



Published by
The Clay Brick Association
of Southern Africa

Building 2 – Unit 6, Bedfordview Office
Park, 3 Riley Road, Bedfordview 2007

Editor: Dianne Volek

The Clay Brick Association represents the clay brick and paver manufacturers of Southern Africa. We research and advise our industry on energy-efficient, sustainable, inclusive production technologies. We inspire eco-friendly, contemporary brick architecture and educate South Africans on best practice in masonry construction and restoration.



Sol-Tech Occupational Training College campus in Gauteng.
Photo courtesy of Rosema Bricks. See the CBA website for more.



THE VOICE

JUNE 2021

OF THE CLAY BRICK INDUSTRY



today's FOOTPRINT
tomorrow's LEGACY

CBA Chairman Hendrik van Dyk reflects on the year past, and the year ahead:

“The Mpumalanga Lowveld enjoys ‘Champagne Weather’ - sunny autumn days that give a general sense of wellbeing! This beauty helps to offset some less positive feelings.

“The aftermath of the hard lockdown during the Covid pandemic can still be felt within the industry but we are robust and have stood strong during this crisis. Many members used the time wisely, to plan and implement more sustainable processes.

“As reported during our virtual AGM we are nearing completion of the European Union Switch Africa Green Project on Sustainable Practices in the Clay Brick sector. We have gained a lot of information that the CBA and its members can put to good use, to promote clay bricks and improve quality while saving costs and reducing waste.



Switch Africa Green
is funded by the
European Union



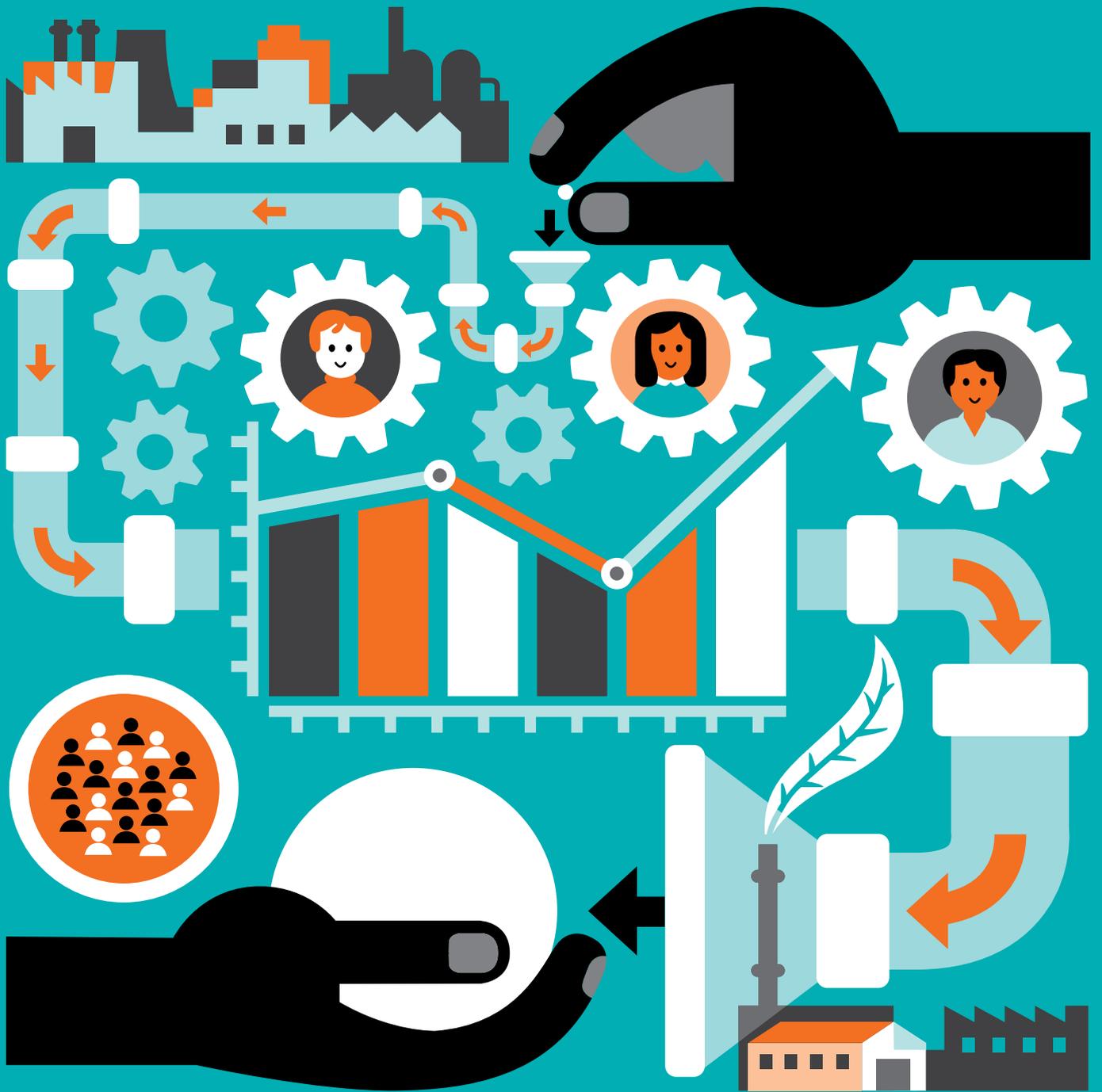
“The Swiss Development agency paved the start of our journey on sustainable production practises. Then the European Union invested in the CBA with the Switch Africa Green project, funding direct research and distribution costs. More significant than the financial cost, is the commitment of time and effort from our CBA team, the Technical Committee and Board members. There is also extensive and ongoing input from our members.

“Going forward, we must make sure we use the research and benefits to our members’ advantage. We intend to focus on effective lobbying of decision makers, especially those in Government, National and Provincial as well as Local Authorities.

“We are equally committed to helping members with the daily burden of complying with ever increasing – often confusing – legislation and regulation. The CBA Board is energised to tackle this challenge in the year ahead.

“Thank you to all members who took the time to participate in the virtual AGM. I trust that Eastern Cape region will be ‘third time lucky’ and host the AGM 2022 at Oubaai. I hope that every member has diarised our 60th AGM in 2023 at Victoria Falls, Zimbabwe!”





We make production processes highly efficient – with our efficient vacuum solutions.

**U
BUSCH
U**
VACUUM SOLUTIONS

Cut power costs and waste

BUSCH VACUUM SOUTH AFRICA delivers high-quality vacuum technologies and expert advice across a vast range of manufacturing applications. Busch offers free vacuum audits and checks to current or potential customers – they will test your systems and assist with fault finding to improve your available vacuum.

The company introduced a new technology for delivering vacuum in the clay brick industry in 2016. Today they have over 20 installations at small and large brick factories, with their units replacing traditional liquid ring vacuum pumps. The impact on production rates and savings for customers has been significant. Two customers - Federale Stene and Apollo Brick - relate their experience with the technology.

Federale Stene

"Federale Stene installed a Busch Vacuum Pump in January 2019. Since the installation, our brick wastage has been reduced by 2.5% and we have experienced an impressive reduction in extrusion electricity use - an average of 60 amps per hour.

"Our factory has also been able to produce clay bricks with better compressive strengths. I'd like to add that with this improvement, our factory is more environmentally friendly which is a major benefit for our company. The after sales service we have received from BUSCH employees has been immaculate."

Johan Humphries, General Manager

Apollo Brick

"We installed the Busch Vacuum pumps in 2016. From the get-go the service from Busch was exceptional.

"We saw immediate improvements. We recorded a consistent 2 kPa better vacuum and on average a 2% reduction in waste on 10 million bricks per month. Although this system is pricier than the traditional liquid ring technology it's a far higher spec. There is some extra serving and maintenance, but these costs are negligible compared against the reduced downtime, the energy savings of 15 kW per pump over the old motor size and the increase in green break strength."

Gerrie Nel, Production Manager

THE BUSCH GROUP WORLDWIDE

The Busch group is present in 42 countries with 60 subsidiaries, positioning the company in the top ranks of original equipment manufacturers globally.

The Busch group supplies the latest manufacturing machinery, techniques and solutions that may be used in every industry. Quality management procedures for the group exceeds ISO 9001 requirements – an assurance that all product certifications will meet clients' specific requirements.

Busch globally offers the widest range of vacuum pumps. It is a world leader in R&D spend and remains at the forefront of improving vacuum technology. Keeping pace with the move to remote automation, Busch vacuum systems are available with variable speed drives with all relevant sensors to ensure optimum vacuum levels or to pre-empt when services are needed.

Busch Vacuum Solutions is a family-owned business founded in Germany in 1963. More than 57 years later, the Busch group is still managed and operated by its original owners, Dr and Mrs Busch, who are actively involved in the company's global operations.

The company's regional office is in Johannesburg, with branches in Cape Town, Durban and Accra, Ghana. Maximise your productivity and savings - call today for a professional assessment from their experienced specialists.

CBA MEMBERS!

**20%
discount**

on any pump purchased
BEFORE JULY 2021



www.busch.co.za
info@busch.co.za
+27 11 856 0650





Education events for clay brick-makers and the building industry



Informal clay brick-makers

Architects and designers



Targeting carbon emissions in the clay brick sector

In 2018, the CBA was commissioned to execute a 3-year project co-sponsored by the European Union (EU) under the SWITCH Africa Green programme. The project supports, promotes and implements sustainable development in the sector.

SUSTAINABILITY IN THE FORMAL SECTOR

"Knowledge is key to managing both environmental and socio-economic sustainability," reports CBA executive director Mariana Lamont.

Several sector surveys have helped to identify actions the clay brick sector can implement internally and externally to make our product more competitive as well as more sustainable.

1. Internal and External Strategy Paper for Promoting Sustainable Building Practices (SBPs).
2. Baseline study assessing CBA members attitudes to SBPs.
3. Baseline study amongst Sustainable Building Sector stakeholders on SBPs.

THE SUSTAINABILITY PORTAL

An online data gathering and reporting portal was developed to track metrics around sustainability. This is helping to identify the most effective energy-saving methods and technologies in the industry.

Members receive performance insights against a range of indicators, and the potential to improve becomes visible. Increased resource efficiency drives profitability and environmental sustainability simultaneously.

SUSTAINABILITY IN THE INFORMAL SECTOR

The informal sector plays a small but important role in supplying affordable construction materials to local communities. These informal brick-makers use traditional, labour-intensive production and firing methods that are usually highly polluting and also deplete local resources like firewood.

"In an effort to better understand the challenges they face, the CBA surveyed their sustainability practices and attitudes, says Sustainability Manager Yster Maduana. "We confirmed that there is almost no knowledge about sustainability."

"Our project plan included an exchange of ideas between formal and informal brick-makers, and educating them about easy green building techniques," he concludes.

Education on reducing the use of coal and wood also reduces cost so at least some brick-makers are keen to learn. After identifying trusted local Sustainability Champions, we were able to share practical ways to reduce coal and water consumption, air pollution and waste.

The CBA reached out to the Department Economic Development, Environment and Tourism in the Eastern Cape to develop a working strategy for the informal sector.

SUSTAINABILITY AWARENESS EVENTS

National Roadshow

In 2018, the CBA clay brick industry national roadshow showed brick makers the benefits of reducing waste, and improving air quality and resource use. We also gathered requirements and concerns around the Sustainability Portal.

Simultaneous presentations to architects and builders showed how the superior thermal performance of clay brick results in green buildings that use less electricity long-term.

The CBA AGM and Conference

This is the industry's main national event where manufacturers share news and trends, and find out about new technologies.

Since 2018, each AGM has adopted a different sustainability theme that resonates locally. The 2018 conference theme was "A Star Performer in Sustainability" to build excitement around the EU project.

Informal sector training

A 4-day pilot training session held in Indwe in the Eastern Cape was attended by 24 informal clay brick makers. The training was well received by both the delegates and the municipality.



Switch Africa Green
is funded by the
European Union





Our Sustainability journey Algoa Brick

Before the concept of sustainability took on its current depth of meaning, Algoa Brick was already working towards reducing its resource consumption. MD Nico Mienie describes the company's 15-year sustainability journey

Energy efficiency

"In 2005, Algoa Brick undertook a refit of a tunnel kiln," explains Nico. "One of the biggest jobs was to replace an outdated and unserviceable heavy furnace oil firing system with a newer oil firing system.

"Our kiln operated in this state until 2016 when Algoa Brick chose to replace a section of the oil firing system with higher efficiency oil burners supplied by Bernini Impianti.

"With the support of the EECB, Algoa applied for a SARS 12L tax incentive due to the improved energy efficiency of the new burners. We were proud to be the first brick manufacturer in South Africa to be approved for this.

"Not long after the Bernini oil burner installation, unpredictable oil prices forced Algoa Brick to reconsider its energy options. In 2018, the remaining 2005-vintage oil firing system was replaced with a coal firing system also supplied by Bernini Impianti.

"Bernini's coal firing system is designed to allow co-firing with a percentage of biomass. This enabled us to shift quickly and easily towards more sustainable firing practices.

The new system worked well from inception and it wasn't long before we were able to achieve a stable firing fuel breakdown of around 65% coal, 30% oil and 5% biomass.

Switching to biomass fuel

"At Algoa Brick, the biomass used is basically sawdust produced from the processing of waste wood – much of which would have ended up in landfill.

"The operation of obtaining waste wood and processing it into a useful format took a while to get up to speed but once the teething issues were resolved, it became apparent that there was scope to push the sustainability envelope.

"Due to their experience with our firing system, Bernini Impianti were again approached to supply a biomass burning system capable of firing a full zone of the tunnel kiln. In combination with locally fabricated equipment, the new installation was commissioned in November 2020.

Algoa Brick is now achieving a firing fuel breakdown of approximately 60% coal, 20% oil and 20% biomass.

"Running the tunnel kiln at an output of up to 280t/day of fired ware, Algoa Brick is currently sourcing 20% of its firing energy demand from renewables and is expects to increase to 30% in the near future.

Tomorrow's legacy

"Algoa Brick takes pride in its water saving and leadership of sustainable firing in the South African clay brick industry. However the greater satisfaction lies in the legacy the company leave for its descendants.

Nico concludes: My opinion on sustainability is captured by two famous quotes: we are only borrowing this Earth from our children. We cannot afford to live here as if there is another planet to go to! (Native American Proverb; Terry Swearingen - winner of Goldman Environmental Prize, 1997).

"Algoa Brick has cut its process water use by 70% or 13 kilolitres per day. This not only ticks a sustainability box but makes a significant contribution to our bottom line"

Reducing process water usage

Algoa Brick's factory site does not have a water-borne sewerage service so all sewage must be trucked away.

More than 95% of the company's water 'waste' is actually grey water. Although the cost of municipal water was relatively insignificant, the recycling of grey water for use in brick production provided Algoa Brick with significant sewerage cost savings despite the investment in the holding tanks and transfer pumps.

With the grey water investment bearing fruit, the onset of water scarcity in the Nelson Mandela Metro area provided a significant driver to step up water saving measures. To reduce Algoa Brick's risk of a water crisis, they embarked on a multi-faceted water management programme using:

- rain water harvesting
- grey water recycling
- process water holding tanks with a transfer pump system

Rain water harvesting and grey water recycling are sufficient under normal conditions. The 60,000l capacity process water holding tanks are filled by a waste services company as and when suitable waste water streams are available.

These waste streams include inorganic contamination in water such as traces of oil or solvents or the presence of organic waste such as waste fruit juice or tank washings.

Promoting Inclusive Sustainable Practices in the South African Clay Brick Sector



Switch Africa Green
is funded by the
European Union





Environmental COMPLIANCE AUDITS SERVICES

So that your business can benefit and grow sustainably adding value through audit assurance remains our focus. Our audit design, execution and close-out aims to accurately assess compliance risks, objectively evaluating your control systems and procedures. Our audit team draws on 25 years of industrial experience. Our collaborated industrial knowledge, specialised levels of insight and strict compliance to audit principles enables us to execute best in class audit programmes and or stand alone audit reports.

We recognize the complexity of environmental compliance and respond by staying abreast with legislative changes and interpretations. We benchmark and interact with our clients and our network of legal specialists and provide a unique range of compliance and environmental technical audit solutions. We endeavour to improve time and cost efficiencies and have considered physical constraints such as site accessibility, travel distances and other unforeseen events such as the national state of emergency.

In response, we have deployed ISO 9001 aligned, tailor-made audit protocols to suit the varying demand of our clients which include:

- ▶ **Site based** – integrated audit protocols (meetings, interviews, checklists, feedback)
- ▶ **Remote based** - intensified and interactive desktop reviews
- ▶ **Remote based** - Online opening meeting, interviews and close out meetings
- ▶ **Remote based** - Secure online documented evidence submission platforms
- ▶ **Semi remote based** - Drone (fly by) and live streaming camera site visits,
- ▶ **Semi remote based** - After-hours auditing to limit exposure.

Our Audit reports link to clear interpretable documented evidence, strong visualization and an alignment with existing document controls on site.

ENVASS has been able to present as much as 50% year-on-year audit programme cost savings to our clients through tailored protocols and audit integration.



Ask our highly capable team of auditors for a suggestion or a quote on any of the following:

- ▶ Water Use Licence's compliance and or technical audits
- ▶ Waste Management Licence's compliance and or technical audits.
- ▶ Environmental Management Programme Performance Assessment.
- ▶ National Norms and Standards compliance audits and review.
- ▶ Atmospheric Emission Licence's. compliance and or technical audits
- ▶ Biodiversity Management Plan implementation audits and reviews.
- ▶ Mine Closure Audits based on GNR 1147.
- ▶ Internal ISO 14001 Systems and GAP Audits.
- ▶ NEMA Environmental Authorisation listed activities audits and reviews.
- ▶ Regulation 34 Audits and Recommendation for EMP amendment.
- ▶ Compliance Due Diligence & Gap Assessments.
- ▶ Occupational Health and Safety Audits.

The above presented packages can be tailored to the most cost effective solution for you!

CONTACT:

012 460 9768 | info@envass.co.za | Please feel free to visit our website www.envass.co.za



The CBA collaborated with EcoMetrix Africa (EMA) and Partners for Innovation (Pfi) to implement the EU-funded SWITCH Africa Green Project to improve sustainability in the South African clay brick sector.

Industry Sustainability Transformation plan

The objective of the sustainability transformation plan is to provide a practical hand-hold for motivating and realising the clay brick sector's sustainability objectives.

The plan is developed against the international backdrop of the Sustainable Development Goals (SDGs). The SDGs consist of 17 global goals set by the United Nations.

The national context of the transformation plan lies in the South Africa National Framework for Sustainable Development as approved in 2008 by the Cabinet.

Drawing upon both the international and national context, the South African Clay Brick Sector Sustainability Framework was developed in 2017.

The clay brick sustainability framework comprises nine categories in total. Five categories have been selected as priority areas for initial aspirational targets to guide the transformation plan.

An integrated aspirational target was set for the medium term (2030) and longer term (2050) - see the table for details.

By 2030 the sector-wide ambition (given that the majority of sites currently use clamp kilns) should be for the sector to strive towards the performance of the **most-efficient** clamp kiln site, particularly in terms of GHG intensity, energy efficiency and production waste.

KSI - proposed targets	2030 Target	2050 Target	Sector Baseline	2030 Goals
GHG intensity	-20%	-60%	2.50	2.98
Energy efficiency	-25%	-60%	2.50	3.16
Clay resource efficiency	-10%	-20%	2.50	2.75
Water efficiency	-20%	-50%	2.50	3.00
Production Losses	-20%	-55%	2.50	2.99

SECTOR SUSTAINABILITY TARGETS & MEASURES

CLAY RESOURCE EFFICIENCY

Given the standard deviation between producers, instead of aligning the 2030 target to the Clamp: Low BL, the ambition is a 10% improvement compared to the sector baseline.

This should be implemented across existing clamp kilns and Zig Zag kilns.

Increased Brick Perforation at clamp kilns: It is expected that by 2030, about 10% of the bricks fired in clamp kilns will have improved levels of perforation.

WATER EFFICIENCY

There is little difference between the Clamp: Low BL value vs other kilns. Therefore the 2030 target is a 20% improvement measured against the current sector baseline.

Lighting Retrofits at the brick factory: the retrofitting of energy-efficient light bulbs is already gaining momentum across the country.

Conscious water use: by 2030, reduce water use by 15%.

Medium term mitigation measures

Clamp to Zig Zag kiln switch: About 67% of bricks in the sector are produced using clamp kilns. The mitigation measure assumes that by 2030 half of these are converted to Zig Zag kilns

Minimise brick waste: we are aiming for a reduction in brick breakages of approximately 7.5% of the currently losses.

Longer term mitigation measures

- Solar PV Installation at the factory
- Efficient Motors at non-clamp kilns
- Clamp to Tunnel kiln switch

Promoting Inclusive Sustainable Practices in the South African Clay Brick Sector



Switch Africa Green is funded by the European Union



The Sustainability Project is executed jointly by Clay Brick Association of Southern Africa, EcoMetrix Africa (EMA) and Partners for Innovation.



Download locally-relevant production factsheets assessing international research.
All publications from the EU Sustainability Project are available from www.claybrick.org/EECB

Sustainability case studies review EU lessons learned

SF#01 Incorporating waste materials into clay brick

Recycling waste products by incorporating them into clay brick during production is a practical and environmentally-friendly way to dispose of waste. It is also shown to improve the quality of brick porosity, thermal conductivity and water absorption as well as reduce energy use during firing.

SF#02 Monitoring and Reducing Air Pollution

The objective of the study was to build and test a small-scale, clamp kiln that accurately monitors gaseous pollutants and particulate matter emissions. Accurate information on real-life clamp kiln emissions facilitates the redesign of kilns for air pollution mitigation at big clamp production facilities.

SF#03 Dematerialisation for energy efficiency

Dematerialization reduces the use of local non-renewable resources. It saves raw material costs during production as well as reducing energy and inputs during construction and waste disposal when the building is demolished.

SF#04 Rainwater Harvesting and Sub-Metering

Improving the efficiency of water usage and water conservation practices within the clay brick sector will significantly contribute to the preservation of South Africa's limited water resources.

SF#05 Clean clay brick firing: Habla Zig-Zag Kiln

Habla Zig Zag Kilns (HZZKs) offer an energy-efficient innovative and scalable kiln technology that is versatile and can be configured for either large or small commercial use.

SF#06 Unfired clay bricks: Structure & Developments

Earth masonry is not "fired" like conventional clay bricks, eliminating the use of fossil fuels during production. Unfired masonry units are sustainable, but do they work?

SF#07 Sustainable Water Treatment and Recycling

In the brick production process, recycled grey water can be used during extraction of the clay, mixing and kneading as well as at the factory for dust suppression or toilet flushing.

SF#08 Switching to alternative fuels

Combined with modern technology, alternative fuels can reduce energy consumption and costs while simultaneously curbing carbon emissions.

SF#09 Hydroseeding for site rehabilitation

Hydroseeding is a fast, cost effective and high-quality method for seeding vegetation, land rehabilitation and erosion control.

SF#10 ClickBricks recycles building materials

ClickBricks are dry stacked together by means of metal clips, creating a stable wall without cement or glue. This makes them easy to recycle. Is this an opportunity for brick makers?

SF#11 Empowerment in the clay brick sector

Socio-economic sustainability affects people's opportunities, now and in the future. Our sector manages safety, employment, human rights and equity, but is there more we can do positively impact employees, local communities and the wider public?

Promoting Inclusive Sustainable Practices in the South African Clay Brick Sector



Switch Africa Green
is funded by the
European Union



The Sustainability Project is executed jointly by the CBA, EcoMetrix Africa (EMA) and Partners for Innovation.



Solve eco-challenges while cutting time, costs and risk

All companies in the clay brick sector need to implement environmental monitoring for regulatory and standard compliance to measure baseline conditions, identify issues and mitigate problems. However an integrated monitoring approach with a professional partner like ENVASS provides environmental solutions that also save you time, reduce costs, minimise risk and ensuring high-quality products.

Air quality

Passive Dust Fall Out and Active Indicative Monitoring establish the type and volumes of emissions emanating from production activities. Once they are identified, Envass works with you to identify innovation alternatives and mitigation measures to minimise air pollution.

Passive Dust Fall Out monitoring

Standard dust buckets are prepared and set up at predetermined border locations, for periods of 30 (± 2) days. Water soluble and water insoluble materials are collected and weighed. Results are reported as milligrams per square metre per day for compliance determination.

Active Indicative Monitoring

A hand-held device simultaneously measures parameters like EVM and particulate matter.

National Dust Control Regulations

The National Dust Control Regulations, 2013 under regulation 6(2) specifies the components of a dust management plan.

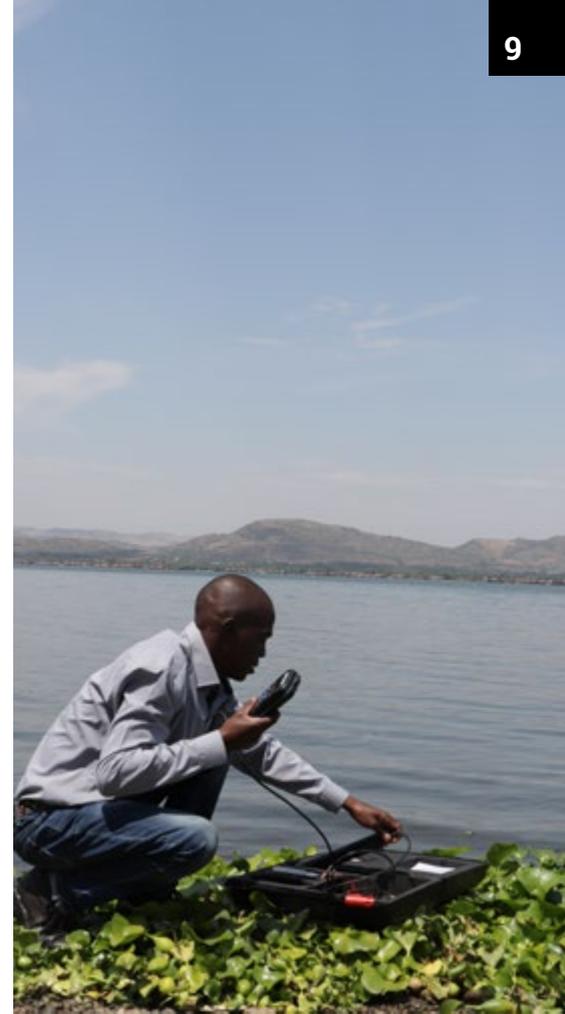
This was published under GNR 827 in GG 36974 dated 1 November 2013.

- 1 Identify all possible sources of dust within the affected site
- 2 Detail the best practicable measures to mitigate dust emissions
- 3 Detail an implementation schedule
- 4 Identify the line management responsible for implementation
- 5 Incorporate the dust fallout monitoring plan
- 6 Set up a complaints register to record follow-up actions and responses

Taking into consideration the programme design, sampling sites should be:

- in an open area
- free of structures higher than 1 m within a 20 m radius of the container stand
- away from local sources of pollution and objects that could affect the settling of particulate matter as described by the ASTM: D1739-98 (2017) standard

Samples should be sufficient to monitor dust fall at representative locations within a maximum distance of 2 km from the source boundaries.



Water Quality

Environmental Compliance Monitoring is designed to ensure that the industry conforms with environmental laws, regulations, lease stipulations, and project mitigations.

The availability and accuracy of water quality data facilitates recommendations on possible sources of contamination, mitigation and prevention measures.

Environmental Compliance Monitoring includes Water Resource Protection. Water Resource Protection is governed by The National Water Act of 1998.

Water Use Licences are issued in terms of Chapter 4 (Act No 36 of 1998). Section 28(1) of the National Environmental Management Act 107 of 1998 (NEMA). This places a general duty of care on any person who causes pollution, to take reasonable measures to prevent such pollution from occurring.

Water quality monitoring is essential for numerous industries like mining, construction and manufacturing where raw resources are converted resulting in waste and runoff.

Duty of care is achieved by developing and implementing a water monitoring programme with the aim to determine baseline conditions and possible sources of water contamination.

For cost effective, integrated environmental solution design and implementation, contact ENVASS on 012 460-9768 or info@envass.co.za



*Tailor-made
firing systems*

The power of **PERFECT FIRE**

Specialists in firing systems for kilns and dryers fuelled by gas, oil, coal and biomass. Our custom-built solutions optimise energy consumption, reduce environmental impact and ensure a superior fired product.



BERNINI
IMPIANTI

+39 051 511216
info@bernini-impianti.it
www.bernini-impianti.it



Bernini Impianti solid fuel kiln burners are designed for energy saving and improved combustion efficiency.

- Regulated combustion with controlled heat distribution throughout the kiln.
- Fuel is crushed to appropriate sizes to achieve even firing, ensuring consistent, high-quality bricks.
- Burners are grouped independently with both central and group control panels for monitoring by section.
- Can be adapted to handle a wide range of solid fuels.

BURNERS FOR SOLID FUEL

- **HSFB:** hybrid burner for both granulated and micronised solid fuel with or without hammer mill
- **SDB:** burners for biomass

Since its founding in 1955 in Italy, Bernini Impianti have earned a reputation as a service-orientated manufacturer and installer of energy-efficient firing systems for kilns and dryers. The company is respected on three continents for their in-depth knowledge of firing processes in the clay brick industry.

With hundreds of installations all over the world, Bernini understand the importance of customising their equipment and system for local conditions.

They work closely with the client to ensure consistent superior quality brick products, while minimising the producer's fuel costs and environmental impact.

A dedicated team of technicians, engineers and support staff allows Bernini to partner with clients, offering reliable support that is based on experience. They have numerous testimonials from very satisfied clients.

Bernini have a reputation for cost-effective solutions to burn traditional fuels such as coal, gas, heavy or light oils and pet-coke. The company continually invests in new technology and has a growing range of burners for alternative and renewable solid, liquid and gas fuels.

Bernini recently invested in the production of original spare parts in South Africa to support their rapid expansion in the territory.





WE RENT OUT!

Laboratory Analyzers,
Calorimeters, CKIC
Machines &
Calorimeters, Analytical
Instruments and much
more.



Let us help you keep
your business and
home connected!
Phone us for a quote
TODAY!

Tel: +27 67 766 1099

Whatsapp: +27 67 765 9376

Email: admin@ercafrica.com



The 2020/2021 virtual AGM was focused on the completion of the European Union Switch Africa Green Project on Sustainable Practices in the Clay Brick sector. We have all gained valuable information and inputs that can be put to good use to promote the use of clay bricks in sustainable buildings.

Our Guest Speaker was Mr Bernard Rey, Head of Cooperation for the Delegation

of the European Union in South Africa. A doctor in veterinary medicine with a MSc in Economics of Development, Mr Rey thanked the CBA for their commitment to sustainability in South Africa.

"By reducing waste and improving efficiency, clay brick makers are building healthier communities and more cost-efficient businesses" he said.



To be in the AGM Lucky Draw, members had to complete the Sustainability Survey and also attend the AGM online or in-person! The delighted winner was Johan from Federale, 2nd was Nico from Algoa, and 3rd was Dewald from Goedehoop Stene.

Regional Meetings round-up



Thank you to Kurland Brick who hosted the Eastern Cape regional meeting in Plettenberg Bay on 3 March 2021. Worcester Bricks hosted the Western



Cape meeting on 10 March. The northern region was hosted by Nylstene in Modimolle, Limpopo on 17 March 2021. It was so great to meet up again!



2021 SUSTAINABILITY AWARDS

ALGOA BRICK
 APOLLO BRICK GAUTENG
 APOLLO BRICK ATLANTIS
 BREDASDORP STEENWERKE
 BOTRIVIER BRICKS
 CABRICO
 CLAY INDUSTRIES
 CLAYTILE
 CLYDE BRICKFIELDS
 COROBRICK DRIEFONTEIN
 COROBRICK LAWLEY
 COROBRICK SPRINGS
 DE HOOP BRICKFIELDS
 FEDERALE STENE
 GOEDEHOOP STENE
 KLINKERSTENE
 KOPANO BRICKWORKS
 KURLAND BRICKS
 LANGKLOOF BRICKS
 MALELANE STENE
 MALELANE STENE WITRIVIER
 MAKANA BRICK
 NOVA BRICKS
 NYLSTENE
 OCON BRICK
 ROSEMA BRICKS
 VHAVENDA BRICKS
 VIVA BRICKS
 WEST END CLAY BRICKS



HORIZONTAL BORING MILL



CAPABILITIES

- Small to medium capability
- Union Horizontal Boring Mill Table: 1400mm x 1300mm, L2300mm x B1500mm x H1700mm

INDUCTION HEATER AND BENDER



GEAR CUTTING



CAPABILITIES

- Both internal and external up to 3m diameter and a face width of 450mm

WEAR RESISTANT COATING



PLEASE CONTACT US:

- +27 11 462 2226
- email: info@bmms.co.za
- www.bmms.co.za
- 14 Kya Sand Road,
Kya Sand, Randburg

CBA website shows a 43% surge in visitors despite the pandemic!



Over the past 5 years, the CBA website has grown in popularity by an average 20% per year, EVERY year. We are still reaping benefit from articles and books written a decade ago!

Why this interest in bricks over Covid?

With people working from home, property owners had the time to identify DIY projects to improve their living conditions and lifestyle.

The CBA website offers free construction guides, bricklaying manuals and DIY project ideas. Bricks don't require lots of equipment – Bricklaying Made Easy points out that for many DIY projects, all you need is a wheelbarrow, a trowel and some string! Most people buy small quantities of brick from their local hardware store, which then needs to restock.

Popular Summer projects (based on our downloads) were braais, paved areas for outdoor seating and raised vegetable and flower beds. In winter, people downloaded information on building paths and garden walls.

For most of lockdown in South Africa (thanks to the lobbying of the CBA and its partners through CASA) construction companies were able to continue their usual projects with even fewer traffic interruptions.

That led to lots of demand for bricks as well as higher margins on better quality brick products!

We are proud to announce the CBA website performance statistics as presented by Marketing Director Johan Humphries at the 2021 AGM.

- 43% increase in visits in the past year.
- 33% increase in users who visited an average of 7 pages each. Visitors do this because they find plenty of interesting and relevant ideas, downloads and articles.
- 4 000 guides and factsheets were downloaded – double the previous year.
- Over 19 000 emails were sent to members over the year.
- Almost 20 000 visitors clicked forward to visit our Members' websites.
- The Members contact and product information and maps were amongst the most popular pages on the website.

CBA Members receive huge benefit from all this interest. Without any hacks or ongoing Google search engine advertising fees, the CBA naturally appears at the top of searches for brick buyers. Our maps are recognised as the best place to go for contact information on brick suppliers in South Africa.

How did we do it?

Our website isn't an 'overnight' success. For the past 10 years, the CBA has invested in over 2 000 pages of building guides, bricklaying manuals, inspirational galleries and informative articles. Return on Investment for a website lasts for as long as your products and services exist. It just keeps building interest, and expanding your credibility.

SUPPORTING OUR MEMBERS AND THE CLAY BRICK SECTOR FOR ALMOST 60 YEARS!



To assist CBA members who manage quarries, the CBA is partnering with ASPASA on its renowned environmental audit system. The process is user-friendly and well-aligned with the requirements of smaller-scale surface miners. CBA executive director Mariana Lamont attended an audit dry run in Nelspruit at the AFRIMAT Quarry.



"The audits rely on inclusive methods and focus on remedying, rather than punishing, reports Mariana. "This encourages quarry manager to confront issues rather than disguising or ignoring them. Simultaneously, it also ensures that members are legally compliant. The audit covers all aspects of environmental management on the type of mines owned by members.

Sometimes fire does not burn...

Barcelona - SPAIN
Tel.: +34 938 445 880 - teide@teide.es
<http://www.teiderefractories.com>

TEIDE

REFRACTORY SOLUTIONS

TEIDE REFRACTORY SOLUTIONS is the leading Spanish company in the refractory sector. Since its creation 60 years ago, the Group's management has actively pursued the goals of constant enhancement and permanent adjustment to our customers' present and future requirements.

More than 30.000 sqm of works and the most complete range of products developed and dedicated to the ceramic industry.

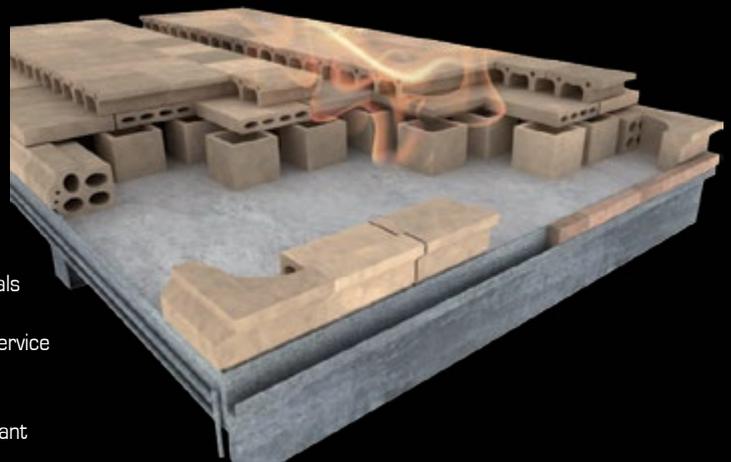


MATERIALS

More than 30.000 ton of annual production.
2 production plants 30.000 m2.
20 presses. 2 extruders and
4 kilns up to 1600°C.

QUALITY

More than 400 formulations adapted to our customers.
New ISO 9001:2008 Quality Certification InterCert TÜV (Germany).



DESIGN

More than 35 years designing kiln cars for the ceramics industry
We have more than 300 installations worldwide.

SERVICE

Nearly 60 years serving materials to the ceramics industry.
More than 60 people for your service
Turn key projects design manufacturing and installation in customer's plant

A FURNACE CONSTRUCTION PROCESS THAT HAS THE WARRANTY OF OUR EXPERIENCE

PRELIMINARY STUDY

Analysis of customer needs.
Search Folders.

PRE PROJECT

Constructive Feasibility study.
Study materials and shapes parts.
Preliminary drawing, with CAD, installation and shape parts.

PROJECT

Calculation of final costs.
Presentation of the project to the client final design.

MANUFACTURING AND ASSEMBLY

Initial tests and prototypes.
Manufacturing project components.
Supervision and management of logistics and assembly.
Project operation's follow up.



INSULATION REFRACTORY CONSULTANTS

Tel: 0861 00 00 90
Fax: 0861 00 00 30
Cell: 082 374 6080
e-mail: alwyn@aeroinsul.co.za
Fax2Email number 0866 11 0862
www.aeroinsul.co.za
www.truesoundacoustics.co.za

THE CBA AND CBA MEMBERS IN THE COMMUNITY



Federale Stene recently started an initiative to reduce water use with the goal of increasing water resource efficiency as well as improve their water conservation practices.

“Our company vehicles and machinery are being washed with biodegradable cleaning products,” reports GM Johan Humphries. “The wash bay has a three-stage filtration system so we can recycle grey water for our dust suppression trucks.

The filtration system removes unwanted particles and ensures that only safe water is supplied to the dedicated canal at the side of the wash bay. The water is then pumped from the canal into dust suppression trucks for reuse.

Dust suppression further contributes to a cleaner and safer working environment for the community as well as the company employees.

Goedehoop team takes on school paving project



Goedehoop Stene in Mpumalanga not only donated paving materials to Carolina Academic School, they undertook to lay the paving as well!

“Goedehoop Stene invests not just money, but a lot of time and effort to uplift our work force and community charity projects,” explains General Manager Kobus Liebenberg.

“Our team at Goedehoop were trained to select and place the clay bricks in this intricate circular pattern. They then paved in front of the Grade 1 and 2 classrooms. They were delighted and proud to be able to making use of their new skills in support of our local school.”

Does your company have community stories to share?

Email your story and photographs to web@claybrick.org for the next issue!



REGIONAL MEETINGS

GAUTENG, LIMPOPO & MPUMALANGA

2 June 2021

20 October 2021

WESTERN CAPE

23 June 2021

13 October 2021

EASTERN CAPE

9 June 2021

7 October 2021

Meeting venues will be announced closer to the time. We will meet in person if possible, but where travel is restricted we will continue with our online meetings via Microsoft Teams.



CBA supports construction materials excellence

Each year, the CBA donates prizes to the two top Construction Technology students at the University of Cape Town. This year's winner is Anita Ferger who received a cheque for R2000 at the prize-giving in May. Runner up was Hermina van der Berg who received R1500.



Direxa
ENGINEERING

Contact: Christophe Aubertot
Email: caubertot@direxa.com



Over the past 30 years, the team at Direxa has been directly involved with the construction of more than 35 clay brick and roof tile plants.



Direxa Engineering is an EPC (Engineering, Procurement and Construction) company specializing in the ceramics and building materials industries.

Direxa designs and builds plants around stiff extrusion, soft extrusion or press technologies to produce a wide variety of heavy clay products such as facing bricks, thin bricks, pavers, hollow blocks, roof tiles, rain screens and other specialised products.

Over the past 30 years, the team at Direxa has been directly involved with the construction of more than 35 clay brick and roof tile plants.

Direxa Engineering can handle projects of any size, from a small retrofit to a complete turn-key plant.

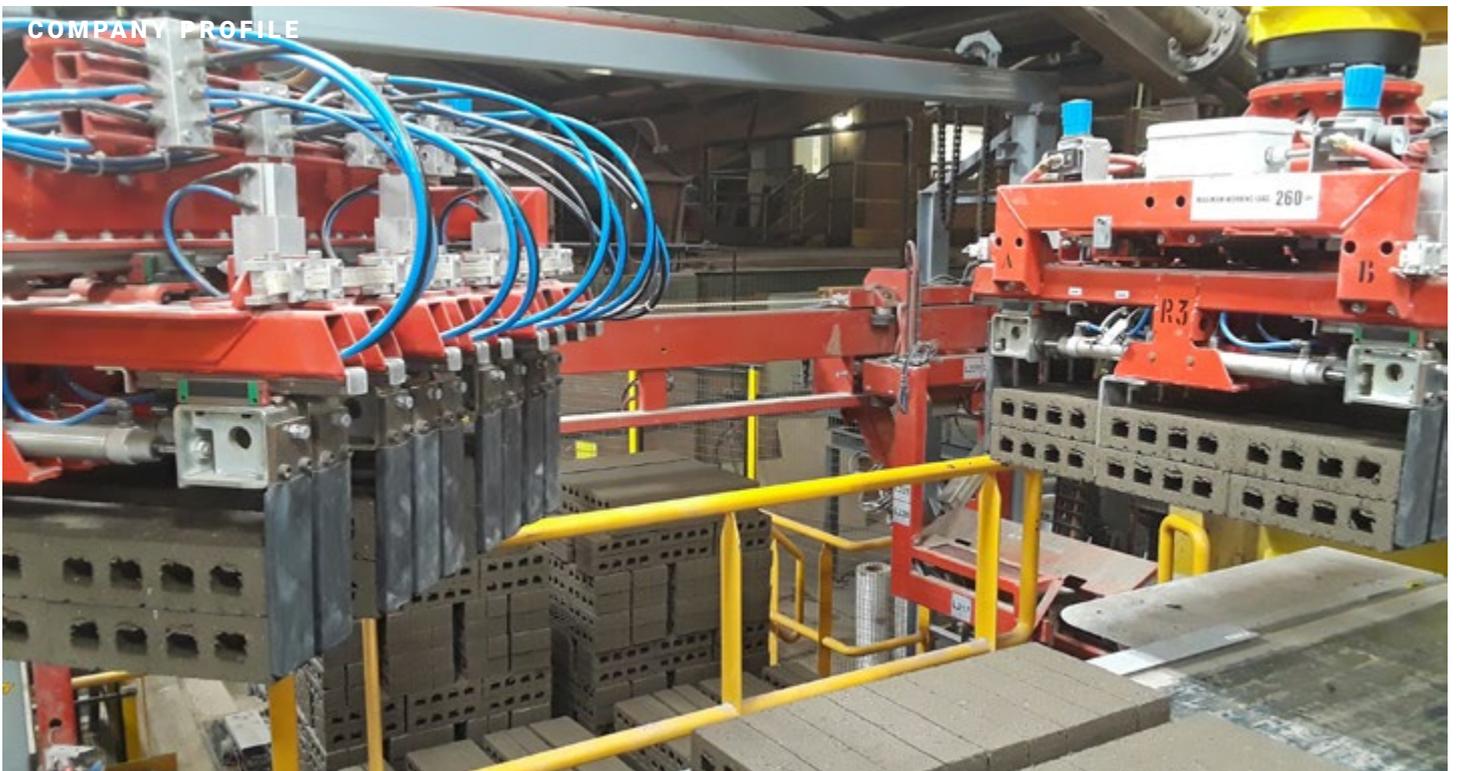
Headquartered in Colorado USA, Direxa Engineering has subsidiaries in Australia and Brazil. They have successfully completed projects on six continents, and are geared up to do business anywhere in the world.

Direxa is the worldwide leader for plant design with stiff extrusion technology: 90% of all the bricks made in the USA are made by Direxa's parent company JC Steele, with 70% of these plants having been built by the team at Direxa.

Direxa leads innovation in the clay industry by developing new technologies and equipment for the use of sustainable energies like biomass or biogas.

High temperature recirculations and the very innovative skate kiln as well as optimizing and controlling the existing processes allows the brick makers to reduce their carbon footprint.

The company also handles projects in fines agglomeration for the metallurgical and mining industries, as well as providing solutions for technical ceramics, specialty concrete products, refractories, gypsum, and fly ash.



Please support our CBA Associate Members!

Are you are considering any type of upgrade or repair at your facility? Please contact our CBA Associate Members first!

To update your contact information or profile on the website, email admin@claybrick.co.za!

African Pegmatite

083 677 7777
wenger@pegmatite.co.za

Bell Equipment

(011) 928 9700 or tyron@bell.co.za
(041) 486 3775 or luch@bell.co.za
(021) 380 9000 or fionaj@bell.co.za
KZN: Twan.Bell@za.bellequipment.com

BERNINI IMPIANTI SRL

Burners for Dryers
+39 351 267 5014
massimo@bernini-impianti.it

BMMS

Clay preparation, extrusion and testing
082 853 7348
andrew@bmms.co.za

Bongioanni Macchine

+39 393 785 5909
sales@bongioannimacchine.com

BUSCH VACUUM

Pumps / Vacuum
(011) 856 0650
reeza.hoosen@busch.co.za

Cermalab CC

079 503 9880 or (011) 395 9700
cjbloem@cermalab.co.za

Chryso Southern Africa

076 094 5564
hannes@chrysosa.co.za

DIREXA ENGINEERING

Christophe Aubertot
caubertot@direxa.com
+1 720 263 5685

Dura Equipment Sales

079 874 5458 or (011) 918 4760
ernest@durasales.co.za

EcoMetrix Africa

078 459 5748 or (011) 447 7896
lodewijk.nell@ecometrix.net

Ehrenberg Engineering

082 561 0936 or (011) 493 6280
hehrenberg@ehrenberg.co.za

EQUIPMENT RENTAL CO

Equipment rentals
071 930 5697 or 065 920 8174
admin@ercafrica.co.za

ENVASS

Environmental Assurance
Environmental Impact Waste Mgmt
(012) 460 9768
emile@envass.co.za

FFS Refineries

083 601 1022 or (031) 459-5300
carl@ffs.co.za

Forgestal SL

+34 672 324 251
forgestal@forgestal.com

Greenmined Environmental

084 585 5706 or (021) 851 2673
sonette.s@greenmined.co.za

IMS Engineering

082 326 2028 or (011) 970 3200
ryork@imgroup.co.za

Insulation Refractory Consultants

082 374 6080 or 0861 00 00 90
alwyn@keu.co.za

Iscosa

083 268 3052 or (011) 908 2511
iscosajb@mweb.co.za

Johnson Tiles SA

066 305 1807
rishen.jagmohun@johnsontiles.co.za

Keller HCW GmbH

+49 160 9089 5775
claudius.dittrich@keller-hcw.de

Leco Africa

082 771 7082 or 011 974 1681
esrie@lecoafrika.co.za

Manitou

082 816 4134 or (011) 975 7770
a.maynard@manitou-group.com

Marunic Trading

082 876 7797 or 044 879 0163
rucus@marunic.co.za

Metalcertima SA

+351 914 930 330
Helder.almeida@metalcertima.pt

Morando S.R.L

+39 01414 1734
andrea.pasquali@morando-rieter.com

PGK Consulting

082 410 6186 or 082 373 0339
info@pgkconsulting.co.za

Refraline

082 574 6008 or (011) 392 0700
krosch@refraline.com

Robobrick

079 507 5100
colin@robobrick.co.za

SABO SA

+30 693 695 2169
sb_sales@sabo.gr (Skype)

Sinani Energy (Pty) Ltd

082 505 6987
info@sinanienergy.com

Soilcon

083 250 5049 or 012 333 7817
soilcon@mweb.co.za

Talleres Verdes S.A.

082 561 0936 or (011) 493 6280
ehrenberg@global.co.za

Taylor Technologies

+(817) 907 1208
taylor@nationwide.net

Technifurn (Pty) Ltd

(011) 976 0894/5
hans@technifurn.co.za

Tecnofiliere SRL

+39 059 67 77 97
info@tecnofiliere.com

Technopol SA (Pty) Ltd

082 443 4461 or (011) 363 2780
lammie@technopol.co.za

TEIDE REFRACTORY CONSULTANTS

Refractory products and Insulators
+34 639 771 504
cm@teide.es

Verder Scientific

083 625 9381 or 010 612 0141
richard@verder-scientific.co.za

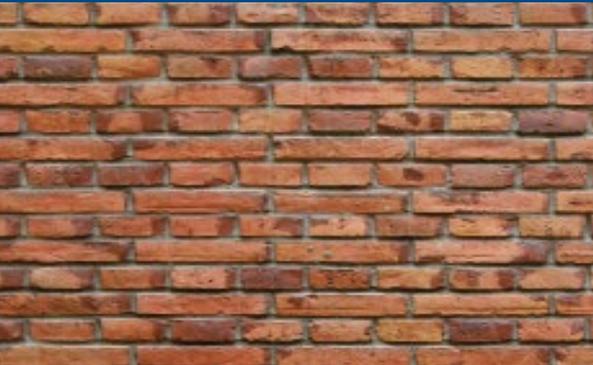
Wealth Generation

083 375 0602 or (021) 851 5254
justin.williams@wealthgeneration.co.za

Zhengzhou Yingfeng Machinery Company Ltd

0086 1503 996 3315
kai@yfbrikmachine.com

Thank you for your ongoing support!



Solution Provider

Direxa holds the view that the only way to a bright future for the Brick Industry in most countries, is through innovation. This means new appropriate innovative technology, tailored to the reality of each market.

With a dynamic team of engineers, we are well equipped and experienced to design, build, and retrofit plants for the Clay Product Industry and other Ceramic Industries.

We are able to customize and tackle any large or small project in the Clay Product Industry. Our job is to find the specific answer to the specific need of the customer. Contact us to discuss your next project today.

Designer and builder of complete plants for the Ceramic Industry



Represented in South Africa by:



14 Kya Sand Rd, Kya Sand, Randburg, 2163, South Africa
Contact: Andrew Dunn | +27 11 462 2226

3609 S. Wadsworth Blvd., Suite 370, Lakewood, Colorado 80235

www.direxa.com | info@direxa.com | (1) 720 263 5685



Denver

Sao Paulo

Melbourne

Johannesburg