory bodies?

The biggest benefit of purchasing quality equipment is that, once the investment is made, you can focus on other aspects of the business with the assurance that your equipment will do what it’s supposed to, when it’s supposed to. You also have peace of mind knowing that your budget allocation is unlikely to be derailed by unexpected repair costs. Quality equipment is also good for employee morale, as they don’t have to waste time with faulty equipment or waiting for someone to repair the instrument, which ultimately impacts their project schedules.

**LION 700 ALCOMETER**

ALCO-Safe recently launched the Lion 700 Alcometer, a portable alcohol breath analysis (breathalyser) instrument specifically designed for use in law enforcement, industrial safety, and health and well-being programmes.

The instrument is compact and completely portable, for use in the field as well as on premises. Despite its neat size, it has significant memory built into the instrument. Up to 3000 readings can be stored, retrieved and printed at any time, allowing for easy record keeping. Should printouts be required for legal purposes, users can simply search the memory, retrieve the relevant test results and reprint them. The Lion 700 has a simple multi-button user interface for increased ease of use. Menu scroll buttons and a select button, which doubles as a power button, allow for simple use and information retrieval. The device also has a range of complementary accessories, such as a carry case and portable printer.

“The device meets the European standard for handheld breathalysers for police use, making it ideal for the enforcement of law in any environment,” says Rhys Evans, Director at ALCO-Safe. “When implemented in an enterprise or industrial environment, test results from the device may be printed and used as valid evidence in any disciplinary and resulting labour court case.”

For companies, particularly industry, the evidence is regarded as solid and credible and can be used in hearings. It is also instrumental in highlighting the ramifications of alcohol use and abuse in the workplace.

Contact: ALCO-Safe / Rhys Evans, Managing Director, Tel: 012 343 8114 / Email: rhys@alcosafe.co.za

Now in its second edition, this South African occupational health and safety handbook is a necessary aid to anyone responsible for occupational health and safety.

Containing about 400 pages of information, it is invaluable to any SHE practitioner, engineer and any other person who has an interest in creating a safe workplace.

Readers and students will find the text easy to read and the illustrations easy to follow.

It will also be valuable to the list of “must read” and reference publications of chief executive officers, engineers and other top managers who often have a responsibility for the health and safety of the workers in their enterprise.

Universities and other tertiary educational institutions will find the book a very handy source for prescribing to their students whilst libraries would do well to make it available to the wider public.

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Web: www.safety1st.co.za
Factors to consider in lockout and tagout applications

Lockout and tagout applications are an all-important safety consideration during maintenance and shut-down procedures. Machinery is controlled by various forms of energy and it is these sources of energy that need to be identified and isolated effectively so that persons performing maintenance can do so safely. The intention of this article is to highlight important issues to consider, as well as to simplify the decision making in designing processes or procedures in the myriad of lockout and tagout applications.

The sources of energy to machinery could include, electrical, hydraulic, pneumatic, thermal, chemical or mechanical energy. The uncontrolled release of this energy during maintenance procedures could be hazardous to persons doing the maintenance. The equipment available to safely isolate these energy sources is vast and can be not only disconcerting, but also confusing to someone who is unsure of what to do, or does not have adequate experience in lockout and tagout procedures.

REGULATION REQUIREMENTS

Lockout and tagout is a procedure that is required by regulations applicable to the industry in which the procedures are being performed, therefore the requirements of the equipment necessary in a dusty coal mine would be different from requirements in an open cast or underground metalliferous mine. Similarly, the requirements in industrial environments could also be different, or in many instances unique. Correct lockout and tagout procedures should be applied in conformance with the Occupational Health and Safety Act (OSH A). This is an international guideline on the correct application of lockout and tagout. Effective procedures not only guarantee the safety of persons doing maintenance on machinery, but are also very effective in limiting downtime of the machinery.

Personnel are not only every organisation’s most important asset, but also the most costly component of the organisation. Laws stipulate that every employee must be protected from potentially hazardous environments while at work. This not only includes the use of correct and adequate personal protective equipment (PPE), but also protection during maintenance and shut-down of machinery. Correct lockout and tagout of equipment is the practical implementation of a legal requirement. Failure to adequately apply lockout and tagout procedures could result in different sanctions by the applicable authority which includes administrative fines, legal and civil law suits or even complete shutdown of a work area until the correct procedures have been implemented.

EQUIPMENT THAT IS REQUIRED

Necessary equipment required can be classified as to 1) Safety Padlocks 2) Safety Lockout Accessories and 3) Safety Identification tags and signs. It is important to note that not all safety lockout and tagout equipment was created equal and as with everything in the market place there are good quality and lower quality products available. Each organisation must ensure that the lockout and tagout equipment and accessories that they are using is of high enough quality to ensure the safety of personnel.

OSHA requires that all lockout and tagout equipment and accessories must be manufactured from durable materials which can withstand the environment in which they are being used - they must be substantial enough to withstand removal without use of excessive force, they must clearly identify the employee who installed the device, they must be standardised in the facility by shape, colour and/or size, they must be unique from other locking devices and may only be used for lockout and tagout purposes.

Every piece of machinery must have its own procedure to ensure adequate lockout of its energy source. This could be as simple as locking out a circuit breaker or locking a valve in the closed position. In general, the steps to effective lockout and tagout are:

1. Preparation for shutdown which includes identification of all the machine’s energy sources.
2. Notification of all personnel working with the machine that a lockout procedure is to be implemented.
3. Stop the machine by following its normal shutdown procedure.
4. Isolate the energy feed to the machine by switching off its main power source.
5. Apply the correct safety padlock and isolation accessory to each point of energy to the machine. The padlock applied must clearly indicate who applied the padlock and in the event of more than one person working on the machine, each worker must apply their own padlock to the lockout accessory.
6. Release any stored energy to the machine, this for example could be draining hydraulic or pneumatic pressure to the machine or blocking moving parts of the machine.
7. Verify that the machine is safely locked out by trying to restart the machine. Only once these steps have been carried out should any work be done on the machine. In this way the safety of personnel is guaranteed during maintenance.

Once all maintenance work has been completed on the machine can it be restarted using the following steps:
1. Remove all tools and replace all safety guards.
2. Check all employees are clear of the machine.
3. Each person must then remove their lockout accessories and padlocks.
4. Notify all employees who work with the machine that the lockout and tagout devices have been removed from the machine and it is about to be restarted.
5. Restart the machine using the normal start-up procedure for that machine.

**MASTER LOCK PADLOCKS**

Master Lock is the world leader in safety padlocks as well as safety accessories used in lockout and tagout applications. The use of Zenex thermoplastic in safety padlocks ensures the durability of the padlock, and also ensures that a non-hazardous lock is used in potentially explosive or corrosive environments. Lock bodies are available in various colours and sizes and shackles are also available in different lengths, diameters and materials, this way ensuring that a safe solution is available for every application.

In addition, Master Lock South Africa offers a free advisory service, where a qualified person will do a site inspection and advise management on which safety devices and padlocks are necessary to ensure safe lockout and tagout at the facility. This function ensures correct application of devices. Training is also provided to persons who would need to use the equipment.

Management of a facility can then rest assured that the correct safety padlocks and accessories are being used as intended in the facility and that all Master Lock safety products are backed by a lifetime guarantee.
Airport construction at St Helena

St Helena is one of the most remote islands in the world and still, to this day, remains relatively undiscovered by tourism. However, with the completion of the St Helena Airport, this will soon change.

In 2014 the construction began with the UK government spending over £250 million. The overall purpose of the airport is to ensure that the islanders become more self-sufficient, encouraging economic development while reducing dependence on British government aid. It is also expected to kick start the tourism industry, with up to 30,000 visitors annually.

The first plane landed on the 15 September 2015, and the first large passenger jet on 18 April 2016.

The airport project measures 3500m² and offers landing facilities for aircraft’s up to an Airbus A 320 or Boeing 737-800.

The airport building is designed as a mixed-use development which includes the terminal building for arrivals and departures, as well as office and retail space.

Creating Comfort

Mixed-use buildings are generally the most challenging buildings to keep comfortable. With the wide variety of weather challenges, the cooling and heating needs of ST Helena’s Airport remains significant.

The appointment of 52 Engineering to act as onsite HVAC contractors, attests to the notion that SARACCA members do much more than just build and contribute to projects. SARACCA members have the mandate to engage in, shape and contribute to social cohesion, community development, and economic revival.

The restricted access via the ship RMS St Helena to the island meant travel time could take up to 3 weeks for a round trip. Planning thus played a vital role in ensuring deadlines were and are still met. Although 52 Engineering has worked on HVAC projects throughout Africa, from Eritrea to Ghana, St Helena’s commissioning proved to be one of the most challenging projects undertaken by the company.

Citi Multi

For this milestone project, 52 Engineering, made use of Mitsubishi Electric’s Citi Multi air-conditioning system. This offers a “Citi Multi controls network” or CM CN which manages up to 2,000 indoor units from a single networked PC. The CM CN sets and monitors operation, mode, temperature, fan speed and airflow direction and even includes an operating schedule that’s tailored to the needs of the people and the building.

The network manages the operation, monitoring, scheduling (daily, weekly, monthly) error email, personal browser, and tenant billing and maintenance diagnostics.

Solving Weather Challenges

To start the project, the HVAC communication tower had to be built and fitted out. Due to weather conditions, the HVAC system had to ensure windows were kept clear at all times of the day. Although they were allocated 8 months for the project, the 52 Engineering team remained on the island for over 2 years. While onsite, 52 Engineering was also awarded the hospital, sea rescue, and BFI projects.

The operations phase of the airport contract will continue in partnership with Lanseria Airport for a period of 10 years.

On May 2016, the Air Safety Support International (ASSI) issued an Aerodrome Certificate to St Helena Airport having been satisfied that the airport infrastructure, aviation security measures, and air traffic control service comply with international aviation safety and security standards.

Project Details

Basil Reed was awarded the contract for design and construction for the ST Helena site.

The project was funded by the UK Government and is part of the ST Helena business improvement project.

The design of the HVAC system was awarded to Worley Parsons.

About Saracca

SARACCA is an association of contractors who have individually and jointly agreed to a set of governing standards whilst operating in free competition against each other. The common aim is to strive to improve the image and standards of the industry and the association provides a forum for this purpose.

In July 2009 the Department of Labour published the “Pressure Equipment Regulations” as part of the Occupational Health and Safety Act Number 85 of 1993. The South African Qualification and Certification Committee for Gas (SAQCC Gas) has been accredited by the Department of Labour to register “Authorised Persons”. SARACCA, as a member of that committee is tasked with registering refrigeration and air conditioning practitioners.

The association participates in several forums where industry wide issues and requirements are discussed e.g. Master Builders South Africa (MBSA), Contractual and Legal Committee (CLC), SAQCC Gas, JBCC Technical Committee on contracts, the Pressure Equipment Regulations Forum (PERF) and the South African Bureau of Standards (SABS) on Duct Manufacturing, Installation and Refrigeration.

South African Refrigeration & Air Conditioning Contractors Association
Barney Richardson, Director, barney@saracca.co.za
The safe handling of LP Gas equipment

Whether you use gas in your home, on holiday or in your business, it is important to understand the regulations around the safe handling of Liquefied Petroleum Gas (LPGas).

In the South African context, Liquefied Petroleum Gas (LPGas) is a popular energy source due to the fact that it is versatile, efficient and safe to use.

Domestically, LPGas can be used for a variety of day to day functions but most frequently for cooking, water heating and space heating.

LPGas can be supplied directly to homes from a bulk tank, via a network of piping (in specific, demarcated areas) or bottled in cylinders.

The LPGas Safety Association of South Africa (LPGSASA) promotes the safe use of LPG as through the adherence to best business and safety practices.

There are three main areas which home owners need to be aware of:

The appliance

Only appliances which have a valid verification permit issued by the LPGSASA may be distributed, sold or installed.

For a complete list of such appliances visit: http://www.lpgas.co.za/safety/find%20a%20safe%20appliance/Search_Appliance.php

The cylinder

Ensure you exchange your cylinder, or have one refilled, through a reputable dealer.

Check that the branding/logo on the shrink wrap seal (on the cylinder valve) matches the branding/logo on the cylinder itself.

Visit: http://www.lpgas.co.za/find%20a%20dealer/

The installer

Any installer, whether he/she is required to do the work, must be a registered installer.

Check that the installer has a valid CoC (Certificate of Conformity).

Installations not covered by a valid CoC would be deemed to be illegal.

For a list of Registered Practitioners visit: http://saqccgas.co.za/?s=

LPGas is one of the safest energy products to use. However, incorrect installation or backyard refilling could lead to damage to property or injury.

LP Gas could solve SA’s energy crisis

Energy shortage is a major problem in South Africa, affecting not only citizens, but it is also one of the major reasons that the productivity of businesses is sometimes interrupted.

The Liquefied Petroleum Gas Safety Association of Southern Africa (LP Gas SA) suggests that there is a solution to this energy crisis.

At the recent LP Gas Training Facilities opening, Kevin Robertson, Chief Executive Officer, said, “Liquefied gas has been used in the past for cooking and to produce the necessary energy needed in the household. In this modern age, this same source of energy can be relied on to replace electricity in South Africa”.

In Brazil, the largest consumer of liquefied gas, 13kg cylinders of liquefied gas are delivered in 92% of households every month.

In Africa, countries like Ivory Coast, Uganda and Nigeria have jumped on the bandwagon and are reaping the rewards that come with this energy source.

Government has invested a lot of money in the development of solar energy to replace electricity. LPGas is a natural substance that is a bi-product extracted during the process of oil rigging.

The surplus of liquefied gas makes it much cost-effective. Every household in Europe uses a gas stove. Gas is quite safe, the only thing that needs investing in is the educating of...
The attendance for such an important event as Women in SHEQ was disappointing. I thought that established and leading companies would make use of the opportunity to come and showcase their organisations’ change regarding equal opportunity within SHEQ as a career for women. Numerous speakers at the event echoed requirements on how to build a successful career for women in SHEQ.

Women are considered as super-human - they are able to:
• Create a balance between their work, their lives and families,
• Passionately care for their aged parents,
• Make sure her family eats healthy
• Clean home environment, clothes and ensure the cupboards are stocked

All the above is seen as unpaid labour!

CURBING NEGATIVE IMPACTS AND STILL THRIVING

Mpendulo Ginindza in her presentation, highlighted the career cycles of women in the work environment as follows:
• First career stage - between 2 - 3 years then time to bear children,
• Second career stage - between 3 - 5 years are seen as working to achieve a goal as senior employee, and
• Third career stage - often as manager and later executive manager - never thinking of retiring due to menopause - this stage is literally taken “pause from men” (unquote).

TRENDS IN QUALIFICATIONS AMONGST WOMEN

Carine Mostert, made some stats available to the delegates and revealed that a case study on recruitment conducted in South Africa and internationally indicated the following trends on qualifications that are sought after:

Safety Practitioners (Construction and Industrial):
• 60% - SAMTRAC, 20% NADSAM, 20% not specified, only 10% asked for SACPCMP registration,
• Chief Safety Officers - Mining - NADSAM and SAMTRAC / COMSOC,
• Safety Managers - 70% National Diploma, 30% SAMTRAC or equivalent,
• Safety Executives - All tertiary degrees,

Current international trends:
• Oil and gas – 100% Nebosh,
• Other – degree / relevant qualifications recognised by respective governments.

EMPOWERMENT OF WOMEN IN THE MALE DOMINATED ENVIRONMENT

A re women in general still proving themselves more (understatement - sic) in the male dominated work environment?

“How can we improve our workplace to ensure gender diversity, and empowerment of women - is resilience in the workplace still possible?” This was but a few of the questions asked by the presenter Natalie Taft during her presentation at the conference.

“Yes! persist with what you believe in and want to achieve” (quote S. Shapiro).

There are numerous South African and international women icons to learn from.

Natalie Taft, in one of her presentation slides quoted the driving forces behind integrating and allowing for a diverse working society in South Africa:

• Legislation: Government regulations mandate a certain percentage of women participation:
  - Constitution 1996,
  - Woman’s Charter for Effective Equality 1994,
  - National Framework for Women Empowerment and Gender Equality 2000 etc.,
  - Basic Conditions of Employment Act, Act 75 of 1997,
  - Code of good practice on the protection of employees during pregnancy and after the birth of a child.

Section 8 the OHSACT

Employers are required to provide and maintain a work environment that is safe and without risk to the health of employees.

This includes risks to the reproductive health of employees.

Employers should identify, record and regularly review:
• potential risks to pregnant or breast-feeding employees within the workplace,
• protective measures and adjustments to working arrangements for pregnant or breast-feeding employees.

Business case: integrating women into the workforce leads to an increase in productivity, efficiency, profitability and reliability for mining companies.

Corporate social responsibility: Employing women can lead to communities becoming more
Prosperous and help break cycles of poverty by contributing more towards household welfare and increasing the level of skills in the community.

What mechanism should be used? According to Natalie, a similar programme/commitment as the “Women in Mining programme implemented by Lonmin Mine and International Finance Corporation (IFC)”.

“And the challenges for women in general, pursuing a career”

- The jobs women do and the choices they make still depend largely on their family commitments.
- Women are more likely than men to suffer multiple discrimination at the workplace.
- Women are increasingly affected by musculoskeletal disorders (MSDs) and stress. This puts into question the misconception that women’s work is less physically and mentally demanding.
- Violence and harassment are a particular issue in certain sectors.
- Male type behaviours distinct to the occupation must be considered.
- Lack of real transformation because of male resistance and prejudices.
- Sex-based labour force segregation contributes to different workplace challenges and hazards for men and women.

**OHS stressors!!!**

- Health hazards i.e. psychological, physical, biological, chemical, STRESS and ergonomics. Appropriate PPE designed for women.

**Workplace culture:**

Isolation (working as the only female on a job site or being ostracised by co-workers) may evoke both stress and fear of assault.

**Hostile workplace:**

A hostile workplace presents safety concerns on several levels, ranging from a lack of training and safety information to physical assault. Sexual harassment: Sex discrimination and anti-women

- Sexual harassment incidents at workplaces range from subtle forms such as being stared at to more blatant forms such as unwanted sexual remarks (including comments on appearance) and sexual assault.

- **Are women part of the risk assessment team to address all categories and the challenges facing the diverse workforce?** (quote)

**HAZARD - WHAT IS THE RISK**

- More stressors identified by Bulelwa Huna, Specialist: Occupational Health and Hygiene in her presentation were revealed during her research into the exposure of women to OHS:

**Anaesthetic gases**

Exposure to anesthetic gases during pregnancy can lead to miscarriage.

**Carbon monoxide**

Risks arise when engines or appliances using petrol, diesel and liquified petroleum gas is operated in enclosed areas. Carbon monoxide can result in the fetus being starved of oxygen.

**Antimitotic (Cytotoxic) drugs**

Exposure to antimitotic drugs, which are used for treating cancer, damages genetic information in human sperm and egg cells. Some of these drugs can cause cancer. Absorption is by inhalation or through the skin.

**Ethylene oxide**

Ethylene oxide is used mainly in sterilising procedures in hospital. Exposure may occur when sterilised goods are transferred to the aerator after the cycle is complete and when changing the gas tanks.

**Lead**

Exposure of pregnant and breastfeeding employees to lead affects the nervous system of young children and is detrimental to child development.

**Mercury and mercury derivatives**

Organic and inorganic mercury compounds can have adverse effects on the mother and fetus.

**Polychlorinated Byphenyls (PCBs)**

PCBs can cause deformities in the child. Maternal exposure before conception can also affect fetal development as PCBs can be passed on to the fetus through the mother’s blood.

**Organic solvents**

Exposure to organic solvents including aliphatic hydrocarbons, toluene and tetrachloroethylene can lead to miscarriage and have a detrimental effect on the fetus.

**Pesticides and herbicides**

Exposure to certain pesticides and herbicides is associated with an increased risk of miscarriage and can adversely affect the development of the child.

**Alcohol**

Fetal alcohol syndrome can lead to physical and mental abnormalities in children. Workers in the beverage, catering and associated industries, including wine farming, are particularly at risk.

**WOMEN EMPLOYED IN CORE MINING POSITIONS**

A researched topic at the conference was presented by Dr D Botha from the North-West University on Occupational health and safety considerations for women employed in core mining positions. The research was conducted at:

- Platinum mine (underground)
- Copper mine (underground)
- Phosphate mine (open-cast)

In her introduction Dr Botha informed the audience that her research revealed the following:

- The mining industry has not been an obvious career choice and preferred place of employment for women.
- Mining has been considered as a very masculine industry due to its heavily male-dominated workforce as well as the physical nature of mining work.
- Until 1994, women were legislatively prohibited from being employed in operations underground in South Africa. The Mines Health and Safety Act 29 of 1996 removed these restrictions.
- New mining legislation (MPRDA and Mining Charter) made specific
provisions for the inclusion of women in core mining positions,

- Although well intended, the establishment of gender equality in the male-dominant mining sector remains one of the biggest equity challenges,

- Numerous problems (e.g. shift work, sexual harassment, acceptance by male co-workers, physical constraints),

- Exposed to the various hazards related to mine work:
  - Mechanical hazards (e.g. tools and machines)
  - Physical hazards (e.g. dust, noise and extreme heat)
  - Chemical hazards (e.g. explosives)
  - Biological hazards (e.g. snakebites)
  - Psychosocial hazards (e.g. long and awkward hours; remote locations)

- Empirical Results / Findings were based on the following qualitative questions:
  - I feel safe at work
  - It is dangerous for women to work underground
  - I have the physical ability to conduct my daily tasks effectively
  - It is safe for women to work night shift
  - PPE are inadequate and women friendly
  - Pregnant women are provided with alternative employment

The quantitative information obtained:

- Women have the physical ability to do their jobs well, but

- The work is tough and not easy to perform (especially underground),

- They do not always have the physical strength, power and stamina required for specific positions,

- They want to prove themselves and often neglect their bodies to do their jobs well,

- ‘I don’t have the steam to work at the position that I am working at.’ ‘I am not strong enough’,

- The operating of heavy vibrating equipment and machines.

Hopefully these research results will be shared with the relevant authorities.

ESKOM’S WOMEN’S ADVANCEMENT PROGRAM

One of the most significant contributions at the conference was the Eskom Women’s Advancement Programme (EWAP) presented by K erseri Pather. The EWAP can be obtained from the ESKOM website.

In the context of her presentation she mentioned that a number of challenges which women face in the workplace are also seen as the barriers to women’s advancement.

The following statements made by K erseri during her presentation:

“Eskom believes that attracting, retaining and promoting women is critical to the success of our organisation. Having a rewarding career that offers growth and opportunity is an important aspect in many women’s lives. Knowing one’s strengths and taking steps to continually develop play a role in ongoing career satisfaction.

In order to deal with the root causes of under-representation it is therefore critical to have a holistic view of these barriers and ensure that the solutions cover a wide range of challenges.

While Eskom has made major progress in the development and advancement of women in both technical and leadership roles, the harsh realities of under-representation still persist.

The Eskom Women Advancement programme is a holistic approach aimed at “breaking the mould” that is based on perceptions of and about women that perpetuate misrepresentation of women in leadership and technical roles. It is a deliberate attempt to influence the culture such that leadership support for EWAP exits, that the programme is inclusive and involves all key stakeholders, men in particular and that the stereotypes are changed.

The programme was launched in 2014 marking 20 years of South Africa’s democracy and 20 years of the
The Ernst & Young’s Women in Power and Utilities Index 2016’s global list of the top 20 most gender-diverse Power and Utilities companies ranked Eskom at 6th place.

In addition, the list of the top 200 Power and Utilities companies with the most gender diverse workforces in the Africa and Middle East region also placed Eskom at 6th position.

Eskom’s investment in women’s advancement through mentorship and leadership development has included:

• Techno girl programme and ablution facilities for women in live line projects,
• PPE procured to suit women in the workplace,
• Women in Nuclear: Appointed 100 learners to be trained as Nuclear Operators at Koeberg; 40 of them are women,
• Regional EWAP launches and yearly conferences,
• Mentorship and coaching initiatives for young women.

This final thought is taken from Natalie Tait’s presentation:

**WOMEN IN SHEQ CAN:**

• Ensure a gender sensitive approach to risk assessments and health risk assessments,
• Use gender sensitive research, review tools such gender impact assessments and gender sensitive monitoring and data collection systems to influence strategy, policy, process and material,
• Facilitate networks and partnerships for exchanging good practices between women and others,
• Involve female workers and decision makers in the implementation of solutions,
• Listen to women and involve them in risk assessment and the development of prevention measures through participatory approaches,
• Encourage woman to be part of health and safety committees and quality circles.

**THE PANTERAT™ - SOFTSHELL 2 JACKET**

Sparks and Ellis Uniforms has launched The PanteraT™ - a Softshell 2 jacket, which effectively replaces both a jersey and a warm jacket.

The PanteraT™ is locally manufactured to meet specific client requirements. This lightweight jacket is warm as well as wind and water resistant. The outer fabric is smooth, easy to clean and exceptionally durable. It is also stylish and suitable for a variety of different working environments such as traffic, security, combat and EMS uniforms.

Features include top mock pocket flaps with press studs. It also has a shirt style collar, as well as shoulder straps for epaulettes. A unique feature is the inclusion of zips in the side seams, which allows easy access to a itema, such as a weapon or a radio.

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It is the only system proven to reduce TOC by up to 50%, as it controls all aspects of PPE, including issuing, use, application, calibration, training, product versus job specification and stock control.

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**AVOID HEAT STROKE WITH DYNAFORCE REHYDRATION DRINK**

Dynaforce, which is developed by North Safety, is a rehydration drink that replenishes the body of essential nutrients for those working in hot environments.

It is available in four different flavours, including naartjie, tropical, blueberry and cherry grape. “The drink, which comes in a 60 g, 240 g and 25 kg bulk pack, has a potassium content that exceeds that of other similar drinks.

The benefit of this is the positive fluid retention effect that the potassium exerts at a cellular level. The powdered drink carries various other vitamins and minerals and has no preservatives. It is available at all North Safety branches.

North Safety Products Africa, Contact Lizette Kasselman, T: (031) 705 6085 / Email: marketing@northsafety.co.za www.northsafety.co.za
Leighton Bennett of Benrisk Consulting is a SHE and Risk Management consultant who is both a professionally registered safety professional and graduate, a professionally registered associate in risk management and is the author of PEPM ELF based risk assessment process. Leighton is also a freelance underwriting insurance surveyor.

As a professional SHE & Risk Management Consultant, I am regularly requested to attend meetings on company premises to discuss and to advise on SHE related matters.

As a passionate practitioner one enters premises and naturally observes the level of OHS of the site on a continuous risk assessment basis. It’s in our blood!!

But then one spots the issues. Below are sightings that I responded to, while on a premises for a meeting, as these two observations are potential fatal incidents waiting to happen.

**Observation one**

A shade-poor construction contractor’s inverter welding machine which had been used, but its condition presents an electrocution fatal waiting to happen. No insulated electrode holder handle, exposed wires on the power supply plug cable (arrowed) and the welding cable pictured is loose, but earlier was pushed onto the electrode cable socket on the welder.

I immediately informed the company management who believed it would not be a problem for them if a guy died as they are contractors. I informed them they would be in trouble as the fatal would be on their site and there were no Construction Regulations related health and safety specifications, plans, etc in place for this shade-poor project. The defective welder was immediately loaded onto the bakkie for removal from site.

**Observation two**

During a meeting break we went to the refreshments area in the building’s ground floor atrium area for a cup of tea. Looking up into the atrium I spotted a box waiting to cause a possible fatal falling risk incident. Can you see the risk?

The box is on top of some filing cabinets standing adjacent to the handrail a few floors up above the refreshments area. The box has been pushed to the back of the filing cabinet such that almost half the box hangs over the edge. A paper filled document storage box weighs some 20 kg and if it falls onto somebody’s head in the refreshment area the consequence is a likely fatal. I suggested to my host to have the box removed immediately.

What have you seen and done to improve safety today?
MICROCHEM® by AlphaTec™ 68-4000:
Heavy-duty hazmat suit. Permeation tested against over 190 chemicals with textile-like inner lining that improves comfort.

AlphaTec® 58-435:
Our AlphaTec chemical glove is engineered with Ansell Grip Technology™ and provides optimal control when handling oily or wet items and features a cotton flocked liner to help manage perspiration.

Ansell is a global leader in protection solutions with a comprehensive portfolio of gloves and clothing engineered for chemical protection.

For details, visit www.ansell.com/en/equipped
Alcohol and Drug testing specialists
Industry leaders for over 40 years, find out why over 5000 businesses trust our products and expert level support in policy development, legal advice and after sales service.

High speed testers capable of testing high volumes of people at site entrance/exit points and portable instruments with digital readouts for use at remote sites providing immediate printed evidence.

**AlcoBlow® Rapid Test**

Strongest and fastest breath alcohol tester on the market. AlcoBlow Rapid Test requires the smallest breath sample and ensures accurate results first time, every time. Results are obtained within seconds. Very economical operation, no disposable mouthpieces are required. The subject simply blows into a cone at the end of the instrument.

**LION ALCOLMETER® 600**

The Lion Alcolmeter® 600 and its printer have a touch screen display, for entering names, surnames and ID number of test subjects for printing and record keeping.

**LION ALCOLMETER® 500P**

Can be used alone or in conjunction with its printer.
It now has cup test mode to allow PASS/FAIL testing reducing the need for mouthpieces on every test.

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3 step saliva and urine testing capable of testing people at site entrance/exit points and portable instruments with digital readouts for use at remote sites providing immediate printed evidence.

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Message from the President

Joep Joubert

A Good Day to all Members of IOSM!

Summer is upon us after a very short spring and by the time you read this we should be in the rainy season, which we are hoping will be more productive than what the weather forecasters are predicting!

The wet season brings with it its own risks, not least of which are wet roads with the potential for vehicle accidents. On the other hand a dry season also has risks, all of which the occupational health and safety practitioner have to anticipate and try to minimise. The moral of the story is that it does not matter what the weather is like, what the season of the year or whatever your business is, the OHS practitioner always has to be vigilant and anticipate the potential for harm and try and minimise it!!

KZN BRANCH

I recently had the honour of again attending a meeting at our KZN Branch.

Arty Zondi and the Branch have to be commended for keeping the branch going and doing such good work for the Institute down in the KZN Coastal area.

Their pre-programme with the National Diploma in Safety Management Students is ongoing, and they are even reporting cases where learners got positions based on the extra work that was done. Congratulations KZN!

I shared a bit about the latest developments at National Level as well as specifically the QCTO qualification,

QCTO QUALIFICATION

The QCTO eventually got around to publishing the Occupational Certificate for Occupational Health and Safety Practitioners for national comment.

You will have seen our e-mail shot in that regard.

The IOSM submitted some comments based on the allocation of credits as well as concern about fire and first aid training standards that were not included in the qualification.

A serious concern raised was the fact that in the same Gazette a qualification for a Safety Inspector in Forestry and related industries was also published for comment. The content of the qualification is good, but it does beg the question of proliferation of qualifications again.

It also brings into question the credibility of both development processes that were followed. The QCTO will now evaluate the inputs and based on that will decide on the process going forward.

NATIONAL COUNCIL ELECTIONS

As you will be aware we held electronic elections for the new National Council over the past few months and the following people were elected to National Council:

1. Joep Joubert
2. Leighton Bennett - co-opted
3. Vaatjie Heyneke
4. Andy Douglas
5. Frankie Arce
6. Richard Wittaker
7. Arty Zondi - co-opted
8. Thandeka Zulu
9. Deline Sheasby - co-opted
10. Thomas Xaba - co-opted
11. Drienie Boonzaaier
12. Annemarie Gordon

Some of the NDSAMN students

More than 40 people attended the meeting again

E-mail: admin@iosm.co.za / Tel +27 12 661 5166 / Website: www.iosm.co.za
Changes to the South African OHS training landscape - the sequel

by Joep Joubert

BACKGROUND

And so it happened! The QCTO published a number of new qualifications for comment in Government Gazette No. 40224 dated 22 August 2016. The qualifications are available for scrutiny on the QCTO webpage at the following link: http://www.qcto.org.za/index.php/for-public-comment. Comments closed by the 12th of September and a number of bodies submitted responses.

Should the comments not be too exhaustive and far reaching, the qualification will be put before the QCTO Council first, hopefully somewhere in October and then it will go before the SAQA Board for final approval by late November, early December. Thus if all goes well, the new qualifications could be registered before January 2017. This means that the change is closer than we think and we need to start preparing for it!

This article will be delving a bit deeper into the content and approaches as applied by the QCTO in drafting the new generation qualifications. It also touches on another OHS qualification submitted by the Fibre Processing and Manufacturing SETA, which corresponds substantially with the qualification developed in conjunction with the MQA.

STRUCTURE OF QCTO QUALIFICATIONS

As indicated previously there are substantial changes to the old unit standard based qualifications. For a learner to acquire a QCTO qualification, he/she would have to go through the knowledge component, which is packaged in a modular format, rather than a skills package as found in the unit standards.

The knowledge component is supported by a practical component which is done under the supervision of the facilitator. This component takes place in controlled conditions so it could be in the training venue or in the workplace. It could take the form of role plays, simulations, mock exercises or any other controlled practice.

The third and final component in the learning journey is the workplace experience component. This is exactly what it says in that the learner is expected to go to the workplace and complete the prescribed actions to build up some experience to be able to do what is required of him/her. This is conducted in an approved workplace under approved supervision and will invariably include the maintenance of a logbook and compilation of a Portfolio of Evidence (POE) to prove that the learner did acquire the required skills.

QCTO APPROACH TO ASSESSMENTS

Assessments in the new dispensation will be based on a two-tiered approach. Firstly there will be the internal assessments that will take place through the skills development provider. Based on good assessments practices, this will take the form of pre-assessments, formative assessments and then a summative assessment covering the knowledge, practical skills and the workplace experience, to ensure the learner is ready to go for external assessment.

With this qualification it was decided that the final integrated assessment will be done in the form of a written assessment conducted under exam conditions. This is an external assessment done through the Assessment Quality partner. The assessment will last plus minus four hours and will cover key elements of the theory and practical skills.

Once successful, the learner will be issued with a QCTO certificate.

OCCUPATIONAL CERTIFICATE: OCCUPATIONAL HEALTH AND SAFETY PRACTITIONER

This qualification exits at NQF Level 5 and carries 256 credits. Upon completing the new qualification a successful learner will be able to:

- Inspect workplaces and environments to identify the occupational health and safety hazards and determine the risks associated with the work,
- Facilitate and support actions to eliminate or control hazards in order to minimise risks in a designated work area,
- Represent the needs of employees with regard to Occupational Health and Safety matters.
• Participate in the planning and implementation of operational occupational health and safety management systems.

• Monitor and continually improve the effectiveness of operational Occupational Health and Safety systems.

In this case the knowledge modules will carry 76 credits, the practical skill modules 62 credits and the work experience modules 118 credits that add up to the 256 credits in total for the complete qualification.

Within the qualification as it was gazetted for comment there are two part qualifications besides the main qualification: firstly for the Occupational Health and Safety Representative, NQF Level 2, Credits 47 and the second called Full Time Representative/OHS Assistant, NQF Level 3, Credits 59. (The descriptions and credits for these differ between the Qualification and Curriculum documents as published). One can expect learning to be packaged in such a way that learners will progress from the first, through the second, up to completion of the outstanding modules for the complete qualification.

As there is a lot more detail in the published documents it is highly recommended that readers have a look at the documents published on the website. (http://www.qcto.org.za/index.php/for-public-comment).

OCCUPATIONAL CERTIFICATE: SAFETY INSPECTOR (FORESTRY AND RELATED INDUSTRIES)

Another twist in the tale of the development of OHS qualifications is the publication for comment in the same gazette, of an Occupational Certificate: Safety Inspector for Forestry and related industries, NQF Level 4, Credits 278. This qualification was developed by the Fibre Processing and Manufacturing SETA, clearly because they identified the need for such a qualification. It does, however, raise the question of proliferation of qualifications and the process of consultation of both these qualifications.

A successful learner in this case will be able to:

• Implement, maintain and review the specific elements of the forestry and related industry company safety systems to promote a safe and healthy work environment free of hazards and risks,

• Identify, monitor and mitigate hazards and risks in the forestry and related industry workplace to minimise and control potential for injury and loss,

• Manage incident scenes, coordinate emergency response and take part/assist in incident investigations to identify and determine compliance with safety, health and environmental rules and regulations and implement preventative measures,

• Enforce statutory (legal) and forestry and related industry company compliance requirements through inspections, first party audits and structured meetings,

• Conduct an appreciation of all operational, chemical and mechanical tasks and activities of a forestry and related industry company to determine compliance with legislation.

• Conduct elementary Safety Health and Environment (SHE) activities in the forestry and related industry workplace to promote a safe and healthy work environment.

WHAT NOW?

We will have to wait and see how the QCTO will be dealing with the comments they received. If the comments are considered serious, it may lead to the qualifications being referred back to the Development Quality Partners for re-work; alternatively comments could be worked into the qualification, and submitted to SAQA immediately for final approval and registration.

As indicated initially, the quickest possible scenario could mean that the new qualifications are registered by SAQA before the end of the year. From there it will depend on the skills development providers on how quickly they can develop and package the training and register themselves and the qualification with the QCTO.
Bridge over troubled waters - or designing for safe construction

Don’t worry, I’m not about to break into song – even though it is a beautiful one!

This picture popped up as a screen saver a couple of days ago and I asked “Google Images” to tell me where the lovely bridge and causeway is. Gaztelugatxe (from the Basque gaztelu = “castle”, “fort” and gaitz = “difficult”) is a small island on the rough coast of Biscay. It is uncertain whether the “difficult” refers to the ability of the “fort” to withstand attack or the challenge of building the causeway and its bridges. The little chapel on the summit was built in the 10th century and, it can be assumed that the bridge was built at about the same time, and certainly before Drake sacked it in 1593. Either way it’s old and definitely predates the requirements of the 2003 Construction Regulations.

So why am I rambling on about the “craggy fort”?

Back “then” - whenever “then” was - there was no legal requirement for the designer and/or builder to take care over the safety of the workers. Since the original building on the island’s summit has religious connections, it might be assumed, though, that the client was concerned about more than just the spiritual welfare of the workers.

So it might be a safety conscious client or merely a builder’s desire not to have to rebuild his work after every storm or even high tide that drove the construction detail revealed in the columns below the arches. Imagine trying to build these with (timber) scaffolding built on the lower level - which may even have been the original fair weather/low tide causeway - to carry the timber support work for the placing of the arch and keystone blocks. Every time the tide came in or large waves swept over the base, the support work would have been washed away with the possibility of the loss of both life and property. So the design of both the structure itself and the temporary works would, at least from 2003 in South Africa, have had to take this hazard into account.

If you look carefully, there are masonry steps at the base of the arch and again about four courses below that. These would have been part of the original design since they obviously are not temporary. So why are they there?

In the picture below, I have tried to represent what I believe the answer is. With no erection of temporary works from the base level being possible, the curved falsework for the arch itself might well have been supported off the upper block as indicated in red.

The timber arch formwork would not have been light, considering the weight of masonry it had to support, but would still have required additional “propping” until the keystone was installed. However, as indicated earlier, such propping could not have been from the base.

The solution, I surmise, would be diagonal propping from the masonry blocks at the lower level - as indicated in black in the second picture!

So simple with a thousand years of hindsight but it would have required cooperation between designer and contractor from the outset - or perhaps it was a design and build contract, in which case, the collaboration would seem a little less unusual.

Either way, it’s pretty obvious that there is no need for “out of the box” thinking when it comes to designing for safety, simply some thinking on the part of all the players so that you can “see how they shine”.

The designer may have even sung to the contractor, to the strains of an ainhoarrak (even though the guitar wasn’t “invented” till at least 200 years later);

“If you need a friend, I’m sailing right behind; like a bridge over troubled water, I will ease your mind.”

With cooperation like that, the designer and contractor could have been as famous as Simon and Garfunkel!
INCIDENT INVESTIGATION MEETING

1. We have called this meeting today, because we need to provide proof to the Department of Labour that Peters' medical files were in place without any abnormalities at the time his accident took place during the night shift last week.

2. They are looking for the calibration certificates of the equipment used when Peter's last medical was done, as well as proof of the qualifications and registrations of the people who performed the medical and signed off on it.

3. I am so sorry, but I do not have these things...

4. I had no idea I needed to ask for these things before choosing a company to do our medicals and now it is too late, because they cannot give me these things, they do not have it all in place...

Now Peter's company runs the risk of getting a huge fine by the Department of Labour following the incident investigation and a visit from the Inspector, Department of Labour.

Mr. She-Rep of the company has no idea how he will provide for his wife and kids should the company decide to terminate his services, because he was not educated about the legal requirements of medical examinations.

Don't compromise on medical surveillance, it affects more than just your worker.
News from SAIOH

DEAR SAIOH MEMBERS,

In the May/June issue of National Safety magazine, we focused on SAIOH’s new office bearers and SAIOH’s strategic direction for the future. With this issue, the time is right to report on the new SAIOH registration and assessment process for Professional Certification.

Ms Julie Hills, the chairperson of SAIOH’s Professional Certification Committee (hereafter referred to as the PCC), jointly with members of the PCC, have put in a lot of effort and hard work in revising and improving the registration and assessment process.

REPORT FROM SAIOH’S PROFESSIONAL CERTIFICATION COMMITTEE ON THE NEW REGISTRATION AND ASSESSMENT PROCESS FOR PROFESSIONAL CERTIFICATION

Report by Jaco Pieterse - SAIOH President 2016 and Julie Hills - Chairperson of SAIOH’s Professional Certification Committee

Introduction

During 2014 and 2015, members of the SAIOH Professional Certification Committee (PCC) worked tirelessly to upgrade the assessment system. Gaps in knowledge, lack of support materials for members and the resulting failure rates in the written and oral assessment process prompted the changes.

New tools and guidelines have been introduced to support knowledge and competence growth for SAIOH members, both during and after registration, at the various professional levels.

Several new processes have been implemented and it is imperative that all members make themselves aware of the changes and new requirements. These are being implemented during 2016 and will be a requirement for Continued Professional Development (CPD) claims, from January 2017.

Registration and upgrade requirements

1. The skills definitions, self-assessment tool and user guide

The first and most important change is the introduction of the Skills definitions and the self-assessment tool and user guide.

This tool is basically a detailed syllabus of the skills and level of knowledge and practical competence required at each level of registration.

All SAIOH members must fill in the tool and keep an electronic copy in their electronic Personal Learning Portfolio (PLP) file. This tool aids developing members to understand their suitability for assessment and provides a gap analysis for identification of weaknesses requiring further work, or learning to meet minimum entry requirements.

For registered Occupational Hygienists this tool provides supporting evidence for their annual CPD claims.

2. Mentorship guidance and support

SAIOH has produced a Mentorship guide to support a volunteer system for both internal supported trainees and unsupported trainees looking for guidance.

Natural supervisor / manager relationships and internal skills development systems are acceptable and records kept as part of this relationship for SANS 17020 requirements naturally fulfil the requirement. Unsupported trainees may request support of a mentor via the SAIOH administration.

SAIOH is building a register of volunteers willing to mentor unsupported candidates; however, careful selection of mentors is hindered by the need to avoid bias or conflict of interest in the assessment process, where potential mentors are Trained PCC Oral Assessors – this is under review and will be finalised shortly.

The Mentorship guide provides ideas, identification of information and advice to both the mentor and the mentee and should be used to support the relationship.

The results from the self-assessment tool described above in point 1 aid the mentor to understand weaknesses and knowledge gaps and to formulate the most effective action plan. Paperwork and agreements can be kept in the PLP file and used to support CPD claims, as both mentors and mentees can claim CPD points where the relationship is formalised.

It is however important to note that mentorship is not training or education! It is support and guidance of the mentee.

3. The Personal Learning Portfolio (PLP)

The PLP is basically a detailed record-keeping system for proof of mentorship, training, experience and development. Each member must have an active PLP file and update records accordingly. The PLP becomes the evidence file for CPD claims as well as an advisory tool for the PCC assessors in understanding candidate work history and practice when applying for registration, and may in future replace the need for oral assessments.

The PLP guide lists minimum required content, including:

• Copy of the candidate skills assessment record
• Internal and external training records
• Proof of attendance at meetings and conferences, etc.

Examples of record templates are provided in the appendices of the PLP guide to be completed by candidates and their managers, mentors or trainers.

Present record systems used by AIAs as part of their SAN S 17020 Quality Management System (QMS) can be substituted for the suggested templates where these are available. It is not intended for the system to create additional work.

4. SAIOH guidance and learning tools

SAIOH is not an educator; it is not the Institute's responsibility to teach Occupational Hygiene to its members! The assessment failure rate has however identified gaps in knowledge and the need for support materials and guidance on information sources and how these can be accessed.

Basic tutorials, information links, articles and reading materials relating to both core and periphery skills are constantly being added to the SAIOH website.

New guidance notes on preparing for both written and oral assessments have been developed and are available on the website; these are sent out to all candidates prior to assessment.

New quizzes are in the process of development and will be rolled out during 2016 (CPD points are allocated for completion of these!).

All guides and support materials are available to download from the SAIOH website or can be requested from the PCC administrator.

5. Continued Professional Development (CPD) Requirements

Revision of the CPD points claimable during 2015 led to some problems and the PCC is currently working to ensure that the points system is fair and easily understood.

It is important that all forms of practice and skills development potential are recognised, and that members feel that the process is fair and user friendly. The new process involves specific teams reviewing various types of practice, including practical Occupational Hygiene, lecturing, inspectorate, etc., and both internal and external training and development are included. The final draft will be sent to all active PCC members for comment in due course.

Proof of evidence for points claimed will be documented in the members PLP file as part of the new process.

CONCLUSION

From the President and on behalf of SAIOH, sincere thanks and appreciation go to Julie and the members of the PCC, who assisted in revising and improving the registration and assessment process for Professional Certification of Occupational Hygiene practitioners. It needs to be emphasised that this initiative is also in line with SAIOH’s strategic objectives, in developing and fostering growth of the Occupational Hygiene profession in Southern Africa.

Please do not hesitate to contact Julie, should there be any enquiries regarding the new registration and assessment process. I offer my sincere thanks and appreciation to Julie for this report.

Jaco Pieterse - E-mail: saiohpresident@saioh.co.za
Julie Hills - E-mail: julieh@saioh.co.za

All in a day’s work for an occupational hygienist

Early morning start! I set off early to get to the site - today was the start day of the three month asbestos roof sheeting removal project and there was a long distance to drive. The plan had been submitted fourteen days before and all was good for “go”. Here in the Western Cape the fourteen day notification period to the Department of Labour (DOL) is strictly upheld. Don’t dare start a day earlier! As it should be...

I got to the said site and it appears that I was late. But was only eight in the morning???? How could I be late? The...
agreed time to do the pre-site inspection was eight AM. Over a thousand square meters of asbestos roof sheeting had already been removed. Maybe I was at the wrong site? I had not worked with this particular Registered Asbestos Contractor (RAC) before but I recognised his bakkie from our meetings and knew I was at the right place.

Then I saw the rest. The labourers where high up on the roof working like cowboys! Not a pleasant site for the Approved Inspection Authority for Asbestos (AAIA). The supervisors / owner came running over.

"Hi Clint", "You must have got here real early this morning to have already removed so much asbestos roof sheeting" I said.

"Oh no" said Clint, "we started a week ago".

"Really?" I said, dumbfounded. "But we agreed to the plan that work starts today and that we would do a pre-site inspection to ensure that all is in order before we start. This is in accordance with the asbestos plan that you agreed to and signed, that was also submitted to DoL?"

"Oh no" said Clint, "that is just a guideline".

"Eh really?" Now I was very concerned, what had I been doing for the past thirty years?

"But Clint, it is a legal binding document that we have to stick to?"

"No not really mam! It is just there to guide us".

"Really Clint, after 30 years in this field, I was unaware that the asbestos plan is only a guideline".

"Yes mam".

"Clint call your labourers down from the roof".

Like trapeze artists, they swung down. I reckon they trained with the circus! "Let’s go through the information in your health and safety file".

"Sure thing mam".

"Clint these medicals don’t state that asbestos medicals have been done by an occupational medicine practitioner for a labourer identified as an asbestos worker".

"M am as long as a Doctor has checked them over, you’re good to go".

"Eh?” was all that I could splutter ...

"Let’s look at your asbestos training certificates then. I see that the training was carried out by ‘All Inclusive Company’, who are they?"

"They are a really good one stop shop!" said Clint.

"Can you show me the contents for this training course?" I asked Clint.

"Sure thing mam" - pulling out another document.

"Clint your training was provided by ‘All Inclusive Company’, but your training course content comes from a company called ‘Let’s do this’, how does this fit?"

"Oh patartoes or potatoes, what’s the difference" said Clint.

"Eh??????" Is all I could manage again.

"Clint the work cannot go on, and what’s more, what you have done so far has been illegal and in contravention of the asbestos plan and requirements of the DoL" I said.

"Illegal???, what do you mean?" said Clint, horrified.

"Illegal???, what do you mean?" I repeated, "asbestos training had been carried out. We set a new date for the start of the project and this time, they started on the correct date according to the approved plan of work. Clint and his trapeze artists’ approach to safety and health and handling of asbestos containing material had improved tremendously. I was now proud to be associated with them and enjoyed working with them from then on.

Sometimes, we as AIAs can change a situation with a little more patience and providing some guidance. It’s a good feeling considering that you may have saved someone from a fatal occupational disease.

Over the years, our company has learnt that we are going to come across RACs who really think that they are doing the proper thing. Perhaps they have been mislead through incorrect training?

Yes, we do have to stop work at times. In the past we would want to walk away and not be associated with them at all, due to wasting our time and difficulty convincing an upset RAC. However if we inform and uplift them with proper training, we can only improve the situation for the asbestos workers, the client and community.

A reluctant Clint and the trapeze artists bundled into their bakkie and rode off into the West.

A few days later they contacted us again as the AAIA. They now had the correct medicals and the correct asbestos training had been carried out. We set a new date for the start of the project and this time, they started on the correct date according to the approved plan of work.

Clint and his trapeze artists’ approach to safety and health and handling of asbestos containing material had improved tremendously. I was now proud to be associated with them and enjoyed working with them from then on.

Sometimes, we as AIAs can change a situation with a little more patience and providing some guidance. It’s a good feeling considering that you may have saved someone from a fatal occupational disease.
AFRICA’S LEADING OCCUPATIONAL SAFETY & HEALTH EXHIBITION

A-OSH EXPO
SOUTH AFRICA | 2017

30 MAY - 01 JUNE 2017
GALLAGHER CONVENTION CENTRE, JHB

2,600
PURE VISITORS

226%
INCREASE IN AFRICAN VISITORS COMPARED TO 2016

75%
OF VISITORS EITHER INFLUENCED OR MADE PURCHASING DECISIONS

34%
VISITORS CAME TO SOURCE SOLUTIONS & PRODUCTS

18%
OF VISITORS WERE MDS / OWNERS

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The retention of health and safety (H&S) documents

ISO 15489-1:2001 defines records as “information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business”. All records, despite their retention period, must be easily accessible (managed) and kept in a secure, dry and fire proof establishment, either internally (archive room) or externally (commercial storage areas).

The most H&S documents that need to be retained fall under employment records. Legally the following H&S records should be retained:

The COID Act No. 130 of 1993 states that all employee records for time worked, overtime, earnings and payments must be kept for 4 years.

The OHS Act No. 85 of 1993 states the retention periods seen in Figure 1.

Suggestions for the retention of documents would be to keep incident/accident records for at least 10 years and to keep all training records, either in-house or external training for the duration of employment, plus a further 2 years.

All project specific H&S Files are to be kept for at least 3 years after completion of the project. The documentation in these files would consist for example of Section 37.2 appointments of contractors, letters of good standing, appointments of competent supervision with CV’s, method statements, risk assessments, safe work procedures, inductions, toolbox talks, meeting minutes, inspections and audits, fall protection plans, control of HCS, temporary works design and control, emergency procedures and drills, checklists for excavations, PPE, facilities, tools, plant and scaffolding.

In conclusion it is evident that there are very few legal requirements when it comes to the retention of H&S documentation, or records. Companies do however, are required to ensure they are aware of possible client requirements, as stipulated in tenders or H&S specifications. The retention periods of all other H&S documentation or records can be determined by company policy after a proper risk analysis has been completed. After any retention period, all documents or records should be destroyed and disposed of in a responsible, environmentally friendly way, recycling where possible.

All companies have documents no matter the size of the company. These documents can be divided into a hierarchy and different laws and regulations apply to the retention and / or review of these documents. General examples of documents would be policies, objectives, manuals, legal documents, and records. Usually only documents that are regarded as records need to be retained, as such a document is a seen as proof of an action.

<table>
<thead>
<tr>
<th>Document</th>
<th>Legal reference</th>
<th>Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>All employee medical surveillance records – base line audiogram included</td>
<td>Noise induced hearing loss Regulations, 2003</td>
<td>40 years</td>
</tr>
<tr>
<td></td>
<td>Lead Regulations, 2001</td>
<td>40 years</td>
</tr>
<tr>
<td></td>
<td>Hazardous Biological Agent Regulations, 2001</td>
<td>40 years</td>
</tr>
<tr>
<td></td>
<td>Asbestos Regulations, 2001</td>
<td>40 years</td>
</tr>
<tr>
<td></td>
<td>HCS Regulations, 1995</td>
<td>30 years</td>
</tr>
<tr>
<td>Noise monitoring and all assessments</td>
<td>Noise induced hearing loss Regulations, 2003</td>
<td>40 years</td>
</tr>
<tr>
<td>Air monitoring and all assessments</td>
<td>Lead Regulations, 2001</td>
<td>40 years</td>
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<td></td>
<td>Hazardous Biological Agent Regulations, 2001</td>
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<td>Asbestos Regulations, 2001</td>
<td>40 years</td>
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<tr>
<td></td>
<td>HCS Regulations, 1995</td>
<td>30 years</td>
</tr>
<tr>
<td>All health and safety committee appointments, meeting minutes and recommendations</td>
<td>General Administrative Regulations, 2003</td>
<td>30 years</td>
</tr>
<tr>
<td>Records of incidents / accidents</td>
<td>General Administrative Regulations, 2003</td>
<td>3 years</td>
</tr>
</tbody>
</table>

Figure 1: Retention periods
NOTICE OF CORRECTION IN TERMS OF SECTION 27(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, READ WITH REGULATION 3(4)(a) OF THE GENERAL SAFETY REGULATIONS

I Tibor Szana, duly designated by the Minister of Labour in terms of section 27(1) of the Occupational Health and Safety Act 1993 as Chief Inspector for the purposes of the aforementioned Act, and acting in terms of the powers and functions conferred upon me by Section 27(2), and those assigned to me by the other provisions of the Act, hereby give notice that as from the date of this notice, all applications for approval from a person or organisation who wants to provide first aid training approved by the Chief Inspector, as referred to in Regulation 3(4)(d) of the General Safety Regulation published under Government Notice R1031 of 30 May 1986 will only be considered if it is accompanied by a valid accreditation certificate issued by the Health and Welfare SETA (HWSETA) established in terms of section (1) of the Skills Development Act, 1998, and has been authorised by the Chief Inspector to carry out such accreditation.

Those already registered with the Department of Labour, will after the promulgation of this notice, be granted 12 months to be accredited with HWSETA. All service providers who fail to register within the given period will be automatically de-registered from the Department of Labour database and will no longer be recognised as legitimate service providers.

Tibor Szana
The ABCs of fall protection

When selecting fall protection equipment, three components make up a complete fall protection system. These are the ABC's of fall protection:

- **ANCHORAGE**
- **BODY SUPPORT**
- **MEANS OF CONNECTION**

Each one must be in place and properly used to provide maximum worker protection.

While each of these components is vital to worker safety, the connecting device is the critical link in assembling a safe fall protection system since it bears the greatest force during a fall. Careful consideration must be given to the selection, materials, construction and inspection/maintenance of fall protection equipment before, during and after a connecting device has been selected.

**ANCHORAGE**

An anchorage, as defined by OSHA, is a secure point of attachment for lifelines, lanyards or deceleration devices. ANSI Z359 defines anchorage as a fixed structural component such as a beam, girder, column or floor that can support the forces exerted in arresting a fall, and introduces the term “anchorage connector” to refer to the component by which the connecting device is coupled to the anchorage. It may be a beam anchor, cross-arm strap, D-bolt, hook anchor, tripod, davit or other secure device that serves as a point of attachment for lifelines, lanyards or deceleration devices.

Anchorage and anchorage connectors must be independent and capable of supporting 5,000 lb per employee attached, or designed, installed and used under the supervision of a qualified person as part of a complete personal fall arrest system which maintains a safety factor of at least two. They must also be located high enough for a worker to avoid contact with a lower level should a fall occur.

**BODY SUPPORT**

A body support, or body wear, is the component that is worn on or around the torso. Body belts and full body harnesses are the two most common body supports.

- **Body belt**
  A body belt is a belt that circles the waist and is used for worker positioning and fall prevention. A body belt may be supplied with D-rings on the hips and/or middle of the back. A body belt must NEVER be used for personal fall arrest.

- **Full body harness**
  A full body harness is a body support device that distributes fall arrest forces across the shoulders, thighs and pelvis. Full body harnesses have a center back fall arrest attachment for connection to the fall arrest connecting device and may have other D-rings for use in worker positioning, fall prevention, suspension or ladder climbing.
  - The only form of body wear acceptable for fall arrest is the full body harness.
  - Full body harnesses should be selected based on work to be performed and the work environment.
  - Front D-rings on full body harnesses are used only for ladder-type fall arrestors, work positioning, travel restraint or rescue.
  - Side D-rings are for positioning only.

**CONNECTION**

The connecting subsystem is the critical link which joins the body wear to the anchorage/anchorage connector. It can be an energy absorbing lanyard, fall limiter, self-retracting lanyard, rope grab, or retrieval system.

Connecting means will vary depending on whether the worker is equipped for personal fall arrest or work positioning and travel restriction.

- **Connecting means for personal fall arrest**
  The connecting means for personal fall arrest is often a lanyard equipped with an energy absorbing element to reduce the energy transmitted to the user’s body in the event of a fall. Self-retracting lifelines or fall limiters reduce free-fall distance as well as reducing energy loads from a fall.

- **Connecting means for positioning and travel restriction**
  The connecting means for positioning and travel restriction is often a simple lanyard, constructed of rope, web or wire rope. These may also include specialised positioning assemblies for rebar work, constructed of chain or web. All positioning devices are intended to reduce the potential for free fall to a distance of less than two feet. Restraint lanyards are specified in length to prevent the user from reaching a fall hazard zone.

**FALL PROTECTION FOR VISITORS**

Even when workers are in the habit of wearing fall protection, not everyone on the job site plays it safe. Visitors - including architects, executives and consultants - may not be part of the construction crew, but they still need fall protection equipment if they’re at height.

However, sites aren’t always prepared for female visitors. The contractor often has spare hard hats and gloves, which fit both men and women. They’ll also have standard H-style harnesses, but they may be too small for some women. Some manufacturers offer an alternate crossfront harness designed for female anatomy.
FITTING AN H-STYLE HARNESS

For many women visitors and workers, an H-style harness will perform safely, so long as it’s worn correctly. For proper fit, the strap should be low and tight across the sternum. Although, when worn this way, female workers and visitors may find the chest strap uncomfortable.

Don’t be tempted to wear the harness higher than is safe. Although it might be more comfortable to position the chest strap above the breasts, it can create a dangerous situation. Because harnesses tend to rise up during a fall, a chest strap that’s located too high could rise into your throat.

One recommendation is to wear extra layers of clothing. This allows the chest strap to be positioned correctly without causing irritation.

Remember, when it comes to fall protection equipment, the most important thing is that it perform properly during a fall.

PERSONAL PROTECTIVE EQUIPMENT

JOHN T. RYAN TROPHY WINNERS - 2016

The John T. Ryan Trophy was presented by MSA Africa Executive Director Colin Oliver at MineSAFE 2016 to AngloGold Ashanti’s Savuka gold mine in Gauteng. Platinum producer Lonmin’s 4B/1B shaft in the North West clinched the award for an underground operation.

The John T. Ryan Trophy is sculpted to represent a father safely home from work, with his arms around the shoulders of his son and daughter. “This symbolises that the miner is the most important commodity, and the embodiment of safety best practice in the mining industry,” Oliver commented.

The award is named after the original founder of MSA, and was introduced to the Canadian mining industry in 1941, before expanding globally.

MSA Africa - Tel: (+27) 11 610 2600 / Email: Colin.Oliver@msasafety.com / Web: www.msanet.com

Protection Update is an e-newsletter with the aim of informing users, specifiers and purchasers of personal protective equipment, and those who regulate it.

Visit the ISEA website at www.safetyequipment.org

North Safety, your PPE specialists, have expanded their expertise to specialised cleaning solutions, consumables and industry specific engineering products.

North Safety your complete solutions expert!
Since his “retirement” in 1999, Rob has been active in the oil exploration field as a consultant Process Safety Engineer. As such he has not had any dealings with industrial safety issues, but maintained an interest. Herewith a brief look at some developments in respect of personal protective equipment that evolved on oil rigs.

On the older oil rigs there is a high degree of manual work taking place on the rig floor. During a trip-out, when the drill string is pulled out of the hole, each joint has to be undone entailing clamping the string and applying a torque wrench, handled by means of a chain block to turn the top pipe loose, then stacking the pipe and finally joining the top drive to the string, removing the clamp and repeating this process. That all has to be done as fast as practicable as a trip-out is non-productive time.

Three men on the floor, one in the drill hut and one on the monkey board, all have to co-ordinate their movements whilst heavy equipment is swinging around them.

HAND INJURIES ON THE JOB

The men are prone to suffer hand injuries and are issued with gloves. However, hand injuries continued to account for 70% of recordable injuries on the rig floor, and, these were mostly back-of-the-hand injuries caused by impact with heavy equipment.

One organisation decided to check up on this and found that the glove manufacturers had standards for abrasion levels and resistance to cuts and punctures but no standard for impact protection.

Although end-users were asking for gloves that provided, amongst others, impact protection, no-one knew the glove capabilities in respect of impact protection until it was too late and someone was badly injured. Back in 2008 the Oil and Gas Safety Committee (USA) decided to tackle this problem head on.

Tests were developed that would verify peak impact force reduction.

In fact, in one of the tests, they were able to take a force of 180kg, which if dropped on a human hand would crush it, and reduce it to 18kg, which would basically only bruise the hand.

IMPACT RESISTANT GLOVES

The company that had been working with the OGSC, and with their blessing, then produced gloves with a known impact resistance, but this came at a cost.

Competitors soon followed by offering impact resistant gloves but at lower cost. Company buyers, looking at their budgets, acquired the cheaper models. However, the discount gloves did not perform as required and concerned by the number of hand injuries still occurring, companies approached the OGSC. It was decided that back-of-the-hand impact standards for gloves would have to be drawn up by the American National Standards Institute (ANSI) and adopted by the glove manufacturers.

CRITERIA FOR GLOVES

In my days as the safety officer for a Durban oil refinery, PPE was ordered by the buying department and it soon became obvious that we were not always getting what was required in terms of protection.

I therefore established a set of criteria that PPE items had to conform to. Gloves were needed to protect against several hazards, such as acid, oily products, abrasion, puncture, cuts, welding spatter and heat, but not all at the same time.

Hand and impact protection had never been considered to be an issue, though. Several types of gloves were eventually settled on and sales people from the various PPE supply companies were asked to provide samples for each set of criteria. The people who were to use them were then asked to select what they considered to be the best.

A very serious hand injury occurred to a contract labourer at about that time. A 36” diameter pipeline was being laid and the 30m sections of pipe had to be aligned to be welded. They used 4 labourers swinging a wooden railway sleeper to bump the pipe into place. The injured guy unfortunately had his hand over the front impact section of the sleeper and when they banged it against the pipe his fingers split like a banana skin.

Ghastly to see.

When I spoke to the supervisor about this incident and asked him why the men handled the sleeper like that he said “No, that’s OK, they are wearing gloves!”

HEAD PROTECTION

On one oil rig, a visitor who was obviously anxious and somewhat scared by the noise and activity, was focusing on the handrail when following somebody else down a rig ladder.

The man in front stopped but the visitor, wearing a hard hat with wide brim, did not see him stop and collided quite hard with the man in front, nearly causing both to tumble down the ladder.

The incident was reported and the investigation revealed that the hard hat
This led to the development of the so-called AboveView protective head gear.

This hard hat replaces the traditional optically restrictive brim with one that is transparent and specially designed to increase the upper peripheral vision by more than 50%.

The expanded upper peripheral vision, in turn, affords workers in potentially hazardous industrial settings the capacity to watch their footing, while at the same time avoiding overhead risks.

I had personally been against the wide brims on hard hats, having bumped hard against overhead piping when working in the field.

Later on, as the safety officer, in places where dropped objects were not the hazard but where bumping against pipes, etc was, like in ship’s engine rooms, I stipulated that bump caps should be used instead of the traditional hard hat.

Since those days, many other PPE developments have been made and implemented - and none too soon.

Poster illustrated in this article can be purchased from the Safety First Association - www.safety1st.co.za

Announcing LegalEasy 2.0

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Ensuring you are compliant and up to date without help is nearly impossible.

LegalEasy 2.0 is a powerful online web-based compliance system that provides an overview of your current position against legal compliance to any Act, Standard or best practices.

LegalEasy is a flexible set of software modules to be used as standalone tools or an integrated system which effectively manage all aspects of your organization’s management compliance needs.
SAPEMA APPOINTS A NEW SECRETARY

Meet Helena van Greunen, SAPEMA’s recently appointed secretary.

Helena worked for Engen Petroleum for 13 years, first in Isando DC where she was involved with admin as well as keeping up the Depot ISO manuals and Standards required via SABS.

She then moved to head office in Parktown as a marketing assistant to 16 representatives and 4 managers.

Although she doesn’t have experience with PPE, Helena is enjoying learning about PPE products and equipment - especially now that she understands its importance.

Helena has told us that she needs to be kept busy and enjoys working with people, so she welcomes queries, or phone calls anytime from SAPEMA members as well as anyone involved in the industry who may need assistance.

Helena has 2 daughters aged 13 and 10, and in her spare time spends many hours supporting their sporting activities.

Her hobbies include photography - action, weddings and matric farewells. She also enjoys nature and being outside.

Contact: Secretary: Helena van Greunen
helena@sapema.org
Tel: 063 442 9935 / 071 602 1456
Website: www.sapema.org

PURCHASE THE CORRECT PPE

On average, companies spend R2000 per year on PPE per employee, without factoring in costs incurred through theft and damages.

By developing and implementing effective PPE management structures, customers can now further reduce the TCO, while simultaneously reducing risk.

Although PPE is one of the least preferred methods of risk reduction at some companies, it is also one of the most important. The importance of PPE is sometimes demoted because employers do not have control over its purchasing, resulting in financial losses which they are not prepared to take. These costs can be reduced significantly if the employer has full control over the sourcing, procurement, items issued, the usage and the management of all items in an effective way.

It all starts with strategic sourcing. There are a myriad of choices within the personal protective equipment industry, and anyone can source and buy PPE products - it is available everywhere.

However, without a management system, the spend can quickly get out of control leading to increased costs, inconsistent levels of protection and waste.

The first step in controlling the buy is to understand what you are buying, who you are buying it from, how much you are buying, and how much it costs.

Once you understand the buy, you need to segment your PPE into the various sub-categories: head protection, eye protection, ear protection, hand protection, foot protection, breathing protection, etc.
This process of PPE sourcing, enables employers to aggregate spend on fewer common items and to stock a narrow range of products. The total cost of ownership will be lowered, allowing for improved PPE planning and supply.

Further losses may be experienced due to PPE being issued randomly and without following appropriate PPE policies or correct PPE profiling. In order to ensure PPE is effectively managed, the employer has to start by developing a PPE policy, followed by a detailed profiling and workplace hazards identification exercise.

Each job and task has to be identified and specified according to the hazards associated. All factors have to be taken into consideration such as exposure to chemicals, noise, extreme temperatures, electric shock, sharp objects and surfaces, and light sources such as lasers and welding arcs.

Each PPE item then has to be selected according to these factors and according to each employee’s specific profile.

Sometimes employers do not understand or perhaps overlook the fact that almost every type of PPE has performance guidelines, capabilities and limitations. For example, has the glove material been tested against the chemical of concern? If so, what is the penetration and/or permeation rate? Will the respirator or cartridge material prevent the inhalation of an air-borne chemical? Are the safety glasses manufactured according to the relevant international standards? Do the ear plugs or ear muffs have a noise reduction rating that adequately reduces noise exposures?

Assuming that the correct PPE policies are in place and profiling has been done, the employer should then focus on other responsibilities, such as issuing (and proper fitting) PPE to all employees according to the specific profile, communicating the importance of PPE and training employees in the usage and maintenance of the items.

Employer’s failure to fully understand the total cost of ownership of PPE, their lack of capabilities to manage the full cycle of PPE, are costing them more than they are willing to spend on PPE.

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COMBAT HEAT ILLNESSES CAUSED BY DEHYDRATION

Hayley Arnesen, North Safety Products

Working in hot conditions poses special hazards to safety and health.

Heat illnesses combined with dehydration are a direct cause of approximately half of the heat stroke cases among South African miners. It can cause loss of concentration, lower productivity, a decrease in morale and consequently increases costs to a business operation.

North exports manager Hayley Arnesen explains that during heavy work, muscles need more blood flow, which reduces the amount of blood available to flow to the skin in order to release heat. “The body defends itself from heat through breathing, sweating and changing the blood flow. Individuals with high blood pressure or some heart conditions and those who take diuretics may be more sensitive to heat exposure.”

There are a number of conditions that can result due to heat exposure, including heat exhaustion, heat stroke, heat cramps, fainting, or heat rash. “In order to prevent these conditions, it is advisable to replace the fluids you lose from sweating by drinking an electrolyte solution, wearing loose fitting clothing and a hat, and getting sufficient cool air.

Businesses should ensure that employees and supervisors have proper training to be able to detect early signs of heat stress and understand the importance of replacing fluids and salt from sweat,” she continues.

Heat exhaustion results from working up a sweat and not replenishing the body with enough fluids. Resting in a cool place and avoiding caffeinated beverages are some of the things that will relieve the condition.

H eat stroke, which can result in death, is caused by the failure of the body to regulate its core temperature.

In order to reduce the effects, the victim should be moved to a cool area and soaked in cool water, amongst other things.

H eat cramps are painful muscle spasms that occur when a worker drinks a lot of water, but does not replace the salts lost from sweating.

Fainting can occur in someone who is not used to working in uncomfortably hot environments.

H eat rash usually occurs in hot and humid environments where sweat cannot evaporate easily.

It can be prevented by resting in a cool place, keeping skin clean and dry, as well as over-the-counter lotions to ease pain and itching.

Appropriate engineering controls, personal protective equipment and work practices are also imperative to reducing the risk of heat stress.

Supervisors should provide enough liquids and ensure that work schedules allow for appropriate rest periods.

Employees need to choose a suitable hydration drink that is accessible before, during and after work.

The hydration drink will assist in maintaining blood volume, which allows for efficient delivery of oxygen to working muscles and reduces the incidence of muscular cramps.

Arnesen warns that only providing water for hydration may lead to a low blood sodium level, as salts do not get replenished.

Workers must consume approximately 300 ml of an electrolyte replacement drink, 20 minutes before possible exposure. The sodium content should be between 25 mg and 70 mg per 100 ml. Intestinal absorption is improved by small volumes of carbohydrates, between 3 g to 5 g per 100 ml.

The temperature of the liquid can also impact the absorption rate – cooler drinks are absorbed more easily.
Electric arc flash-overs occur when there is substantial electric current that passes through ionized air. An arc flash is very explosive and typically lasts for less than one second, letting off radiant heat. These electric arc flash currents will ignite or melt everyday clothing. During this process there can be many other hazardous risks like molten splashes, pressure waves and other projectiles from the pressure built up as a result of the arc.

When work involves the risk of electric arc hazards, protection and safety comes first. DuPont™ Protera™ Fabric meets the international NFPA 70E Hazard requirements, making them class protection, tests have shown that garments made from DuPont™ Protera™ offer a high level of comfort compared to other fabrics. Those who tried DuPont™ Protera™ found it to be less “prickly, heavy, stretchy, stiff, clinging, clammy and scratchy” than cotton. In an independent double blind comfort study, DuPont™ Protera™ was the clear winner in overall comfort compared to fire retardant cotton and nylon blends of the same weight.

DuPont Protera™ garments offer a high return on investment due to their tensile strength. Some of the fibres used in Protera™ fabrics are modacrylic, which contain antimony trioxide as an ingredient, to increase inherent strength and durability of the fabric. During electric arc incidents we guarantee no rips or tears. Protera™ also retains it abrasion resistance over repeated laundering and use in the field.

DuPont is committed to finding new ways to make its products safer and easier for you to do your job. We at DuPont continually innovate to ensure excellent protection, durability and value – things that matter the most. For further information, please contact: Dharmesh Lakmidas Tel: + 27(11) 218 8686 Mail: Dharmesh.Lakmidas@DuPont.com

WHAT IS ANTIMONY TRIOXIDE?
Antimony trioxide is an inorganic compound whose main application is as flame retardant.

Antimony trioxide itself has no flame retardant function, however, when it is used together with halogenated compounds, the synergistic effect of the mixture creates the flame retardant properties. Antimony trioxide reacts with halogenated compound and creates the chemical compounds, which generate the flame retardant function.

Antimony Trioxide has received some bad press in the past for being a carcinogen but its use in DuPont’s Protera™ fabric sees it become a permanent part of the fibre by spinning it into the modacrylic fibre. DuPont has also conducted tests that show that antimony from the Protera™ fabric does not penetrate the skin.

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Maximum protection, work convenience and comfort

Many people are exposed to specific hazards in their work, whether industrial cleaning, working with paint and varnishes or chemical processing. UVEX 5/6 disposable coveralls guarantee a high level of protection against liquid splashes and solid particles while being skin friendly and feeling like a second skin.

The material UVEX uses for its 5/6 coveralls is not just very durable, it also ensures high breathability. UVEX coveralls combine outstanding wearing comfort with reliable protection.

UVEX 5/6 CLASSIC
Disposable coverall chemical protection type 5/6

The microporous PP-spunbond / PE-film laminate material of this extremely durable and breathable coverall ensures an exceptional combination of outstanding wearer comfort and reliable protection. This coverall has an elasticated waistband for a more tailored fit and has anti-static properties.

Areas of application:
- Chemical and pharmaceutical industries
- Painting
- Fibreglass, ceramic fibre and synthetic resin production and processing
- Construction industry, wood and metalwork
- Automotive industry
- Grinding and polishing work
- Cement manufacturing
- Quarry and mining work
- Demolition work and renovation
- Police services

UVEX 5/6 FR

Disposable coverall chemical protection type 5/6

Flame-retardant coverall for wearing with flame-retardant protective clothing in order to protect against particles and mist spray. Provides protection in the event of accidental, brief contact with small flames if there is no significant danger from heat.

The UVEX 5/6 FR disposable coveralls material is very air permeable and provides a high level of moisture management, which makes the coveralls particularly suitable for warm working environments and for extended working periods.

The UVEX 5/6 FR provides exceptional protection and wearer comfort. It also has an elasticated waistband for a perfect fit and has anti-static properties.

Areas of application:
- Wood and metalwork
- Maintenance work
- Grinding and polishing work
- Cement manufacturing
- Work with dust and powder chemicals
- Redevelopment and renovation work and working with asbestos

SAFETY NOTE

The UVEX 5/6 FR with limited flame spread protects staff in the event of accidental, brief contact with small flames if there is no significant danger of heat exposure and there are no other heat sources.

This must always be worn in combination with ISO 1416 index 2 or 3 protective clothing or ISO 11611 and ISO 11612 certified clothing.

The material does not create a thermal barrier and can melt. It should therefore under no circumstances come into direct contact with skin.

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Driving innovation through specialist garment solutions

Using the latest fabric innovations and technologies, MB Workwear manufactures specialised and technologically advanced garments that provide workers with unrivalled protection and comfort.

Recognised for their uncompromising attitude towards quality, they produce a full range of garments for the mining, foundry, steel, oil and gas, petrochemical and utilities industries.

Notable developments and innovations used in the manufacture of these garments include the Zeroflame®, Zeroflame® Acid Resistant, Nomex®, Vinex® and Alumax technologies.

**PROTAL® ELECTRIC ARC COVERALLS**

Recently, MB Workwear added another innovation to their impressive list of specialised garments. Protal® Electric Arc is an antistatic and inherently flame resistant range of coveralls that has been specially designed to meet the evolving needs of the industries it serves.

The fabric is manufactured using Protal® technology by a local manufacturer, Gelvenor Textiles. Located in Hammersdale, Gelvenor Textiles has been producing high quality technically engineered fabrics for over 50 years; making them an experienced and valuable partner in MB Workwear’s manufacturing process.

**ANTISTATIC AND INHERENTLY FLAME RESISTANT**

Manufactured to provide antistatic and inherently flame resistant properties, Protal® Electric Arc is the ideal PPE solution for people working in industries where flash fires and electric arc are a daily threat. This globally compliant PPE solution incorporates advanced flame resistant technology to prevent the fabric melting, dripping or sticking to the skin during flash fires. When flames come into contact with the unique blend of fibres in Protal® Electric Arc, tiny amounts of non-burning inert gases repel oxygen away from the surface of the fabric – creating a barrier that protects the wearer and extinguishes the flame.

**LIGHTWEIGHT AND COMFORTABLE**

In addition to these protective properties, the Protal® Electric Arc range is also lightweight and comfortable, and the balanced blend of fibres creates a highly effective moisture management system which enables the wearer to operate in comfort while enjoying complete protection.

The Protal® Electric Arc range is yet another example of MB Workwear’s ability to innovate specialised safetywear solutions. From completely new garments to customising garments from their current range, MB Workwear is a tried and tested manufacturer of specialised safetywear solutions that can make all the difference in the workplace.

Contact MB Workwear on 039 682 2430 or email bruce@mbww.co.za / andre@mbww.co.za
If you aren’t wearing an MB Workwear garment, you aren’t serious about safety

MB Workwear’s protective garments allow the wearer to perform their job safely and to the best of their ability.

For 60 years we have understood that comfort and durability are essential. It is this understanding and experience which has set us apart from our competitors. It is not only our commitment to quality standards which make us different, but our obsession with safety. It makes what we do more than a job, it’s a philosophy, “safety obsessed, quality driven”.

We’re serious about safety, are you?

MB WORKWEAR®
Safety Obsessed. Quality Driven

VISIT OUR WEBSITE TO DOWNLOAD OUR FREE CATALOGUE

Visit www.mbworkwear.co.za or find us on Facebook or LinkedIn

Brands proudly brought to you by MB Workwear
 uvex sportstyle

23 g, 100% performance

Whatever your industrial workplace environment the uvex sportstyle delivers the perfect combination of performance, safety and style. The distinct close fitting athletic design, unrivaled uvex scratch resistant and anti-fog lens coating technology provides a wide field of vision. The ergonomic fit and extra soft, adjustable nose piece enables wearers to achieve a comfortable customised fit, throughout the day.

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