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FROM THE DESK *of the president*



John Matthews
President, Master Builders
South Africa

SURVIVAL

I'm not one to hope against hope, but at each dire turn of events and twist of fate over the 30-something months of my MBSA presidency, I've trusted in South Africa's ability to win through, whether facing economic ruin under poor governance, or a deadly disease that strikes at the most vulnerable.

South Africans are survivors, and the words one hears most frequently as we're battered by new challenges every day, are "this will pass." We will make it so.

Looking back at my Comment columns in SA Builder during my tenure, you may have noticed that I have tried to maintain a consistent tone of optimism in what is one of the worst economic periods in South Africa's history. This has not been based on blind faith.

The journey from the start of my Presidency to now, only a month from its end, has been characterised by two separate circumstances largely beyond our control. Both have been catastrophic in their effect on our daily lives and prospects, and their aftermath will be felt for the foreseeable future. But as with all challenges, it's how one faces them that decides the outcome. One of the vital responses is effective action taken together with others in a spirit of unity, to find solutions.

In our industry, particularly, this is what has given me hope for the future. In an exemplary effort, we moved to establish a large measure of unification with the creation of the Covid-19

Rapid Response team, our voluntary alliance of professional and industry representatives. The 35 core member associations are still together and the work towards solutions is ongoing.

I can only emphasise that our future lies in working together, a fact demonstrated by the phenomenal cooperation we have achieved in the face of a failing economy on a collision course with a global pandemic.

The primary task for all South African industries, independent of political influence and with unswerving determination, is to restore our country's economy. The only way we can do that is to generate unity and trust between public and private enterprise and also between members of the fragmented sectors of the industries themselves. Let's forget about adding more bureaucracy and red tape, but rather put our trust in existing mechanisms and be more diligent in holding institutions to account.

It goes without saying that we have to be strident in our opposition to the squandering of public money, patronage, and downright corruption, which seems to have gone on unabated at this time. It's hard not to be apprehensive about repercussions for calling out dishonesty but if more of us are united in the effort to expose it, the prospects of success are that much greater.

We simply cannot stand by and watch.





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MASTER BUILDERS SOUTH AFRICA
Roy Mnisi - Executive Director

CMA Office & Conference Park,
2nd Street, Midrand, 1685
Box 1617, Halfway House, 1685
Tel: 011 205 9000
Fax: 011 315 1644
Website: www.masterbuilders.org.za
email: info@masterbuilders.org.za

MBSA Members:
See last page

MALNOR (Pty) Limited

10 Judges Avenue,
Cresta, Johannesburg
Private Bag X20
Auckland Park, 2006
Tel: 011 726 3081
e-mail: magazines@malnormags.co.za
Website: www.malnormags.co.za
www.sabuilder.co.za

Publisher:
Ken Nortje

Manager:
Wendy Ansel

Sales manager:
Sophia Nel

Editor:
Simon Matthews
email: simon@sabuilder.co.za

Advertising:
Wendy Ansell
011 726 3081
email: wendy@sabuilder.co.za

Production:
Johan Malherbe

Graphic Designer:
Marius Nel

Accounts:
email: accounts@malnormags.co.za

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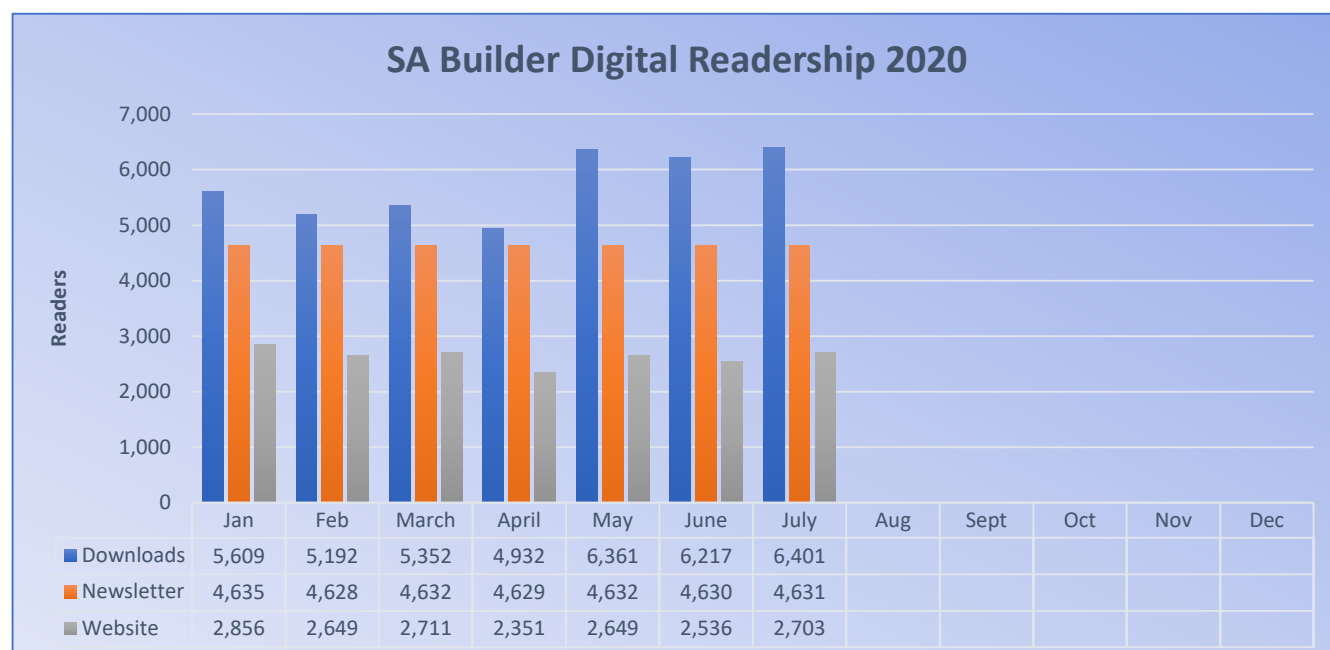
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Master Builders Free State

Master Builders and Allied Trades Association (Free State), known as MBA FS, was founded in 1952 and has been an institution for 68 year now. MBA Free State is affiliated with MBSA, which is an organisation which speaks on behalf of its members and specialised affiliate members.

MBA Free State is part of a federation of registered employers' organisations which represent contractors and employers operating in the building industry, and is regulated in terms of Section 107 of the Labour Relations Act, Act 66 of 1995.

MBSA and the MBAs promote a positive OHS (occupational health and safety) culture, which contributes to the reduction and elimination of occupational injury, disease, loss, and the prevention of damage to the environment. Compliance with the law and the well-being of both employer and employee is the foremost concern of MBSA.

Master Builders Free State Executive Committee 2020/2021

We have decided that with the pandemic, we will extend our Executive Committee to serve another year. They are as follows:

Arno van Zyl – President

Arno is the Marketing Manager at 3 Bricks; they are currently the biggest paving suppliers in Welkom and have done many projects with our members in the Free State, North West and Northern Cape.

Martin Westraad – Vice President

Martin is the Branch Manager at Formscaff Bloemfontein. Formscaff services include hire and sale of scaffolding, falsework, and associated services.



Stephan Claassen – Regional Health and Safety Advisor, Master Builders Free State



Francois du Plessis – Executive Director, Master Builders Free State

Ian Harris – Executive Committee

Ian is the Managing Director at Amokoro Training Welkom. They are a training provider and specialise in health, safety and environmental training nationwide.

Steven Nkgadima – Executive Committee

Steven is the Chief Operating Officer at Sompema Welkom. Currently they do logistics and civil construction.

Johan Naude – Executive Committee

Johan is the Director at Naude Construction Welkom. They specialise in plumbing, civils and construction.

Raymond Seboko – Executive Committee

Raymond is the Director of Mofomo Construction Welkom. The company specialises in building and civil contracting.

Stefan Roos – Executive Committee

Stefan is the Sales Manager of FS, NC, NW and WC AfriSam, which provides quality construction materials and technical solutions. This includes cement, aggregate and readymix concrete construction material.

Shabeer Moosa – Executive Committee

Shabeer holds the position of CEO of Namcon Construction. The company is a Level 1 B-BBEE compliant construction company, which has developed a core focus in building, civil and water reticulation works. It has also been listed on the vendor contractor database for Santam insurance in the Free State Province.



Paul van Heerden – Executive Committee

Paul is the Director of Kandula Construction. The company's services include building, foundations, roofing, tiles, plumbing, painting, boilermaking, ceilings and more.

Master Builders Association Free State Staff

Francois du Plessis – Executive Director

Francois has been on the Executive Committee, was elected as the Vice President and then become the President before he was offered the role as Executive Director of MBA FS. Francois is stationed in Bloemfontein where he is busy promoting the MBA FS services among the construction companies in Bloemfontein.

Stephan Claassen – Regional Health and Safety Advisor

Stephan has been working for MBA FS for five years, where he started as a Junior Health and Safety Advisor and worked to the top to become the Regional Health and Safety Advisor. Stephan oversees two Health and Safety Advisors who are working under his supervision. He is stationed in Welkom, but travels frequently between Bloemfontein, Northern Cape and North West to assist our members with their health and safety needs.

Werner van Zyl – Junior Health and Safety Advisor

Werner has been working for a year now at MBA FS, and was first appointed as a Health and Safety Advisor Trainee, and was then offered the Junior Health and Safety Advisor position. He is currently stationed in Welkom

and serves all our Northern Free State members.

Monique Trollip – Health and Safety Administrator

Monique is stationed in Bloemfontein where she handles all the health and safety admin work for the Health and Safety Team.

Rehaba Lekhoto – MBA FS Receptionist

Rehaba is one of the oldest staff members at MBA FS and has been working here for 17 years. She started as the cleaning / tea lady, and eventually was offered the job as the receptionist at MBA FS. Rehaba helps our members with their provident fund claims, and handles all the queries for the Welkom office. ■



Extracts From “Management Of Persons Under Investigation (PUIs) For Covid 19: Experiences In The Construction Industry”

By Gerhard Roets, Construction Health & Safety Manager, Master Builders Association North

Identify Covid-19 suspects: access control on construction sites

Screening will be conducted on all employees, visitors and contractors requiring entry to the workplace. Before entering the work premises, employees should be alerted that if they are coughing, have a fever or flu-like symptoms, they should please not enter the workplace.

Temperature screening

Screening will be controlled by security personnel who are properly trained in doing the screening procedure. All security personnel who will be involved in the screening of employees, also require screening before the start of their shift. A temperature check will be conducted on all employees entering the workplace.

A daily symptoms questionnaire will be completed by each person entering the site. If a screening question is answered yes, or if their temperature is abnormal, access to the workplace should be denied and the person should be managed.

Managing of Covid-19 suspects

The employee should be refused entry into the place of work. A referral slip will be given and the employee will be asked to consult with their own health care provider. The name, surname, contact details of the employee and the contact details of a next of kin should be obtained and recorded in the referral record, prior to the employee leaving the premises.

The responsible manager should be immediately informed, and a mask should be provided to any symptomatic person before they are referred to their own health care provider. An employee will not be allowed back onto site until a medical evaluation of fitness is issued by an OMP or doctor.

Employee confirmed to be Covid-19 positive

Following the identification of a sick employee while on site, all potentially contaminated surfaces (where the Covid-19 positive person worked) should be cleaned with a 70% alcohol-based cleaning liquid, eg floors, walls, contact surfaces and large equipment.

Sanitise contaminated instruments as per usual protocols - cleaners need to wear protective PPE and wash their hands after handling any potentially infected material. All cases are to be reported to the NICD (National Institute of Communicable Diseases SA), Department of Employment and Labour and DOH (Department of Health).

The employee will be required to self-isolate for 14 days. It is essential that the responsible manager maintains regular contact with all employees in quarantine or isolation.

Challenges faced by the construction industry

These include delayed entry onto site and the honesty of employees, visitors and contractors when completing the daily symptoms questionnaire. Additional resources to manage Covid-19 include appointing compliance officers; PPE; paperwork and filing monitoring; costing; and training and inductions.

Best practice recommendations

Indicate to all employees that the company has their best health interest at heart. Internal company policies, procedures and declarations must adhere to Covid-19 sick leave and disciplinary policies. Regular online meetings should be held to discuss the latest legislation, challenges and recommendations (PC to liaise with construction managers and H&S officers). Adhere to the basic Covid-19 preventative protocols and provide awareness training. ■



Safety Bulletin - August 2020

Warning signs of Suspension Trauma

Suspension trauma is an effect which occurs when the human body is held upright without any movement for a period of time, e.g. hanging immobile in a harness. The onset of suspension trauma could vary from person to person and also depends of the equipment used and where one is connected to the harness.

Managing Suspension Trauma is important because poor blood circulation, lack of oxygen, may result in brain damage or even death, if the causes of Suspension Trauma is not controlled.

Causes of Suspension Trauma:

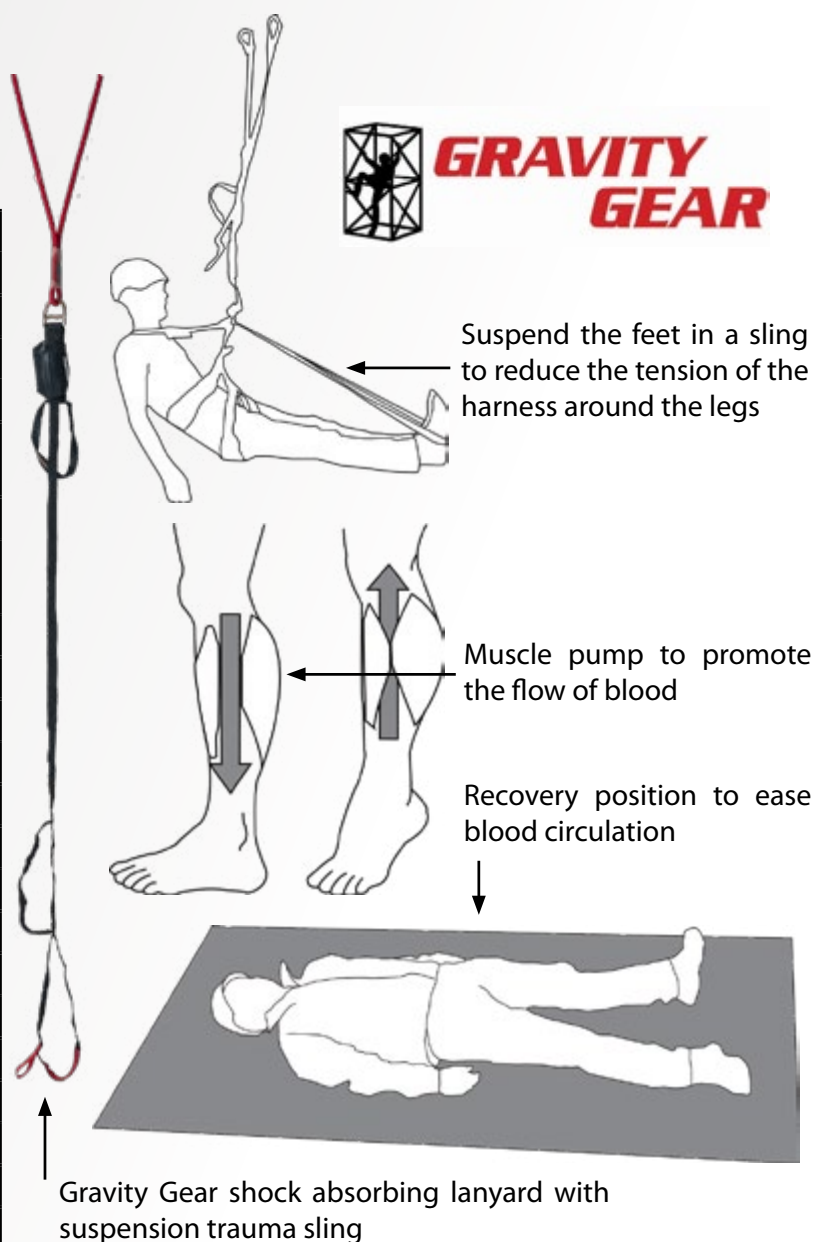
- Hanging immobile in a harness
- A lack of understanding of Suspension Trauma
- Pain and injury
- Physical and emotional exhaustion
- Muscle failure due to hypoxia and aesthesia of the legs
- Hypoglycemia (low blood sugar)
- Suspension Trauma Cascade has progressed to the point of unconsciousness

Warning signs/symptoms of Suspension Trauma:

- Considerable pain and discomfort
- Increased heart-rate
- Ringing in your ears
- Blurry or tunnel vision,
- Dizziness and turning pale
- Feeling warm and sweaty

Preventative actions:

- Fall Protection Plan
- Risk assessment and training
- Adequate rescue kit and competent to use
- Action the rescue immediately
- Slow movements of the legs (muscle pumps)
- Standing in a sling/strap to release pressure
- Get the legs horizontal



It is vital that rescues are performed as quickly as possible to ensure the possibility of suspension trauma can be reduced. For more information on rescues, training, Fall Protection Plan and any other equipment needs, contact info@gravitygh.co.za or visit www.gravitygroupholdings.com.

Asbestos

Extracts From “Five Risk Factors To Add To Your Risk Assessment”

by Koos Roets, Consulting Occupational Hygienist CC

What is a hazard?
A hazard is an activity, substance or process with the potential to cause harm, and comprises mechanical (moving parts on machinery or a plant); chemical (hazardous chemical agents); physical (slips, trips, noise, vibration and moving objects); biological (Covid-19, leptospirosis - animal urine and skin contact); ergonomic (human and tool relationship); manual handling, eg lifting; electricity and stress (too much or too little to do).

What is risk?

Risk is the likelihood of a substance, activity or process causing harm, illness and adverse health effects. Thus, risk = severity X probability.

So, what must we look at?

- Hazardous chemical agents – SDS (safety data sheet)
- Confined spaces
- Noise
- Ergonomics
- Vibration – whole body vibration, eg plant
- Hand-arm vibration – hand tools (concrete breakers)
- Silica – batching plant and cement
- HBA (hazardous biological agents) regulations, eg Covid-19, Legionella, etc)
- Heat / cold stress
- EMF (electromagnetic field), UV (ultraviolet), IR (infrared) radiation
- Asbestos – old building materials in renovation or alterations
- Lead-based paints – old outside steel structures and plants, bridges, etc
- Mercury, cadmium – fluorescent tubes

Obvious versus hidden risks

Most workers understand why they need to wear a hard hat, or fall protection equipment if they're working at height, because the risks are obvious and can be easily visualised. Construction dust, on the other hand, is something of a hidden killer, as the potentially fatal respiratory diseases it causes are typically the result of years of exposure.

Why is controlling hazardous construction dust such an important issue?

To put it bluntly, construction dust kills.

According to the Health and Safety Executive (HSE), 43 workers were fatality injured in the UK construction sector in 2015/16 as a result of workplace accidents. This is a frightfully high number. However, it is less than a tenth of the number of deaths of construction workers as a result of exposure to respirable crystalline silica (RCS). The HSE estimates that RCS is responsible for around 500 deaths a year in the UK construction sector, or nearly 10 a week.

Fast facts:

- Asbestos is the biggest killer in the workplace
- With noise damage to the ear, it may take many years for the symptoms to appear
- Hand-Arm Vibration Syndrome (HAVS) can cause permanent damage
- Repetitive work is one of the major causes of musculoskeletal disorders (MSDs)
- Reaction of the skin to any irritant varies from one individual to another (personal susceptibilities)

Asbestos

Asbestos-related diseases kill more people than any other

Silica

single work-related cause. The danger arises when asbestos fibres become airborne and remain suspended in the air. Breathing in these fibres can damage the lungs and cause cancer.

Anyone responsible for maintenance and repair of a commercial or industrial property is legally obliged to determine whether asbestos is present; assume a material contains asbestos unless there is strong evidence to the contrary; assess the risk; take action to manage the risk and provide appropriate information to anyone likely to encounter asbestos.

Silica

RCS can be formed when construction materials containing silica, such as bricks, concrete, granite or tiles are cut, drilled, crushed or abraded. RCS can be breathed in and may reach the deep lungs where it can scar the delicate tissue (silicosis). This can cause difficulties in breathing. Long term exposure to RCS may also increase the risk of lung cancer.

A full and appropriate risk assessment should be conducted to determine the extent of the silica exposure and should, where applicable, quantify the airborne concentration.

Noise

Regular exposure to high noise levels can lead to tinnitus and hearing loss, although it may take many years for the symptoms to become apparent. Employers have a legal responsibility to protect their workers from excessive noise. The risk should be assessed and controlled. Where the noise has already been reduced by other controls, but an acceptable level has still not been reached, hearing protection should be provided.

Vibration

Hand-arm vibration and whole-body vibration

Hand-held power tools are regularly used in construction and the vibration can cause hand-arm vibration syndrome (HAVS). This condition affects fingers, hands and arms and can cause permanent damage over time. The more a worker

is exposed to vibration, the more likely it is that problems will occur.

Ergonomics

Musculoskeletal disorders (MSDs)

MSDs cover any injury, damage or disorder of the joints or other tissues in the upper or lower limbs or back. Issues can be caused by regularly lifting, carrying or handling materials and items, as well as repetitive work such as plastering or rebar tying.

Dermatitis

Dermatitis is an inflammatory skin condition caused by exposure to hazardous substances such as wet cement and solvents. This can either be irritant dermatitis, which is usually caused by the skin coming into contact with a substance, or allergic contact dermatitis, where a person develops an allergic reaction to a substance.

PPE provided must be appropriate for the hazard involved. When using gloves and protective coveralls, the wearer must take care not to get the hazardous substance on their skin when putting them on or taking them off. ■



Dermatitis



Extracts From Construction Industry Webinar Q&A with NIOH, Part Two

By Dr Lucas Mosidi –Director: Medical Services, Compensation Fund, Department of Employment and Labour

If the notification of construction work has expired, does the contractor have to apply for an extension date before working on site?

No, but if it's an internal requirement (by client / PC) then it must be updated.

Is there some sort of a baseline risk assessment (RA) one could use as a guideline when drawing up a more specific and task / job / site risk assessment?

The DOH and DEL promulgated guidelines.

Our employment numbers are around 300, are we required to submit the RA?

No.

In big SOEs and construction sites, who is the employer in terms of the DMA regulations?

On a construction site, the client, PC and contractors are employers depending on a number of factors (direct employees, direct appointments etc). If there is a Section 37(2) agreement then this may be guided further.

If the SOE has divisions, is each division required to provide a RA and policy or is it just the parent company?
Each CEO / Director.

What is the procedure when your client is a home owner and never provides a baseline RA and safety spec?
See Construction Regulations 2 (2).

Based on the costs associated with implementing safety procedures on site, will the costs be for the client or the contractor?
Internal contractual agreement.

We are unable to implement barriers; people are working on bench building looms and it is the nature of the workstation for them to work closely with one another – its designed like that (engineering bench).

The risk assessment should indicate to you how much risk is associated with this. From there the controls can be implemented to reduce the risk, and can be anything from engineering to administrative or even PPE.

If the temperature rate of the employee or visitor is within the normal rate, and when filling in the questionnaire the employee or visitor is not honest in answering the questions, how effective is the screening, because it does not detect the virus immediately? Should we not rather consider on-site testing as an effective measure?

Screening is not meant to detect the virus immediately, but it's meant to sift and identify people who might benefit from further testing, as blanket testing is not done. Testing is done as per the recommended framework. In the SA setting, the NICD recommends specific criteria which should be fulfilled before testing is conducted; namely, when someone has symptoms SIMILAR to those of Covid-19.

Why are contractors required to add transportation to site into their risk assessments? Are they to be held responsible for public transport?

Depending on the location on the construction site, usually the contractor will transport the employees to the site. The contractor is obligated to the Road Traffic Act, DMR, and applicable directions (eg social distancing measures) if they are providing such transport.

Employees with symptoms of Covid-19 are afraid to come clean due to fear of staying home without getting salaries. Any advice please?

A RA approach, eg screening, medicals, etc should direct the way forward.

How do we overcome the challenge of illiteracy during self-screening / completion of the screening forms in all industries? The organisation can decide internally on alternative measures that will suit their workforce.

Has any thought been given to the ineffectiveness of the non-contact thermometers in cold ambient temperatures? Often readings below 36°C are given if the ambient temperature is below 10°C. I have noticed this even at police roadblock screenings.

The NIOH [website](#) has a guideline on temperature screening.

Clients are sceptical about using other sanitisers as the regulations says 70% alcohol and it's so bad for you - methanol



can lead to blindness

The regulation further defines which type of alcohol, ethanol and methanol.

What is your take on the signing of DSTIs and toolbox talks by attendees, is it acceptable for the supervisor to simply verify attendance?

Not recommended, my take is that each employee should bring their own pen or sanitising should be in place

Can the medical professional develop a protocol as guidance to employees when returning to work after testing positive, or when a person was under isolation?

Yes, an occupational medical practitioner, trained in occupational health.

How can one differentiate between community acquired and workplace acquired Covid-19?

Not easy - the OMP will know how this is generally done for all other diseases. The COIDA guideline on Covid-19 compensation makes reference to this: specific cases where occupational cases can come from.

Is there any webinar or information on the contractual side of things, like contractors claims for significant changes from suppliers, such as steel prices?

Information / webinars / seminars are conducted by various industry bodies and government on different topics, recommendation is to check online platforms.

How is the DoL going to monitor and ensure that these measures are implemented? The practice / trend has been a reactionary response once an incident has occurred. These measures are also meant to be self-regulated.

How will the DoL ensure that all companies employ compliance officers?

It is the obligation of the employer to adhere to the legislative requirement.

How many workers are allowed on a site per day?

Guided by RA.

The use of FFP2/3 masks with valves: since it allows for the venting of hot air, is it possible to release contaminated saliva during coughing or sneezing, more so for people working in confined spaces?

There are no studies to our knowledge on the risk of infectious material exhausting out of the exhalation valve of respirators. However, there is a possibility that exhaled particles may leave the respirator via the valve. It is advisable to use valved respirators in situations where an exhaled breath of the wearer is not a potential risk to the persons around the wearer. Alternatively, if a valved respirator is preferred to reduce a build-up of moisture but a there is a potential risk from exhaled air, the use of respirators with a

shrouded valve such as the 3M FFP3 1883+ model may be considered.

Are workplaces deemed to be public spaces?

Some workplaces can be both, eg licensing departments, retail centres, and other areas where the public can freely access for services or products.

Would a compliance manager be able to appoint other compliance officers that work on remote sites?

The June 2020 OHS Directive indicates this is now one appointment. Each site must have a compliance officer appointed by the employer.

Do you need to wear a face mask if you wear a face shield?

RA will inform this, depending on what are you protecting or preventing from where.

Please advise if the DEL has considered whether paperless / electronic safety files can be submitted to the employer by the principal contractor. My concern is the movement of the safety file using paper, where the virus can be transmitted between the employer and employees.

The definition of health and safety file: "A file, or other record containing the information in writing required by these regulations." ■



Zutari Focuses On Engineered Impact To Make A Difference In Africa

Zutari, formerly known as Aurecon, is uniquely positioned to partner with clients to co-create fit for purpose solutions for infrastructure development.

The African continent requires a minimum of US\$130 billion annually for infrastructure development and preservation. Highlighting this number recently, the African Development Bank also pointed out a financing gap of around US\$68 to \$108 billion.

On 10 July, the ANC's Economic Transformation Committee officially launched a discussion document entitled "Reconstruction, Growth and Transformation: Building a New, Inclusive Economy." This proposes a massive, infrastructure-led economic recovery that will include expanded public-private partnerships and a strengthening of the District Development Model at the local government level.

Earlier in June, African Union Chair President Cyril Ramaphosa underlined the importance of infrastructure as a growth driver at the Sustainable Infrastructure Development Symposium of South Africa (SIDSSA) in Sandton, Johannesburg.

President Ramaphosa stated that SIDSSA represented "a new beginning for infrastructure development – a new beginning that promises inclusive growth, development, transformation and, above all, hope for a better tomorrow for all our people."

Barely a month after this historic symposium, a "new" player is auspiciously launched in the infrastructure space. A company whose primary focus is Africa and that believes all infrastructure projects must be engineered to have an impact.

Zutari CEO, Dr Gustav Rohde, is quick to point out that the "new" company is really one of the oldest in the industry on the continent. Formerly known as Aurecon, it was the



Dr Gustav Rohde, CEO, Zutari

merger of Africon, Connell Wagner and Ninham Shand in 2009. The latter can trace its history in Africa back to 1932 – operating for almost nine decades.

In October 2019, the owners of Aurecon Africa took the bold step of deciding to demerge from the global business, headquartered in Melbourne, Australia. The process subsequently culminated in Zutari. The portmanteau name is derived from the Swahili for "invent" and "nectar", namely *mzulia* and *nectari*.

Of course, back in October no one could have predicted that the beginning of 2020 would see the emergence of a global pandemic, with Covid-19 having a devastating impact on both a macro-economic and a community level. Dr Rohde, however, highlights that management could already see the winds of change push back against globalisation as early as September 2019.

"We could see the market changing, and so decided to demerge from the global company to be proudly African. It is interesting how the pandemic has accelerated this trend towards localisation, especially as borders remain closed and international travel continues to be restricted. The fact that we are a private, management-owned company with African owners makes our commitment real – we have a vested interest in our clients' success."

It answers the question of whether launching a new company in the current business environment is either an audacious or a risky move. Instead, it is the culmination of a well-planned journey towards Zutari, which is committed to Africa because it believes passionately in its future.

About 75% of its nearly 2 000-strong multi-disciplinary employees are professional engineers, technologists or scientists. "I think there are very few companies that can



Joseph Joe Ndala, CFO and a Director of the Board, Zutari

From page 12

match our local capacity, long-standing presence and understanding of the challenges required to operate successfully across this continent," stresses Dr. Rohde. It is this deep skills base and long-standing presence on the continent that Zutari taps into to make a tangible difference in Africa.

"It is all about making a difference. This refers to responsible infrastructure projects that generate employment and improve local communities," explains Dr. Rohde. Zutari aims to achieve these goals by partnering with its clients in a process of co-creation to derive at "joint solutions that matter."

Dr Rohde elaborates further: "We work in conjunction with our clients, rather than going away and designing what we think to be the answer and then presenting it as a fait accompli. Here it is important to factor in the social impact of design.

"Ultimately as engineers we are trained to focus on the technical aspects, but our solutions have both a social and an environmental impact. The best way to embrace these is through co-creation, where we also look at the end user of infrastructure, which allows us to deliver the most impactful engineering that we are capable of."

Infrastructure development must also be sustainable, which is why Zutari is a leading player in Africa in renewable energy solutions such as solar and wind power. Dr Rohde stresses that true sustainability for any asset owner or operator focuses on responsible development.

This includes social and environmental factors, as well as embracing appropriate new technology. "It is also about well-rounded operations and a safe and motivated

workforce. We work with our clients to deliver solutions that help them stay in business and thrive."

The new normal ushered in by the Covid-19 crisis saw the entire company transition successfully to remote working in March – a week before the hard lockdown came into effect. The company steadily introduced digital technologies over the last decade, an investment now clearly paying dividends. Zutari is uniquely positioned to take on the challenges of working in Africa, where many project sites are remote and access is difficult.

As a final message, Dr Rohde avers that the new company will focus exclusively on "solutions that are appropriate for the continent. What might be feasible for highly-developed markets like the US or Australia may not necessarily be affordable, let alone viable here. It is our vision and our commitment to achieving the full potential of Africa."

Dr Rohde sees the main infrastructure deficit on the continent as revolving around basic amenities such as water and wastewater services, transportation and energy. "Building a road, for example, is not an end in itself. Our vision as Zutari is that a road provides access, which facilitates economic development that, in turn, helps alleviate poverty and empowers communities. To address the infrastructure deficit, we need to approach both public and private sector priorities as integrated and holistic solutions.

"Infrastructure has been rightfully identified as a catalyst for growth and development. Many global companies who attempt to enter the African market do not know the best way to tackle its problems. We are right there at the coal face, where we can make the biggest impact possible," Dr Rohde concludes. ■



Tel: + 27 11 822 2320
Fax: + 27 11 822 2354
Call us: e-mail: cindy@ashak.co.za

Going Green Is Colourful!

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- Concrete Crack Repairs
- Concrete Floor Hardeners
- Concrete Floor Repairs
- Concrete Repair Mortars
- Curing Compounds

- Epoxy Adhesives
- Epoxy Grout
- Floor Coatings
- Joint Sealants
- Non Shrink Grouts
- Pre Cast Repairs
- Wall Coatings
- Water Proofing



PowerOptimal Provides Low Energy Cost Water Heating Solution

Elon PV range makes solar heating available to more South Africans

The recently inked exclusive partnership between PowerOptimal, a leader in innovative sustainable energy and demand management solutions, and Electrolux SA, a subsidiary of Swedish global appliance giant Electrolux, is set to meet the ever-increasing demand for cost-effective and sustainable solar photovoltaic (PV) water heating solutions in the local market.

The high cost of inverter based solar PV systems makes them unaffordable for many South Africans, leaving them no reliable alternative to being dependent on unreliable, ever more expensive Eskom grid energy. The PowerOptimal Elon range does not require an inverter or battery, giving the customer the ability to conveniently add solar capability to their standard electric geyser.

Essentially, the PowerOptimal Elon intelligent PV controller enables the direct connection of solar PV panels to a standard electric geyser. And because there is no maintenance required over the long lifespan of the product, it is one of the lowest cost per unit energy (kWh) solutions for water heating available today. While it runs entirely off the grid during daylight, the system can use AC power to supplement solar ensuring the household always has access to hot water.

"The country has an abundance of solar, so it makes sense to capture and store it as cost-effectively as possible to enable South Africans to enjoy the financial benefit of being off the grid. The significance of our partnership with Electrolux highlights the opportunity for innovative technology to transform the way people view and use solar PV systems. In fact, when compared to a traditional solar PV grid-tied system, the PowerOptimal Elon solution delivers significant cost-savings, not only on implementation, but usage as well," says Richard Fearon, CEO of PowerOptimal.

For example, when comparing the levelized cost of energy of a six-minute shower using 15 litres of water per minute at a temperature of 40 degrees Celsius across all available systems today, the PowerOptimal Elon is the most affordable. Grid electricity will set you back R5,58, a heat pump system will be R3,94, typical gas heating system works out to R5,05, a low-cost solar geyser system is R2,40, a solar PV grid-tied system comes



Richard Fearon, CEO, PowerOptimal

in at R2,35, while the PowerOptimal Elon solution costs R2,06. Unlike gas or grid-tied systems that are still impacted by price increases on the resources they use, the cost of the PowerOptimal Elon offering remains fixed for the lifetime of the hardware.

"Some argue that solar thermal collectors are more efficient; the lifetime of such a system ranges from seven to fifteen years depending on quality. It is simply not realistic to expect consumers to make large financial investments every few years. For their part, solar PV modules are routinely guaranteed at 80% performance after 25 years with the US National Renewable Energy Laboratory using a lifetime of 33 years in its solar PV calculations PV is the clear value and cost leader," concludes Fearon.

PowerOptimal designs, develops, and builds sustainable energy solutions that redefine the future of energy. Headquartered in South Africa and founded in 2014, PowerOptimal's team draws from their collective engineering and commercial expertise to enable global organisations and consumers to reduce energy cost whilst achieving the sustainability goal of net zero carbon. The company's innovative and patented energy demand management and solar photovoltaic water heating systems are designed to reduce consumption, demand, and cost by leveraging the abundant solar resource. ■

Demystifying “No Work, No Pay” And Other Covid-19 Options

Employers must understand that the Covid-19 and the national lockdown has not suspended employment rights, warns Grant Nirenstein, Director at law firm Knowles Hussain Lindsay Inc.

“The disregarding of employees’ rights will prove to be a costly mistake, especially now the Commission for Conciliation, Mediation and Arbitration (CCMA) has opened and labour courts are set to resume operations,” says Nirenstein. “These agencies will inevitably be inundated with referrals by employees, and transgressions will not be sympathetically viewed.”

He notes that recent weeks have seen much confusion among both employers and employees, fuelled by misinformation about employment obligations. A key principle for employers to remember is that employment is a binding contract, and they are not permitted to unilaterally change material employment conditions – especially where this will prejudice an employee.

“Unsurprisingly, one of the material terms of an employment contract is remuneration,” he says. “To amend the terms of remuneration therefore needs the agreement of the employee.”

To understand how the principle of “no work, no pay” may be applied, a distinction must be drawn between two common scenarios. One is where the employer is taking steps to salvage the viability of their businesses in the face of reduced income and the other is where employees are lawfully prohibited from working during the lockdown period.

“The restaurant industry, for example, has been lawfully precluded from operating during the lockdown period to date, so restaurant employees have been precluded from working,” he says. “This is a direct consequence of the lockdown regulations and not the product of operational considerations on the part of any employer.”

This situation – referred to as the supervening impossibility of performance – allows “no work, no pay” to be unilaterally implemented by the employer. This means an effective suspension of the employment relationship, often referred to as “temporary layoff”.

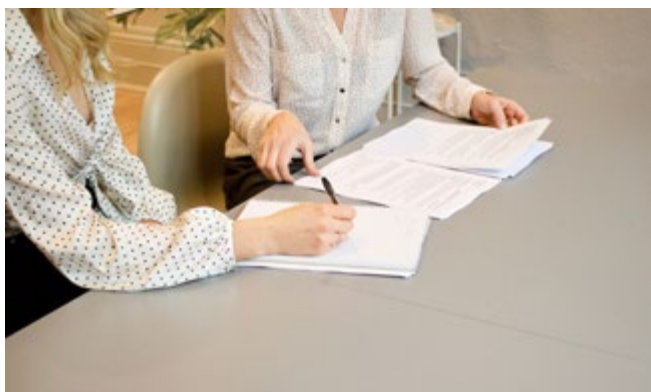


Photo by Gabrielle Henderson on Unsplash

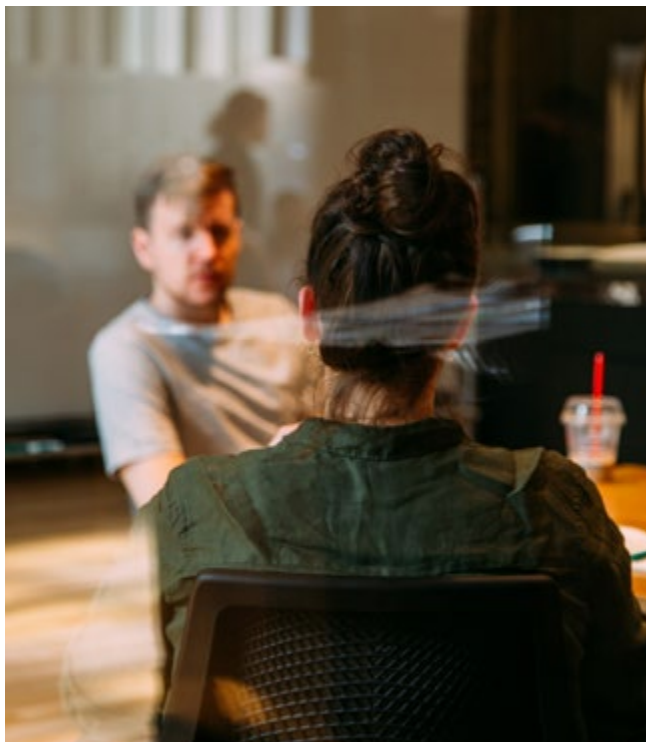


Photo by Charles Deluvio on Unsplash

“A difficulty employers face is how to deal with employees who refuse to agree to a reduction of earnings or short time,” says Nirenstein.

There are effectively four options for employers, he says. The first is not to change the terms of employment, which under the circumstances may not be feasible. The second option is to implement a “no work, no pay” policy, which is more prejudicial than reduced earnings or moving to short-time.

“Employees who refuse to agree to a payment reduction or imposition of short-time should judiciously consider their options, as an unreasonable refusal may, in itself, constitute a career-limiting decision,” he says. This is because cost-saving measures such as these are generally not contemplated by employers who need not implement such measures. Failing to agree to an employer’s request in these circumstances may lead to retrenchment proceedings in terms of section 189 of the Labour Relations Act – which is the third option for employers.

“Commencing retrenchment proceedings is exceptionally prejudicial, particularly in the context of a Covid-19 ravaged economy,” he says. “It is important to note that intrinsic in legitimate Section 189 proceedings, options short of dismissal must be considered and explored. In this context, payment reduction and short-time can be implemented as an alternative to dismissal, failing which retrenchment would be the fallback position.”

The fourth option is to consider liquidation or business rescue proceedings. ■

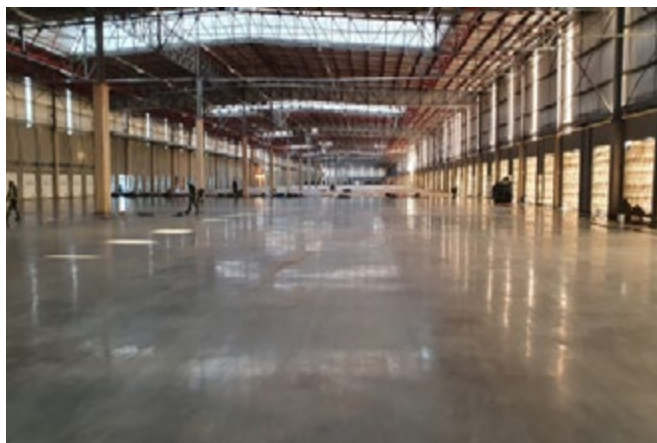
PrimX - Future Ready Jointless Flooring In South Africa



Concrete is one of the most frequently used building materials but has remained mostly unchanged. Traditional concrete is cement, stone, and sand, sometimes reinforced with mesh. Strong in compression but weak in tension. Concrete is prone to shrinkage, cracking, and curling, resulting in significant maintenance budgets for warehousing facilities.

Welcome to the world's first FUTURE READY JOINT LESS FLOOR!

SA *Builder* met Brett Meadway – Primekss Technical Sales Manager in South Africa, and got the insight on the flooring technology that, as he says, “will raise the design and execution methods of concrete slabs to a completely new level.”



How did your journey in PrimX start?

Primekss, based in Latvia, EU, is the inventor and patent holder of the world's first truly jointless concrete technology PrimX, well known since 1997. The Company however, had a modest beginning as a specialist flooring covering (epoxy and other) company, but after some period customers complained about the quality of the finish due to the concrete below the coating failing again and again. So, they started to search for the reason...

It was clear that traditional concrete cracks and curling were due to the drying shrinkage impacting the coating that we would add. And, what started out as an effort to understand, how to improve the concrete base on which the coatings would be applied, turned into a complete focus, research and business model on how to reduce and eliminate the negative effects of shrinkage in concrete slabs.

At the same time, throughout the 1990s, steel fibre reinforced concrete (SFRC) started becoming popular in Europe through the life work of Mr Xavier Destrée, ir. FACI. R. and D, Structural consultant, ARCELORMITTAL.

SFRC has provided a major improvement in crack control and curling and has been adopted by Primekss and it became a commercial success in Northern Europe. While Primekss was able to control cracking and curling more effectively, the concrete still suffered from shrinkage. Later



Primekss secured research support from the European Union (in 2007) to address the key issue of SFRC: shrinkage.

In collaboration with academics from Sweden, Denmark, Finland, Belgium and Latvia was developed a new revolutionary shrinkage controlling concrete system – the first version of what is now known as PrimX. Very soon the worldwide patent was achieved and thus opened the opportunity for Primekss to significantly widen the business.

PrimX is now selling its technology in over 25 countries. Until now, more than 15 million square metres of PrimX floors have been casted. PrimX unique system has been awarded with various industry awards and is one of very few technologies receiving four Most Innovative Products (MIP) Awards, issued during world's largest concrete industry event – World of Concrete in Las Vegas, USA.

So, when I was invited to join the company and open it to the South African market, I welcomed the offer without much hesitation. This opportunity not only allows me to connect my family in Latvia with my relatives here in South Africa, but also gives the possibility to build a better future for my four children.

I profoundly respect Primekss' core value – sustainable development. Climate change is no longer an issue for the future but a reality of our present day. To help avoid the



Brett Meadway,
Technical Sales and Project Manager, Primekss



Total Onsite Control of PrimX Concrete

climate crisis, we need to act now and use more advanced technologies to save our world. Cement manufacturing itself is responsible for more than 7% of global CO₂ emissions, which is why PrimX is so important – with better materials and optimized design, we significantly reduce the environmental footprint – on average saving 40% of CO₂ compared to traditional concrete solutions.

Was it easy to launch the business here?

Not at all! This was a major challenge at the outset - PrimX entered the South African market in 2014, when steel fibre reinforced concrete had just started to be introduced. It took a lot of time and energy to market Primekss high performance SFR concrete with a focus on reducing shrinkage through addition of special additives, careful mix design optimisation and quality control through the whole production process to ensure confidence in our system.

The only thing we source locally is the raw materials for the 30 MPa readymix – concrete stone, sand, and cement. However, it is vital to maintain a high degree of concrete consistency and cooperation with local ready-mix suppliers to provide a reliable and predictable standard for PrimX.

It was a real problem before I got to know Pronto Building Materials, which is now our main supplier in SA. Fortunately, with Pronto, we were able to obtain a quality washed crushed sand as well as a washed natural river sand filler. All cement and aggregate samples are shipped to Riga, to our Primekss lab where concrete engineers analyse the raw materials for their reactivity with our admixtures. None of PrimX admixtures are sourced locally as they all are under strict patent review and we manufacture and deliver them from Europe, Latvia.



Even traditional SFRC concrete is available. What is the difference and advantage of PrimX?

Well, that is easy to answer. Traditional concrete floor specification will be required for a standard 30MPa mix supplied daily by a readymix plant without any specific effort to address shrinkage. The traditional solution is limited to 30x30m (900m²) jointless panels and, depending on the load requirements (e. 75 kN btb 150 kN), a slab of 180mm could be constructed.

If the shrinkage is not addressed, 100m of joints will begin to open within months of casting and begin to curl, eventually leading to severe joint damage. Pretty soon the client will start to have huge maintenance expense to repair 100s of metres of joints and damaged equipment, not to mention significantly higher hazard risk at the workplace.

Instead of that, PrimX is limited only by day joints, saving 100s of metres of joint damage and allowing for a load requirement of 75 kN btb 150 kN on a 90mm slab.



Brett Meadway- Primekss Technical Sales Manager,
Chris Howes - CEO CHC-SA Construction and Charl
Marais - General Manager at PPC Readymix

As a PrimX floor doesn't require additional reinforcement with mesh, construction time for the same size of a slab is approximately 30% shorter. Imagine how much can a project manager do with an extra month or so?

With no curling and controlled shrinkage PrimX floors when cast flat, stays flat for its lifetime, saving a lot of time and money for maintenance. Well managed quality control on site, with a backup support from an experienced concrete engineering team in Primekss lab, offers a predictable, consistent quality no matter where the project is located.

How is a consistent quality achieved?

The success of the PrimX slab relies on full on-site supervision by a professional team. My job is to ensure that Primekss local partner is qualified to meet all the requirements of PrimX. All factors, impacting the quality of the final result are captured on-line via PrimX's own quality control system, thus we can monitor and react to any changes very quickly.

Can you tell more about the current projects you are working on?

Despite the lockdown this year for PrimX South Africa has been very intense. I can highlight, as an example, these two projects:

KIT KAT Distribution centre, Pretoria West, 14000m²

The brand Kit Kat is recognized as one of the leading brands in the FMCG industry today, and it symbolizes the trust of our customers



In 2019, PrimX secured Phase 1 and in 2020 Phase 2. The customer required a modern high-quality slab to compliment the brands modernization. PrimX design offered a jointless solution and a slab so strong that 90mm could handle racking load of 75 kN btb 150 kN.

DSV Logistics Warehouse, Kempton Park, 110 000m² - is a Danish transport and logistics company offering transport services globally by road, air, sea and train. Its main activities lie within road transport (trucking) networks in Europe, North America and South Africa, and its global air and sea freight forwarding business.

In 2020, this important project was secured with a PrimX Jointless floor. The project was divided into a 31500m² Crossdock and a 78 000m² Main Warehouse. The Crossdock, was designed with Primx jointless solution for huge loading from a sorter and mezzanine and was completed in July 2020.

The Main Warehouse required the PrimX design to handle up to 123 kN btb 246 kN racking loads, with our system to an extremely high tolerance not yet seen in South Africa. In fact, we are currently casting the Main Warehouse and setting a record in South Africa with 10'500m² cast every 5 days. I am proud of my local flooring partner, Chris Howes and his company CHC-SA with whom I have a partnership."

What does Future Ready, Joint Free Floors mean?

To cope with today's ever-changing industrial environment, everything must be flexible. The recent global pandemic has shown that dramatic change can happen instantly: production shutdowns due to infected workers, material availability challenges, changes in many

processes, and the critical need for facility cleanliness.



Every aspect of an industrial facility should be designed and built to be adaptable for future challenges, including the floors. Only jointless, saw-cut free floors allow for the true flexibility: no limitations for racking placement, easy system replacements, true flatness in long term for fast operations, precise slab with no shrinkage movement ready for automated robotic solutions and more. In addition to complete flexibility, the PrimX jointless floor is 30% faster to be installed, shortens the overall construction schedule and costs, maintains full warranty (design, materials, execution) and ensures consistent high quality in each project due to the design of the system.



PrimX floor in Israel

To get full scope of #FutureReady concrete floors and how with PrimX technology you can reach significant increase in ROI, you are welcome to join the upcoming webinar.

The Webinar is scheduled for September 22, 2020 13:00 to 14:30 GMT, in Zoom.

During the session essential long-term benefits of PrimX high-performance flooring solutions will be highlighted. For more information contact Brett on +27 084 837 8654 , email brett.meadway@primekss.com, or visit www.primekss.com



Brett Meadway - Primekss Technical Sales Manager,
Fernando Ferreira - WBHO Contracts Manager



DSV - PrimX Future Ready Joint Free Floor

Effective Sewerage Systems For Infrastructure Development and Maintenance

Effective sewerage systems are an essential element of infrastructure planning, development and maintenance. They ensure that communities live in hygienic conditions through the collection, conveyance, treatment and disposal of wastewater in a non-hazardous manner to people and the environment. A critical function of sewerage systems is to prevent water-borne diseases from becoming active.

The success of such systems is dependent on the design of the system, good quality materials and products, good installation and construction practice and continuous monitoring and maintenance to ensure their effectiveness is not compromised during their service life.

Rocla, a leading manufacturer of precast concrete products, is an ISO 9001(Quality Management System) certified company and manufactures sewerage system products carrying the CMACS Mark of Approval.

The range of products that Rocla offers in terms of sewer reticulation are:

Reinforced concrete pipes with HDPE lining – The HDPE lined concrete pipe offers the advantages of a conventional concrete pipe as well as a plastic pipe in that it maintains its shape under load and is inert to acid attack. They are an

ideal product for large diameter gravity pipelines in almost any condition. The standard HDPE lining is light green and 3mm thick. A HDPE capping strip is welded over the joints after installation to protect the exposed concrete at the joints from corrosive products. These pipes are available from 750mm diameter pipes.

Reinforced concrete pipes with a sacrificial layer – The company manufactures the following types of reinforced concrete pipes with sacrificial layer: The host pipe is manufactured from ordinary Portland cement (OPC) concrete with either dolomitic or siliceous aggregate and the sacrificial layer is manufactured with dolomitic aggregate in an OPC concrete or calcium aluminate cement (CAC) concrete.

Reinforced concrete pipes with Xypex BIO-SAN C500 – Concrete pipes with Xypex BIO-SAN C500 are offered for 300mm to 600mm diameter pipes. Xypex BIO-SAN C500 is a uniquely designed admixture for integral, long term protection of concrete in harsh sewerage conditions with high levels of H₂S that causes microbial induced corrosion in pipelines.

Infrastructure accessories

Supporting precast concrete sewerage accessories include:

- Pipes with access hole
- Bends – custom made bends of up to 30 degrees can be supplied
- Manholes – HDPE lined manhole chambers, reducer slabs and cover slabs

Rocla products have been utilised in the Waterkloof Quarry and the Nellmapius Ext 22 housing project both in Pretoria, as well as for the Polokwane Eastern Ring Road and rehabilitation of the D528 in George's Valley and the Great North Plaza in Limpopo.

Projects in Cape Town and Mozambique have also sourced the expertise that Rocla can offer when it comes to infrastructure specialist requirements. Rocla is part of the ISG group which also includes Technicrete. ■



Rocla Pipes



Scaffolding: The Highs And Lows

Scaffolding is key to construction, with a rich history, used to obtain access to structures and working at height, to sustain construction workers and tools, and support heavy building material loads, for example cast-in-place concrete, stucco, blocks and bricks – which is known as “shoring”, as opposed to “scaffolding”.

Variants of scaffolding emerge with regularity, and vary globally. Popular scaffolding types include mast climbing, suspended / swinging, frame and brace, staircase tower, haki, kwikstage, cuplock, systems, tube and clip, and wooden and bamboo.

Scaffolding-specific projects arise due to available equipment and familiarity with the system, with codes and expertise specific to the local in which the system takes place. For example, in Northern Europe labour is costly so aluminium scaffolding is popular, as the material is lighter to manually carry than steel thus reducing scaffold construction time and cost.

In other nations, the reverse is true. Labour is cheap and aluminium is expensive, so bamboo and wooden poles are used. Scaffolding specific to the project and country is the best way to go.

Scaffolding types

Wooden and bamboo

Common in Africa and Asia, pre-cut lumber was popular before steel and material fabrication became cheaper. Bamboo is more Asia-specific because of its power, ability to bend and sustainability. This is nowhere more evident than Hong Kong, where builders and designers navigate multi-layered bamboo scaffolding.

Tube and clamp

Steel scaffolding, assembled by connecting tubes to

construct long runs and clamping the vertical and horizontal tubes is a combination known as “couples” and is an original type of steel scaffolding. Flexible by design, verticals can be placed at will. This kind of scaffolding can be moulded to unconventional shapes; irregular, straight or round, with the bonus of being rust and corrosion-proof in wet conditions.

Systems / modular scaffolding

A system of arranged vertical and horizontal elements, and the most utilised scaffold used around the world in loaded circumstances as well as with smaller scaffolding. A generalised scaffolding term, this also refers to *Cuplock* - Made from galvanised steel and used for its heavy





load-bearing properties to enable scaffold designs with repeat motifs, with cuplocks at every 500mm to 1 000mm.

Haki – modern and recruited in shoring and suspension, it is a brand as well as a specific scaffold, and is light and relatively simple to construct. This system is durable, approved for load class 6 and bay length averages 3m.

Staircase towers – facilitates technicians moving between different levels and sturdy access to a building section, also used on its own.

Frame and brace – modular scaffolding, comprising bases, planks, braces and frames, common to the West; not heavy and quick to erect, but weaker than system scaffolding. It's used in minor projects with mobile scaffolding.

Suspended and swing set – used to support scaffolders and equipment, this comprises a cable system suspending a platform used to ascend and descend to varying heights. Economical to use on tall buildings requiring minimal duty access such as maintenance.

Mast climbing – akin to the above, a mast climber can ascend and descend while the scaffold adjusts vertically on fixed mast constructions, able to support heavy weight. Suitable for brick / block walls as it can be adjusted to small height degrees. These are perfect for constructions with curtailed ground area.

Shoring – concrete poured onto a structure to hold the liquid form until it cures into a solid, with a scaffold underneath.

Scaffolding types

Single / bricklayers scaffolding

Predominately for brickwork; comprises an outer row of verticals ("standards") tied to longitudinal members at different levels. The standards are tied to the cross members ("putlogs") at the outer end, which are supported on the inside walls; the putlogs carry the platform. In the event that an opening in the wall is at the same level as the putlog, the putlog may not be placed on the wall, but rest instead on a cross piece ("bridle tube") attached to the wall end of the putlogs that are adjacent.

If the putlog level coincides with an opening in the wall,

it cannot be placed on the wall. Hence, it should rest on a cross piece (called a bridle tube) tied at the wall end of the adjacent putlogs. Lateral stability is obtained with cross bracing in the vertical planes.

Double / Mason's scaffolding

Used by masons for plastering, with inner and outer verticals, and putlogs supported by verticals and longitudinals. Narrow frameworks are given lateral steadfastness by tying them to the building.

Cantilever / needle scaffolding

Suited to building the top parts of a lengthy building for residents, cantilevers get rid of the need for lower level scaffolding, and are supported at the bottom by a cantilever prop.

Birdsage scaffolding

A cage carried by four verticals, used for internal work, and mobile.

Ladder / trestle scaffolding

Comprises two ladders with the tops connected by planks, used for lightweight construction.

Suspended scaffolding

Used for working at height and suspended from above the ground, comprising three types: *Operated by winches* - used with cranes and are arc heavy platforms hung by wires. *Operated by pulleys* - used to clean windows and paint buildings; *Fixed type* - attached with ropes, chains and tubes to the roof truss above work sites. ■





IWH Trade Association And Professional Body

The Institute for Work at Height (IWH) was initially formed as a trade association in January 2009, being a merger of the Specialised Access Engineering Manufacturers Association (SAEMA) and the Rope Access And Fall Arrest Association (RAFAA), desirous of creating safety awareness and in turn “professionalism in the overall Work At Height Industry”. Soon other sectors of the work at height industry joined, and the seven different chambers were created.

The members all agreed that their input in the development of the necessary skills was lacking and they thus decided to apply for the registration of a Professional Body, and in November 2012, the Institute for Work at Height Professional Body received official recognition from SAQA.

Work at Height is a specialisation for other occupations to allow these occupations to work safely at elevated heights, by means of specialised equipment which include:

- Rope access
- Steel scaffolding
- Access towers and ladders
- Mobile elevating work platforms
- Temporary suspended platforms
- Falsework, as well as
- Fall protection (which is generic to all work at height trades)

Working at height cuts across a large spectrum of industries such as construction, building, maintenance, electrical work, welding, telecoms and other infrastructure developments. The IWH Professional Body is in fact a key player in the training process. Having the Trade Association as its ‘bed partner’, the IWH PB is indeed ideally suited to

undertake this role simply because it represents the voice of the Industry.

In its initial formation, the IWH spend a lot of time in improving all the other chambers, but Scaffolding and Falsework had its own challenges which was difficult to resolve.

Scaffolding and Falsework

The IWH started a process of assisting the scaffold and falsework industry in 2014. The challenges in this industry was unique, as the members that were experiencing problems were those who employed permanent scaffold and falsework erectors, and not those who use these structures simply for access.

Construction crews rely on scaffolders to erect sturdy platforms for them to stand on when they work on tall buildings, stadiums, bridges and other lofty structures. Some even work in the shipping, oil and mining industries so builders can construct ships, erect oil derricks and support mines. Scaffolders calculate the amount of materials they need for construction projects, such as the wood and steel support tubes, and test the scaffolding for durability. They must also disassemble the scaffolding when projects are completed.

Scaffolding can be very dangerous and consistently results in accidents for construction workers. It has statically been noted that while falls are a major source of personal injury in the construction injury, falls from scaffolding is one of the leading reasons for a fall.

Internationally, scaffolding is being trained as a proper occupational qualification and, in some cases, as a registered trade, whilst in South Africa it was structured as short unit

standard-based programmes. Although SANS 10085 indicated how the training should have been structured so that the person are trained over two to three years, inclusive of workplace experience, this was hardly checked for compliance in the industry.

The construction and various other industries have identified a need to develop a proper "scaffolding qualification" to address one of the scarce skills identified by the NSDS. Scaffolding services in South Africa have become an increasing necessity in the transformation of the country into a first world entity, with a thriving infrastructure of buildings and construction works encompassing all wet and dry trades. Scaffolding services are required for a variety of projects taking place daily in South Africa.

Various scaffolding systems provide contractors with a lot of benefits due to their increased safety, ease of assembly and dismantling of scaffolding structures. Scaffolding is a key element of the construction industry. With the use of scaffolding, structures can be constructed. Scaffolding is used to create support for formwork to be completed in building construction. Scaffolding services are also used as a support structure for workers to access parts of the permanent structure which are difficult and dangerous to reach or to perform various other tasks within or around a permanent structure.

The IWH PB is in the final stage of submitting new scaffold and falsework qualifications to the QCTO for registration, which will allow learners to develop skills required in the workplace. The generic competence will enable learners to transfer this competence to other streams of specialisation within the building and civil construction Industry.

The scaffold qualification will include proficiencies to work as a:

- General worker
- Scaffold hand
- Scaffold fixer
- Scaffold erector
- Scaffold inspector; and
- Scaffold supervisor

The falsework qualification will include proficiencies to work as a:

- General worker
- Shutter hand
- Falsework erector
- Class A1 falsework inspector, and
- Falsework foreman

There is a critical need in the industry to have suitably trained people who can conduct the essential scaffolding and falsework operations associated within the industry safely and efficiently. This will lead to competence in the scaffold industry to grow the South African economy and



Scaffolding

boost much-needed job creation. It will also lead to a balanced society in that learners will understand how the work they do, fits into the greater construction industry and contributes to inclusive economic growth and social development.

The newly developed scaffold and falsework qualifications will enhance safe working conditions and decrease the number of incidents at height. It should have a strong secondary effect on industry growth by professionalising the environment and enhancing skills of unskilled labourers, thus increasing employability in the country through the correct behaviour in the industry enhancing safety and creating employment.

For more information you are welcome to email the CEO, Dr Alti Kriel, at ceo@ifwh.co.za.





A Modern Gem in Victorian Cape Town

Situated in the heart of Observatory, Mitra Mews merges history with contemporary design in a beautiful, privately developed small mixed-use precinct, with a retail shop and short and long-term accommodation rentals.

Owned by the husband and wife architect duo Alastair Rendall and Gita Goven, construction of Mitra Mews was completed at the end of last year. The precinct features a complex that offers both short-term and long-term rental options - with nine fully furnished units, including fibre internet connectivity and smart televisions. Four of the units are duplexes with four-bedrooms and a bathroom on each of the two levels, and five of which are two-bedroom units both with en-suite bathrooms.

The 840m² site has parking for 11 cars and includes a convenience store, a music studio, letting office, and laundry, as well as a completely refurbished Victorian house which is part of the Observatory Heritage protection area, containing many of the remaining Victorian and Edwardian architecture buildings in South Africa. The precinct is also within walking distance of 20 different restaurants and bars as well as the Metrorail station, bus stops, and two shopping centres.

Alastair Rendall says, "My wife and I have been in the rental business for 26 years and were looking for an investment that would ultimately allow us to reduce our dependence on our professional service business and generate an income from the rental property. This would free us up in generating innovative solutions to mixed income inspiring settlements. Considering this property was in front of our home, it made sense for us to purchase it when it came on the market. It was also small enough to make the development manageable for us without requiring the services of a massive third-party developer."

Both Alastair and Gita are passionate about designing everything using sustainable materials and making their

developments as water and energy-efficient as possible. To this end, the complex has been constructed using eco-friendly green-lite concrete blocks, and water supplied by a borehole that is fully filtered and purified on-site.

For energy, the development relies on a photo-voltaic water heating and electricity generation system, with heat pump back-up, to help make it as eco-friendly as possible. There is also a predominantly edible urban courtyard landscape with 24 fruit trees and medicinal, herbal and culinary plants.

Even though Mitra Mews was receiving good online reviews and started building momentum on the rental front, the recent lockdown as part of the Covid-19 containment measures has meant that the owner were required to rethink their short-term plans.

"While there is still a lot of uncertainty in the market, we are exploring making the units available to health professionals as we are within walking distance of a hospital. There is also a possibility of continuing with the long-term rentals targeting foreign and local students, but with the second half of the year is difficult to predict as universities will likely continue with online education, so we are keeping all options open at this stage," indicates Alastair.

Mitra Mews received R11 million in funding from TUHF. "It has been a great experience working with committed clients like Alastair and Gita. Not only have they followed through on what they promised to accomplish, but they also produced quality work in the development of Mitra Mews. This goes a long way in establishing the foundation of a strong client relationship," says Anne Meiring, Credit Analyst at TUHF.

Given the picturesque location and the quality of the development, it certainly does bode a lot of potential that will benefit its owners and tenants well into the future. ■

Construction Hero In 100-Day Marathon To Build Hospital Beds



When South Africa went into a hard lockdown on 27 March, Government's aim was to use the time to ramp up the readiness of healthcare facilities and hospitals around the country in preparation of the expected Covid-19 peak.

In April, it was projected that the country would need between 4 100 and 14 767 ICU beds, but there were only 3 318 available at that time. In light of this, the construction and allied industries have been working around the clock to prepare for the onslaught of the pandemic.

One of these companies was GVK-Siya Zama, which received an order to create 24 new isolation beds at Clairwood and Wentworth hospitals in Durban. The company has extensive medical construction experience and just before lockdown, completed an ICU/isolation section at a private hospital, also in Durban.

"An isolation bed is like an intensive care bed, but with a positively pressurised anteroom and access control to prevent the spread of a virus," explained Ryan Schneeberger, Contracts Manager for GVK Siya-Zama on the Wentworth site. "As the potential impact of Covid-19 became more apparent in March, health authorities recognised the shortage of isolation beds in the country.

As lockdown had put a stop to approximately 99% of all travel, the safest and most efficient way that construction work could commence on these projects was to accommodate key workers on site."

One such worker was 28-year-old Tshelemali Millionare Kwazi Dladla, also known as Kwazi, who was a junior foreman at GVK-Siya Zama. Kwazi was chosen to work at the Wentworth Hospital site, where the company had to convert a derelict building into an eight-bed isolation unit in only 35 days. He was one of four core workers who lived in park homes on-site for the duration of the project.

"Not only was the Wentworth project deadline-driven and technically demanding, but the team had to deal with the new realities of Covid-19 during construction," said Schneeberger. "We had to establish a core team on-site as well as off-site to manage the work and Kwazi was appointed as a Junior Foreman for the project – a step up from his previous position as Supervisor."

Kwazi initially thought it would be a small project that entailed getting a building ready for patients. "But when I arrived on-site, there was specialist work such as installing air pressure systems and gas ducts. I also had to learn about Covid-19", he said. "At one time we had up to 75 people on site, including sub-contractors, so I had to make sure they all followed Covid-19 rules and that they sanitised and were socially distanced."

Schneeberger explained that the scope of the Wentworth project had expanded beyond the original contract: "As we were able to successfully finish the isolation unit on time, we were asked to complete 22 quarantine beds as well, and these also included the same specialist air pressure systems as the isolation beds. This was followed by work on the Emergency and Pharmacy sections at the hospital to change the patient flow in line with Covid-19 requirements."

The experience of the GVK team at Clairwood was similar as their project grew from an initial build of 16 beds to 93 beds, now due for completion early in September. The expanded scope of the project proved to be fertile learning ground for the young Kwazi.

"I have gained a lot of experience that I wouldn't have had without being exposed to the Covid-19 pandemic," concludes Kwazi, who has managed to turn his experience of a global pandemic into a positive one that will set him on the way to reaching his dream of becoming a Site Agent, one of the most senior production positions on a building site. ■

Efficiency A Key Driver In Environmental Stewardship

Demanding economic conditions – aggravated by stoppages caused by the Covid-19 pandemic – have highlighted the value of environmental stewardship in the construction sector.

“A key focus of good environmental stewardship is on project efficiency,” says Bruce Paul, Environmental Manager at Concor. “It is vital that contractors develop end-to-end engineering processes that conserve resources and manage risk – now more than ever.”

Before construction on a project even starts, Concor considers issues including material sourcing, reduction of potential wastage, and the carbon footprint of fuel and materials. The company recently took the opportunity, for instance, to reduce the use of water, sand and cement on a Gauteng building project.

“This interesting innovation was applied by constructing



Alternative water for non-potable use at Concor's Aurum Project in Cape Town

the inner wall with everite-hebel autoclaved aerated concrete (AAC) blocks, which are lightweight,” says Paul. “While a typical brick and mortar wall weighs about 350kg per m², an AAC wall load is 90kg per m². Requiring a thinner skim coat finish, this positively impacted our material and logistical demands for less water, sand and cement.”

The building's long-term energy efficiency was enhanced with the use of performance glass which has a low-e aspect, reflecting long wave infrared energy and helping to keep



Alternative water for non-potable use at Concor's Aurum Project in Cape Town



A interesting innovation using autoclaved aerated concrete (AAC) blocks

the building cooler. This, in turn, reduces the load on the air conditioning system.

He emphasises that judicious use of water is also an ongoing environmental concern for contractors, especially in water-scarce countries. In a building project in Botswana, Concor had to find solutions when a moratorium was placed on all non-drinking uses of municipal water. The porous rock in the foundations proved to have a constant outflow of irrigable water. This was pumped to a farm of tanks on site and reused for purposes such as dust control and the mixing of mortars and plasters. The end-design of the building was even adapted to make use of this source for its brown water system.

A recent building project in Cape Town also required working within strict municipal water restrictions. Alternative water supply for building operations was sourced from groundwater below the foundations. It was non-potable but could be used for certain aspects of the building. Monthly municipal water usage at the site dropped from 60 000 litres to 5 000 litres within just a few months.

On a wind farm project in the Western Cape, Concor ensured that all secondary water was cleaned and diverted back to construction process.

“Water use on construction sites often comes from concrete-related processes such as the washing of readymix trucks,” he says. “We were able to remove solids such as aggregate for re-use, while returning the water to the batch plant. With this water's cementitious content, it could also be used in the compaction of roads and building up of road layers.”

Paul highlights the growing but necessary weight of environmental licencing that applies to both the end-client and the contractor.

“Effective stewardship demands a comprehensive suite of practices to prevent and mitigate any pollution that may emanate from our industrial processes,” he says. “We apply this knowledge across all projects, according to our critical environmental standards to manage risks and make the most of opportunities in each case.” ■

Fever Screening Systems – When Temperature Matters

Viral epidemics like SARS, MERS, swine flu or the current coronavirus / Covid-19 have created a worldwide demand for infrared cameras able to screen for fever conditions in humans. INSTROTECH, South Africa's leading provider of test & measurement instruments, representing Optris in South Africa, offers an excellent solution. The Xi 400 and Pi 450i cameras are specifically designed for this application, delivering up to 40mK thermal sensitivity and making it easy to discern elevated body temperatures.

As employees return to work after virus related shelter-in-place regulations are lifted, it is critical for companies to ensure the health of their returning work force is not compromised by workers who may have contracted a virus outside of the facility. The fever screening system can be used in different ways and application areas, so individual scans of single persons or crowd-based screening of larger groups of people can be implemented.

The installation of the whole system, including the reference radiator and PIX Connect software, which comes with a predefined fever screening layout, is very easy. It can also be relocated if necessary and set up in minimum time. The system works discreetly. The software singles out the people whose skin temperature exceeds the predefined value.

The visual alarm quickly identifies subjects who exhibit temperature increases from the normal population allowing security staff to validate internal temperature and discreetly examine the subject for additional symptoms. Thermal images with temperature measurements can be stored whenever a temperature exceeds the preset threshold.

Key features of the Optris Fever Screening Systems:

- Screening of employees and visitors with elevated skin temperatures
- Easy installation and operation of the inspection system
- Alarm signal when skin temperature reaches predefined alarm value
- Thermal images of fever suspects can be stored automatically
- Extensive software inclusive, runs on a standard PC
- 382 x 288 pixel resolution and 80 mK (Xi 400) or 40mK (Pi 450i) thermal sensitivity (NETD)
- PI 450i T010 with ambient referencing source BR 20AR for an absolute measurement accuracy of +/- 0,5 °C

Optris Fever Screening has two main approaches:

1. Crowd-based screening - The IR camera monitors a crowd of people at once or sequentially. Assuming that the majority of the measured maximum head temperature values come from healthy individuals, the exceptions with an elevated body temperature can be easily detected.

Recommended product:



Xi 400 T010 or PI 450i T010 with 29° or 53° optics ≥ 4m distance

2. Individual screening - This method is mainly used at control gates or where crowd screening is not possible. From a closer distance the exact temperature of the medial canthus (tear duct) can be measured, providing the strongest correlation between outside skin temperature and core body temperature. This method can also detect lower fever grades.

Recommended product:

PI 450i T010 with 29° optics @ 1m distance or
PI 450i T010 with 18° optics @ 1,5. to 2m distance
(MFOV should be 4mm or less)

The fields of application for these devices are hospitals, airports, supermarkets and malls, rail stations, offices, lobbies / foyers, schools / universities, and warehouses.

Setting up the system

The Optris PI 450i T010 infrared camera can be combined with the dedicated ambient referencing source BR 20AR which is equipped with a digital temperature sensor with +/- 0,1 °C accuracy.

The reference source has to be positioned in the scene proximate to the subject to be scanned. The high accurate reference signal is integrated into the PIX Connect analysis software and gives a system accuracy of +/- 0,5 °C. Contact INSTROTECH on 010 595 1831 for more on Optris fever screening systems.

VIDEO LINK:

<http://www.instrotech.co.za/Media-Downloads/Videos/lc/51968/lcv/s/when-temperature-matters>

Know the difference between sealants and adhesives



Acryl-W sealant fills small cracks, sticks and seals cornices

An Acrylic sealant is a sealant with typically water-based ingredients made from acrylic resins, used primarily for filling small cracks and joins, and for adhering cornices to walls and ceilings. In order to have the satisfaction of doing a job that will last. Do it right the first time, by making the correct purchasing decisions and knowing the differences in grades or the quality of acrylic sealants on the market.

You may need to **pay for quality**

Most often, but certainly not always – the better-quality ingredients used in a product, the higher the price maybe. Not all acrylic sealants are equal: some

have undergone technical research and laboratory testing, to produce a product that will perform optimally, in varying conditions, surfaces and applications.



Fix-O-Chem is a chemical fastener adhesive

Can Acrylic sealants be painted? **Yes.**

There are a variety of paintable acrylic sealants in the market place, and they can be painted over with solvent based paints as well as water-based paints (ie acrylic latex). They are generally available in white, grey and beech and the six wood colours of the Den Braven Woodflex range.

Good colour stability is achieved with high grade sealants:

They are smooth, pure white, with no discolouration and have good adhesion properties.

The difference between adhesives and sealants

The main difference between adhesives and sealants is that adhesives are primarily used to bond materials together.

Sealants are made from flexible material (Silicone sealants, Polyurethane sealants, Acrylic sealants) making them ideal for areas where expansion and contraction is of concern.

The main objective of a sealant is to seal assemblies and joints or gaps. Sealants need to have sufficient adhesion



Fire Protect® is a range of fire protection sealant and adhesives

to the substrates and resistance to environmental conditions to remain bonded over the required life of the assembly.

When sealants are used between substrates or surfaces having different thermal coefficients of expansion or differing elongation under stress, they need to have adequate flexibility and elongation (movement capability). Sealants generally contain inert filler material and are usually formulated with an elastomeric to give the required flexibility and elongation.

Sealants usually have a paste consistency to allow filling of gaps between substrates. These sealant pastes normally cure (RTV-room temperature

vulcanisation) to form a durable and tough rubbery seal. Low shrinkage after application is often required.

Durability, good weather resistance as well as UV and ozone resistance is also required in most cases. The adhesive's main purpose is to bind one surface to another, not to seal the space in between the objects.

Many of Den Braven's range of sealants, adhesives and foams meet the Green Building Council of South Africa's



High Tack is the ultimate instant high grip MS polymer adhesive

environmental requirements. There is also a certified Fire Protect® range available. Selecting the correct sealant is as critical as the preparation and application process to the success of the job on hand.

Den Braven celebrates its 40th birthday

Den Braven Sealants South Africa is a market leader in sealant technology and was established in 1980. They supply their range of products throughout South Africa from offices in Cape Town, Durban and Johannesburg where they also export to and service sub-Saharan Africa which includes Botswana, Namibia, Swaziland, Malawi, Kenya, Tanzania, Ghana, Lesotho, Mozambique, Angola, Zambia, Mauritius and the Indian Ocean region. Their range of sealants and adhesives, foams and technical aerosols are used in diverse markets

including, but not limited to construction, glass, glazing, aluminium, and automotive, industrial and DIY markets.

Den Braven is a member of the Green Building Council South Africa, and Fire Protection Association of South Africa, amongst others. Den Braven South Africa proudly celebrates its 40th anniversary this year.

For more technical information, please visit the Den Braven website www.denbraven.co.za or call them on: JHB: 011 792 3830, CT: 021 552 9674 and DBN: 031 579 2375 or sales@denbraven.co.za



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CoolAd 18405

High-Speed Doors Can Increase Productivity

With companies under pressure to ensure as contactless operation as possible, automated high-speed doors are becoming a viable option. Not only does use of this type of door increase productivity, but it will allow the opening and closing function to be done without the need for personnel to touch the actual door.

This is according to Wim Dessing, Sales Executive at Apex Strip Curtains & Doors, who says there has been an increase in enquiries for these high-speed doors with interest being shown predominantly from manufacturing operations, as well as companies in the storage and warehousing sector.

"High speed doors, unlike the conventional roller shutter door, are quick and easy to open, and the entire process can be automated, significantly improving productivity and importantly hygiene," Dessing says. "Reducing unnecessary standing time for equipment and vehicles carrying goods enables companies to enhance their supply chain logistics with further knock-on benefits."

Apex Strip Curtains & Doors is the leading local manufacturer and supplier of a wide range of door products including high speed roll-up and fold up doors, general purpose strip



High speed doors can be automated making for contactless operation.

curtains and welding and safety screens.

Dessing emphasises that apart from the obvious cost savings another major advantage when dealing with a local manufacturer is the vastly reduced lead times.

High speed roll-up and fold-up doors are suitable for a wide variety of applications. The doors do not hinder personnel, forklift or vehicular traffic.

The Sector high speed roll-up door, manufactured by Apex Strip Curtains & Doors, delivers both functionality and performance. These compact doors are robust enough to cope with the intensive demands of heavy and continuous traffic and feature an integral unit incorporating the actuator, controls, safety devices and balancing systems. Sector doors are structurally flexible with transparent or coloured interchangeable panels.

The company's range of Traffic high-speed fold-up doors offer a sturdy, dependable and modular solution for medium and large entrances such as shipment and



High speed doors are quick and easy to open

warehouse areas, and are particularly suited to conditions where wind is a factor.

Made from strong self-extinguishing Class 2 fabric with excellent thermal insulation properties, this door has been designed to resist a wind loading of up to 50km per hour. The supporting structure is manufactured from high-quality galvanised steel to ensure optimum durability and, if the application requires it, vision windows can be incorporated in the panels.

A counterweighted balancing system ensures high standards of performance and safety. The built-in automation unit protects the components from wear caused by the elements.

The Traffic high speed doors are controlled by an electronic unit that complies with all IEC regulations. It can be activated by any type of remote control equipment including photocells, pressure sensitive mats, movement detectors or induction loops.

All Apex Strip Curtains & Doors products are manufactured in accordance with international standards using materials that comply with stringent hygiene and safety criteria. ■



High speed doors offer functionality in the "new normal"

Mobile Pumps Prove Their Value

The mobility of trailer-mounted pumps has earned them a reputation for versatility and efficiency, according to Integrated Pump Rental.

The company's range of Sykes pumps in mobile configuration has seen enthusiastic take-up in construction sites. Sykes product specialist at Integrated Pump Rental, Henru Strydom, says that the company has even embarked on the local manufacture of these units.

"Mobile pumps can deliver real economy through their ability to be moved where and when required," says Strydom. "With their own wheel-base, it means that no infrastructure needs to be built before they can start working. They can also be moved quickly in an emergency."

High head (HH) pumps can pump to a height of between 70 to 150 metres, while the medium head (MH) pumps can reach heads of between 50 to 90m. The contractors' package (CP) range comprises the smaller units which can be pulled by a bakkie or 4x4 vehicle. These are also licenced for travelling on public roads.

The robust, auto-priming Sykes pump range has features that protect against overheating or low oil levels, optimising



The Sykes CP units weigh 1,5 tons on a road trailer

uptime and ensuring low maintenance requirements. Internal components including impellers, wear plates and shafts are supplied in stainless steel as standard for high resistance against acids.

Sustainable Access Flooring Made From Old Tyres Available From KBAC

KBAC Flooring's Raised Flooring division now has the capacity to provide a unique form of green raised flooring which uses rubber crumb cradles made from recycled truck and car tyres.

In addition to rubber crumb cradles, the KBAC Raised Flooring's InstaCradle system employs cradle packers, timber battens overlaid with chipboard, plywood or hardwood to form the prime component in creating high performance acoustic and sports floors which can accommodate a variety of floor coverings – both internally and externally.

Guy Park, Head of the KBAC Raised Flooring division, says installation of the rubber crumb cradles – which have a 60-year guarantee – is simple and cost-effective. "They are loose laid and do not require fixing to sub-floor and can be adjusted to suit varying finished floor heights. Levelling on-site copes with uneven floors so no levelling screeds and subsequent delaying concrete drying times are involved."

Park says InstaCradle cradles are made from recycled rubber to provide long lasting high-performance solutions with no maintenance required. The cradles are also fully recyclable, thereby providing a genuine "cradle-to-cradle" product. Other benefits of the system include:

- Excellent acoustic performance.
- Can provide a void for services/underfloor heating.



A new raised sports floor being laid on Instacradle rubber cradles, produced from recycled old truck tyres

- Cradles are unaffected by water.
- Cradles can be used in areas of abnormal loadings.
- Can accept a range of floor finishes including ceramic tiles.
- Hardwood floors can be unobtrusively nailed direct to timber battens.
- Structural loadings minimised due to the light weight of the system.

"The InstaFloor cradle and batten system is designed either as a raised floor, accommodating underfloor services, or as a floor offering extremely high standards of acoustic performance," Park adds.

For more information, contact him on 011 608 4270 or 082 563 0973 or email guypark@kbacflooring.co.za.



MASTER BUILDERS SOUTH AFRICA

Corporate members



Boland
Daniel Uys – **Executive Director**
Tel: 021 863 3330
E-mail: info@mbaboland.org.za



East Cape
Greg Steele – **Executive Director**
Tel: 041 365 1835
E-mail: ecmba@global.co.za



Free State
Francois du Plessis – **Executive Director**
Tel: 057 352 6269
E-mail: admin@mbafs.co.za



MBA North
Mohau Mphomela – **Executive Director**
Tel: 011 805 6611
E-mail: info@mbanorth.co.za



KwaZulu-Natal
Vikashnee Harbhajan – **Executive Director**
Tel: 031 266 7070
E-mail: info@masterbuilders.co.za



Greater Boland
Duane Phillips – **Executive Director**
Tel: 023 342 6964
E-mail: mbagb@telkomsa.net



Northern Cape
Christa du Plooy – **Secretary**
Tel: 053 832 1762
E-mail: nc_mba@xsinet.co.za



Western Cape
Allen Bodill – **Executive Director**
Tel: 021 685 2625
E-mail: info@mbawc.org.za

AFFILIATE MEMBERS



Association of Architectural Aluminium Manufacturers of SA
Johan J Heyneke – **Director**
Tel: 011 805 5002
E-mail: aaamsa@iafrica.com



SA Reinforced Concrete Engineers' Association
Jeff Thomas – **Director**
Tel: 011 455 6321
E-mail: sarcea@iafrica.com



SA Refrigeration and Air Conditioning Contractors' Association
Barney Richardson – **Director**
Tel: 011 622 3890
E-mail: barney@saracca.co.za

www.masterbuilders.org.za

People in Construction

The Paragon Group is perhaps unique in the industry for employing an equal number of men and women, with the latter ranging from student architects to senior management. "I love the fact we have so many talented, audacious women in our company in different stages of their careers," comments Director Estelle Meiring, who herself has notched up 15 "wonderful" years.

South Africa is commemorating Women's Month in August as a tribute to the over 20 000 women who marched to the Union Buildings on 9 August 1956 in protest against the extension of Pass Laws to women.

Representing "a sprig of youth" is Student Architect, Caitlin Ho, who has a BSc in Architecture from the University of Pretoria. While it is her second year at Paragon Architects, she will return to university next year for postgraduate study. In her 20s, Ho says she brings "fresh eyes to the teams in which I work. I use my energy to throw myself headfirst into any task, no matter how mundane it may seem, as everything is an opportunity to learn."

Candidate Senior Architectural Technologist, Mpho Nomnga, is in her 30s, with a BTech in Architectural Technology and an interest in the technical and business side. Responding to a recruitment agency, she ended up with two companies to choose from. "Both interviews were successful and so I had to make a choice. Almost four years later I am still at Paragon Interface."

Ho adds that the transition from university to office life was an exciting one. "I have only scratched the surface, but by observing the talented people around me, I am learning more than I could ever have imagined. The design, construction and life skills I am acquiring is unquantifiable."

This ranges from time management to work ethic as well as design rationale, presentation, construction and industry knowledge. "I am excited to overlay these skills with an academic's eye and design theory when I return to university."

A top attribute of the Paragon Group for Ho is the company culture, as people are always patient and wholehearted in offering assistance. "What I enjoy most is the teamwork and spirit that extends beyond the workspace. Personally, it is extremely exciting being able to say I contributed something to a project. I can confidently say I have learnt exponentially from day one. I have had the chance to work on a number of projects in all sectors – from residential to offices, retail and storage. This range of experience does not come often or easy to young designers."

Hos' message to fellow students contemplating a similar career path is that success is ultimately determined by a willingness to learn and grow. "Grab each opportunity, no matter how daunting or simple, and ask questions constantly. Listen carefully, be enthusiastic and work smart and hard. Build yourself and your confidence in both life and work."

The Paragon Group continues to evolve along with its employees. "Just as I am constantly growing, Paragon is persistently developing and changing as the world shifts around us. The changes that have taken place on a global scale in the last few months have been astounding. I think we are all still trying to come to terms with how things will settle in the longer run. However, I would love to see Paragon play a key role in improving the built environment for human beings – in South Africa, but also internationally – by creating spaces that people can thrive in," concludes Meiring.

Construction Industry Events 2020

Due to ongoing restrictions on public gatherings, some of the events on the list may be affected.



Africa Build Show (ABS) - Virtual Exhibition (VE) edition - 28 September - 02 October 2020



Cape Construction Expo - 09-10 September 2020 - Sun Exhibits, GrandWest, Cape Town



ACHASM 2020 Construction Health and Safety (H&S) Summit - 6 - 7 October 2020, Altron Conference Centre, Midrand



AfriBuild - 13-15 October 2020 - Nasrec Expo Centre Johannesburg

bauma CONEXPO AFRICA
CONEXPO AFRICA - 13-16 October 2021 - Gallagher Convention Centre, Johannesburg

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