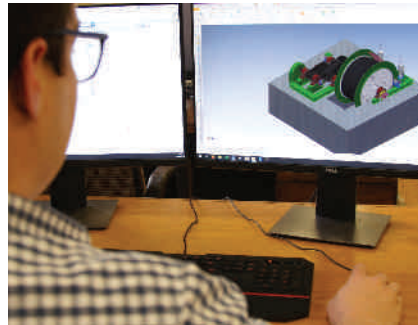
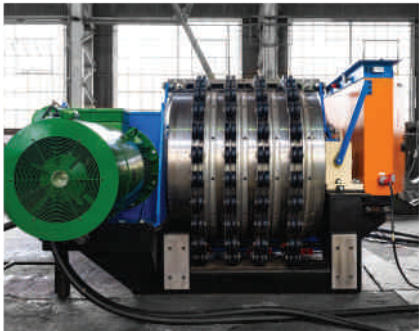


Winder Controls

Technology leaders in shaft hoisting and three-chamber energy recovery systems

CORE COMPETENCIES:



Technology leaders in shaft hoisting systems

Housing all engineering competencies under one roof: mechanicals, hydraulics, support structures, automation and visualization, process and signalling technology, drive technology and power supplies.

Providing decades of experience in the development of unique products and solutions.

Special applications for projects with partners from other specialized engineering companies.

Offering a comprehensive range of products and services for



New Installations
Customized hoisting solutions



Existing Installations
Refurbishments and relocations, upgrades and maintenance



Markets



Precious Metals:

Gold
Silver
Platinum (PGM)



Industrial Metals:

Copper
Nickel
Lead
Zinc



Precious Stones:

Diamonds



Energy:

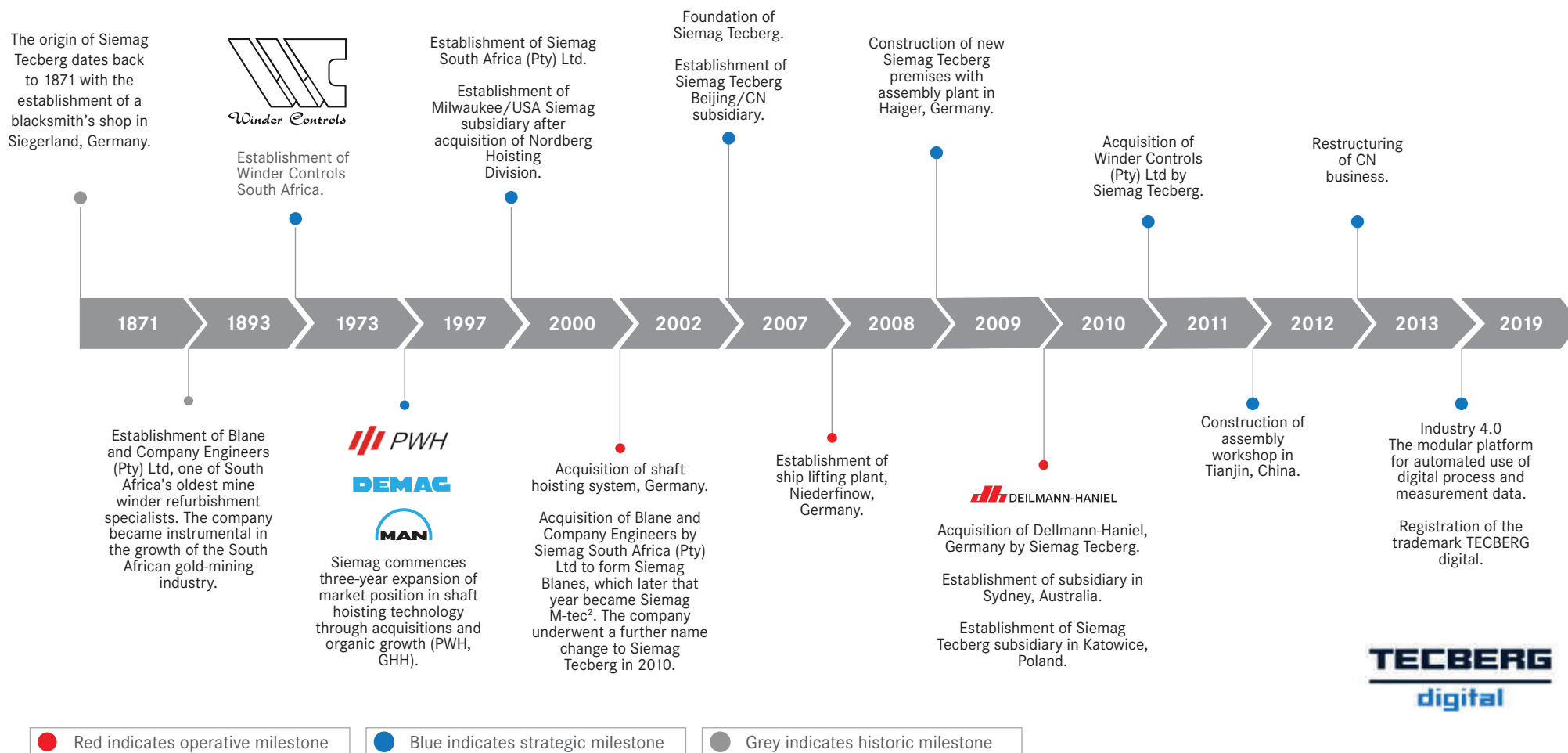
Coal



Fertilizer:

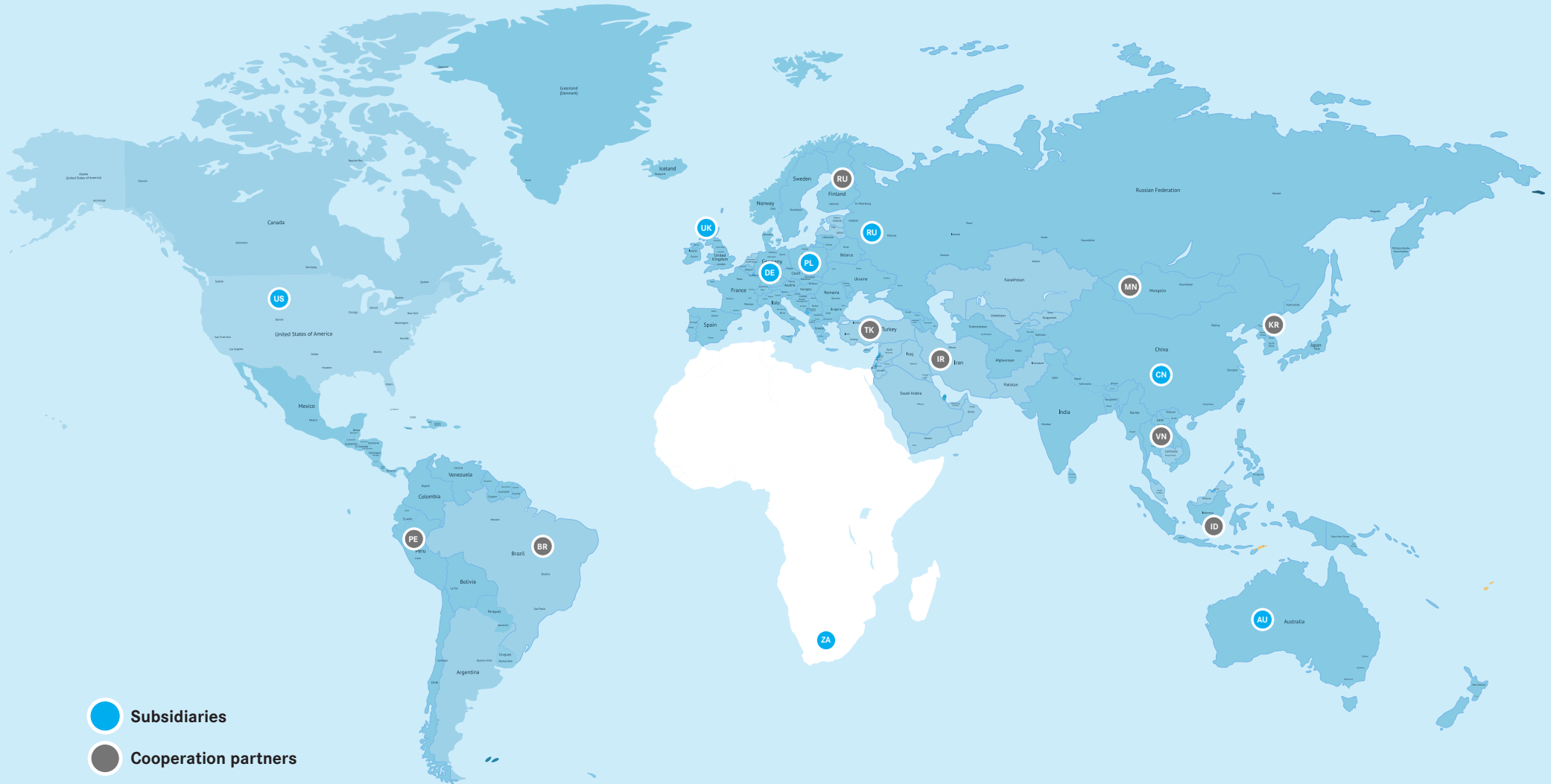
Potash




Winder Controls was established in 1973 by Bill de Beer, and Siemag South Africa was founded in 2000. Winder Controls was incorporated into the Siemag Tecberg group in 2011. Siemag Tecberg and Winder Controls now combine their electrical, mechanical, hydraulic and services capabilities to provide full systems integration solutions under the Winder Controls banner.



SIEMAG TECBERG group

Worldwide network of subsidiaries and cooperation partners



-  Subsidiaries
-  Cooperation partners
-  Winder Controls ZA coverage

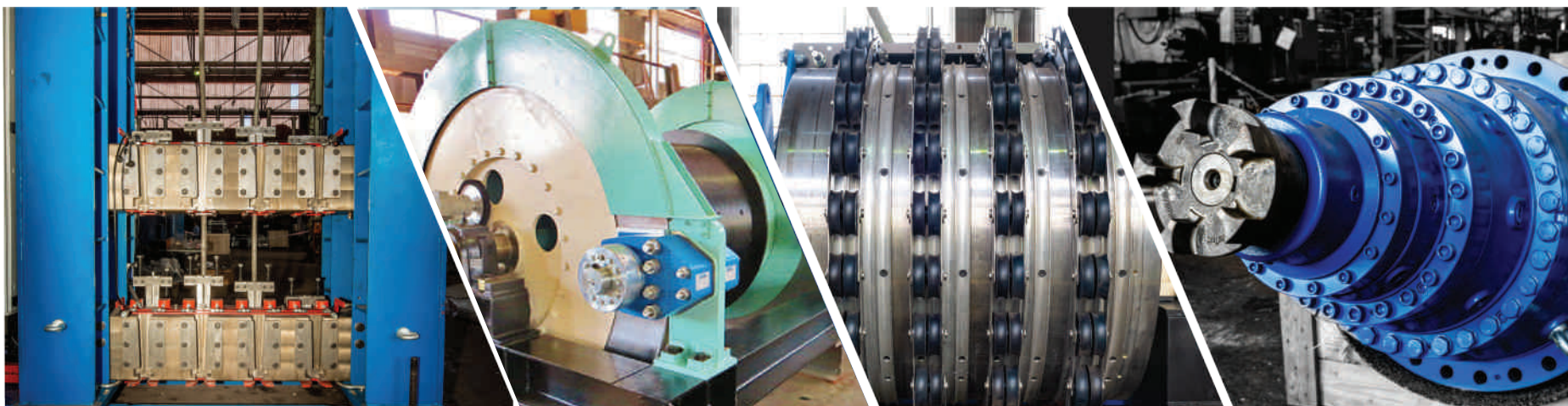




Winder Controls

Since inception, Winder Controls has developed a sound track record of over 800 installations comprising hoisting systems and auxiliaries, as well as upgrades and refurbishments to existing plants.

Winder Controls approaches all projects with a dynamic, flexible and solutions-based mindset. We leverage our systems integration capability to deliver quality projects that incorporate our expertise in design, manufacture, inspection, testing, installation and commissioning.





OUR MISSION

Winder Controls specializes in the design, manufacture, supply, installation, commissioning and servicing of high-quality hoisting and associated equipment for the African mining industry.

Through our high level of skills excellence in engineering, manufacture and site work, we offer our clients innovative, risk-reducing solutions to their hoisting and general industrial requirements from concept design through to emergency breakdown and long-term maintenance support.

We are proud to offer our clients a full service, single point of contact, which provides seamless interfacing between all disciplines and covers all major equipment brands.

In all our activities, we strive to ensure a safe working environment for our employees, with a focus on overall health. Each individual is encouraged to accept accountability and is enabled to develop to their full potential.

We are determined to achieve our goals through conscientious, responsible management practices to ensure a value-adding, sustainable and growth-oriented business for our clients, employees, shareholders and affected communities.



OUR VISION

One dynamic team growing together across multiple disciplines to keep the hoisting industry turning.

Through technical and service excellence, Winder Controls is committed to continually provide the best client experience in the winder industry.



OUR VALUES

INTEGRITY

We will at all times conduct our business in a professional, ethical manner, striving for the good of our company, our clients, our employees and our business environment.

RELIABILITY

We will provide products and services that our clients can rely on, always.

SAFETY

Our belief that each individual must be safe and respect the safety of others is central to all of our activities.

COLLABORATION

We believe that the whole is greater than the sum of the parts, in our internal practices as well as in our dealings with our clients and other stakeholders.

ACCOUNTABILITY

Our employees are empowered to fulfil their roles and are fully accountable for their actions.

EFFICIENCY

We believe in continually seeking opportunities to improve our use of resources and to enable our people to perform at their best.

INNOVATION

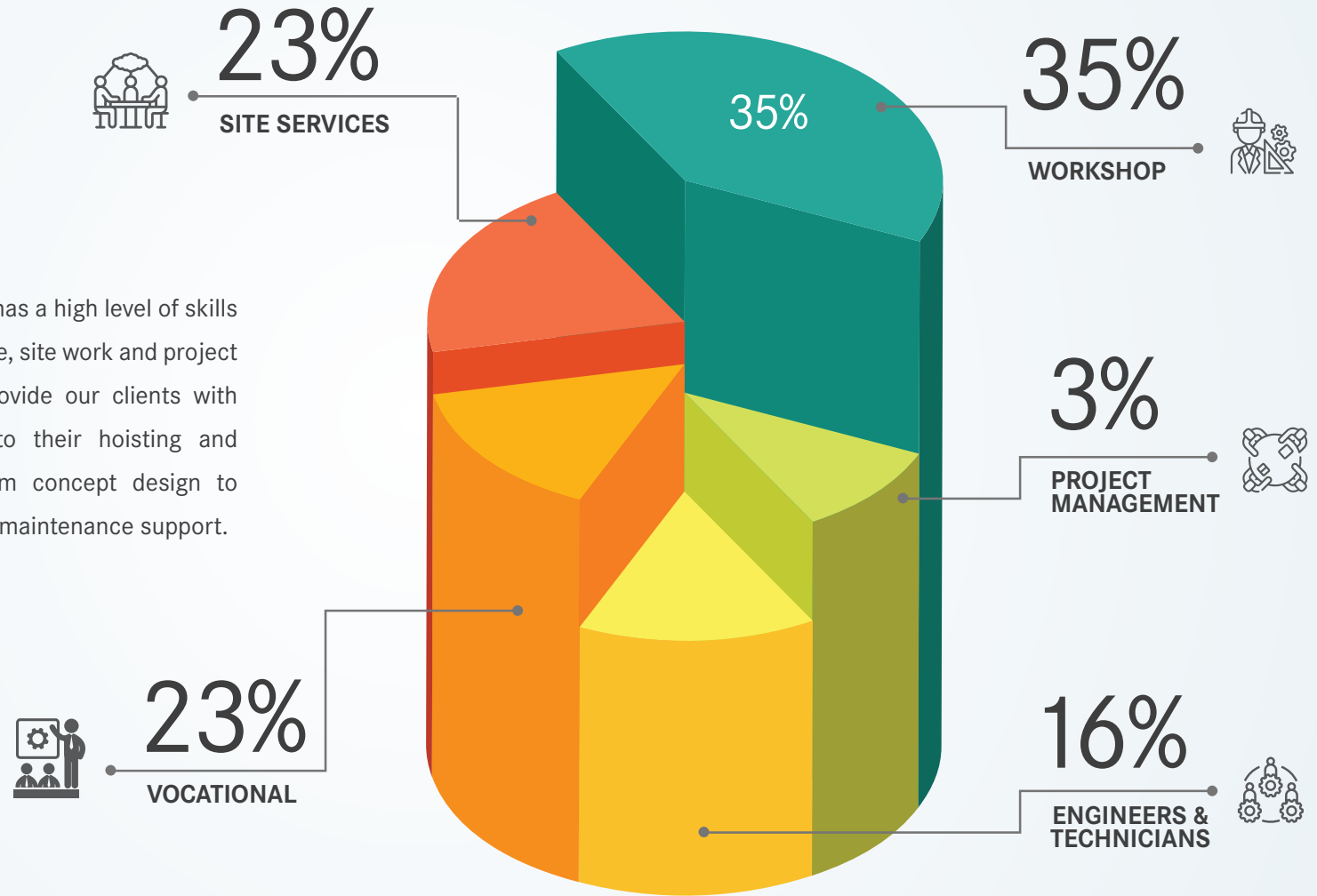
We will continually improve and broaden our products to better address the needs of our clients.

DYNAMIC

We will not be bound by rigid thinking, but will encourage enthusiasm and will strive to develop solutions most appropriate to our clients' needs.

Team

Our dedicated team of over 100 staff has a high level of skills excellence in engineering, manufacture, site work and project management. This enables us to provide our clients with innovative, risk-reducing solutions to their hoisting and general industrial requirements, from concept design to emergency breakdown and long-term maintenance support.



Hoisting systems and their associated equipment are critical in achieving mine safety, reliability and continuity of production.

To this end, Winder Controls is compliant with all requirements as set out in the ISO 9001:2015 standard. All our processes are properly controlled, from engineering and design, through procurement and production to final installation of our products and systems.



Winder Controls recognizes its social responsibility and will remain a responsible corporate citizen.

The CSI partnerships that Winder Controls favours, support community enlistment and development programmes that are empowering in the short term and sustainable in the long term.

One example is the Blouberg, Limpopo water and sanitation project.

In 2019, Winder Controls embarked on an initiative to provide water and sanitation to 20 schools in the Blouberg, Limpopo region. To date, the following achievements have been made:

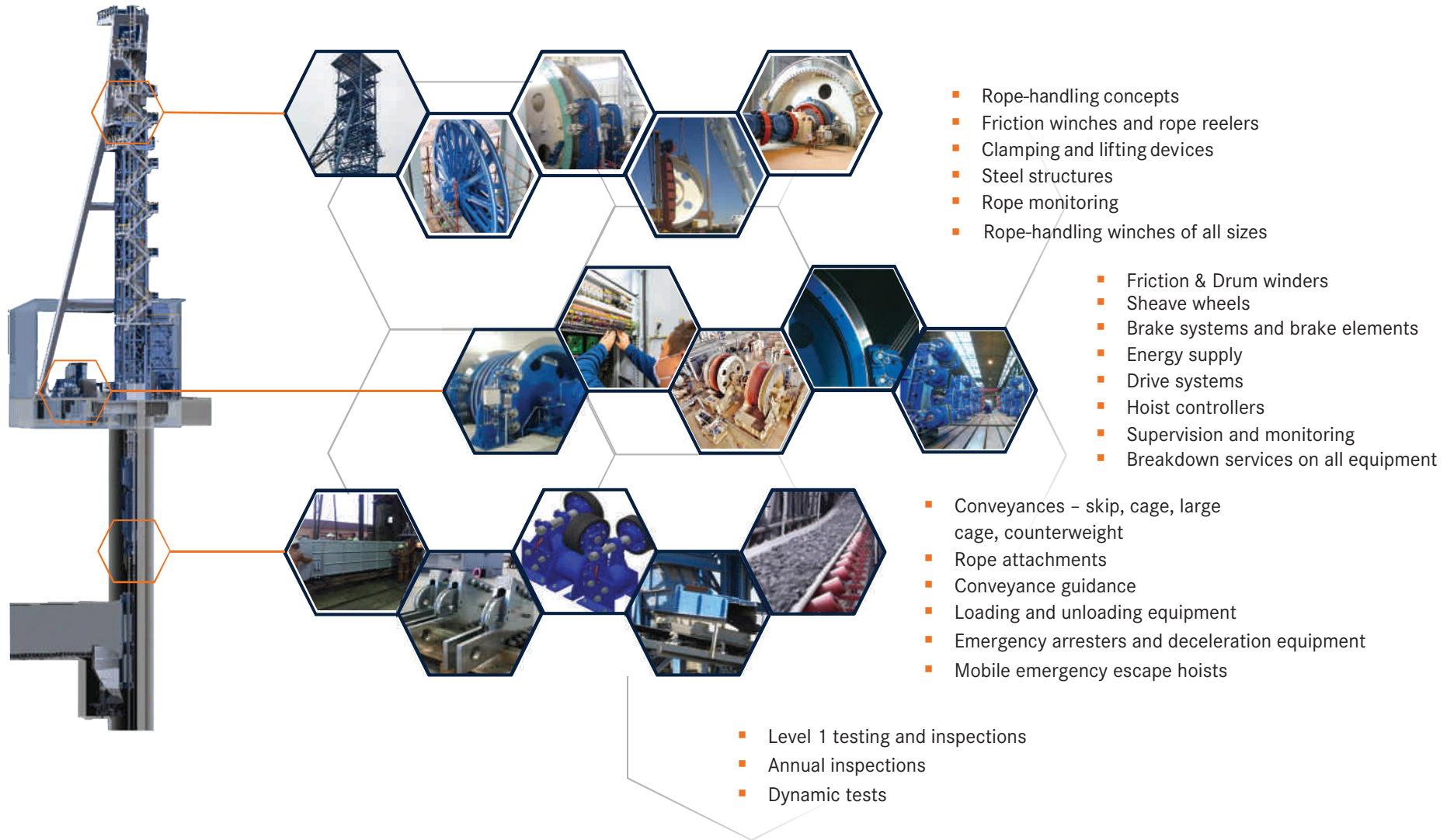
- New toilet blocks – 4
- Refurbished toilet blocks - 36
- JoJo tanks (5 000 L) - 2
- Tank stands - 9
- Tap stands - 29
- Vegetable gardens - 5

Each intervention was implemented with the sole aim of improving the current stressed infrastructure to create a healthy environment conducive to learning.



PRODUCT PORTFOLIO

Complete shaft hoisting solutions



Our wealth of experience, gained in numerous installation and service operations on the most varied systems around the world, sets the pace for continuous further development of our knowledge base.

As an independent systems integrator for shaft hoisting systems, we offer our customers comprehensive full-system expertise including planning, engineering and construction of winders and entire systems in the field of shaft hoisting technology.

- Koepe winders
- Single-drum winders
- Double-drum winders
- Blair multi-rope winders
- Stage winders
- Rope tensioners and rope-handling equipment
- Mobile shaft winches



REFERENCE PROJECT



SOUTH DEEP GOLD MINE Gold Fields, South Africa

Realization of efficient hoisting operations in the gold mine with a shaft depth of 3 000 m.

Construction of a large Blair multi-rope drum hoist.

Challenge

Winding distance:	3 090 m
Winding capacity:	255 000 t per month
Drum diameter:	7.1 m
Compartment load:	102 t
Power:	13 000 kW

Winder Controls offers full drive and automation for both man and rock winders with new equipment or as a retrofit. Man winder automation includes both cage-control and level-control type systems, or a combination of the two.

- Programmable Logic Controller (PLC) based control and visualization
- Safety Integrity Level (SIL) rated safety systems
- Engineering and supply of multiple-drive system technologies
- Design and supply of advanced rope-handling systems and mobile winders
- AC/DC motors and drives
- Full electrical site services including inspections; audits; installation and commissioning; maintenance; and breakdown emergencies
- Electronic speed distance protection units
- Brake control systems
- Auxiliary equipment motor control centres



REFERENCE PROJECT



RSV Odysseus Rock Winder Electrical Upgrade - Australia

EXISTING EQUIPMENT

The following electrical equipment was retained and reused:

- DC winder motor, 3 600 kW, 60 rpm.
- Lily controllers, high-speed DC circuit-breakers, converter transformers (rewound for 11 kV).

NEW EQUIPMENT SUPPLIED

- Five-panel 11 kV switchboard in 6 m E-House, two converter transformers 3 000 kVA each, auxiliary transformer 630 kVA, DC drive system, 12 pulse, 2 x 4 000 A converters with converter control panel, field converter.
- 12 m E-House containing LTDB and motor control centre 415 V AC, PLC control logic system, PLC regulator system, battery charger, protection, alarms and indication.

- Closed-loop Brake Control Systems
- Open-loop Brake Control Systems
- Semi Closed-Loop (ESCORT) Brake Control Systems
- Bearing lubrication systems
- Siemag Tecberg Brake Elements
- Brake systems and cylinder refurbishment
- Large journal and roller bearing lubrication systems
- Clutch operating systems
- Hydraulic skip discharge systems



REFERENCE PROJECT

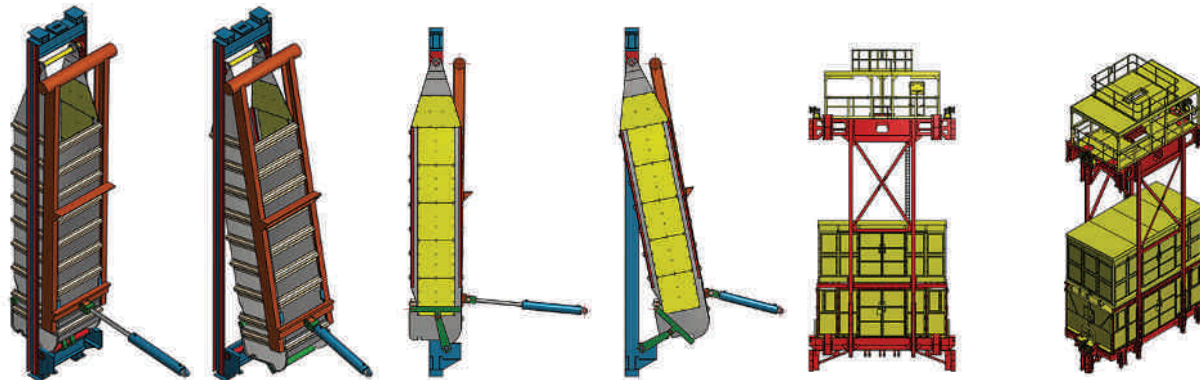


Obuasi KRS Rock Winder Upgrade - Ghana

Refurbishment of the electrical portion of the KRS Rock Winder, including:

- Installation of new equipment on-site: 1.7 MVA converter transformers, DC converter panels, converter control panel, DC high-speed circuit-breaker, Winder safety and control panels, Winder regulator, EHMU panels, AC and DC reactors, transformer box, Absolute encoders and an incremental encoder.
- Supply and installation of additional new equipment: driver's desk, driver's cabin, 440 V AC MCC/LTDB, brake control panel, auxiliary transformer 200 kVA, brake power pack remote I/O box, Locked Bell signalling units, single-aspect LED robot units, Call Bell units, magnetic switches and conveyance magnets.
- Supply of spares.
- Commissioning of the complete scope of equipment supplied.

- Skip
- Bridle
- Man and materials cage
- Dolly car
- Man car
- Flat tops
- Aluminium conveyances



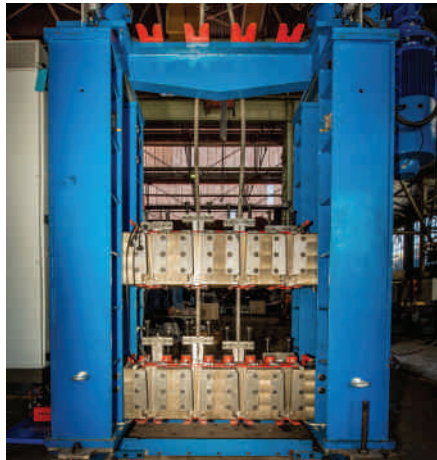
REFERENCE PROJECT



Bogoso-Prestea Mine, Ghana

- Central shaft spare skip and rope attachments supplied
- Central shaft man-cage supplied
- All conveyances manufactured from high grade aluminium

- Mobile friction winch
- Clamping and lifting devices
- Rope sheaves
- Rope attachments
- Sheave liners
- Koepe winder liner inserts
- Rope reeling winches



REFERENCE PROJECT



Venetia Diamond Mine - Limpopo, South Africa

The cost-effective rope-handling equipment supplied enables the installation, maintenance and replacement of four (4) Koepe head or tail ropes simultaneously on the production shaft Koepe winders. The equipment is also designed to carry out the single rope tensioning, removal and installation on the mine's drum winders.

The equipment consists of:

- Four (4) messenger winches
- Four (4) rope reeler winches
- One (1) multi-rope friction winch
- One (1) 4-rope Clamping and Lifting Device
- A variety of auxiliary equipment

- Conventional jack catcher
- Systems combining Jack Catcher and Deceleration systems including frames, roller boxes and energy-absorbing strips
- Deceleration devices



REFERENCE PROJECT



Bogoso-Prestea Mine, Ghana

The principle of the safety arrester is dissipation of energy by plastic deformation of a ductile strip of material (such as mild steel) by sets of rollers over a large area. The kinetic energy is thus converted into strain energy, which is safely released as low-grade heat.

The safety arrester consists of four or more strips suspended from the shaft steelwork, that pass through roller boxes mounted on an arrester frame. In the event of an over-wind situation, the conveyance hits the arrester frame and the roller boxes are forced to run along the strips.

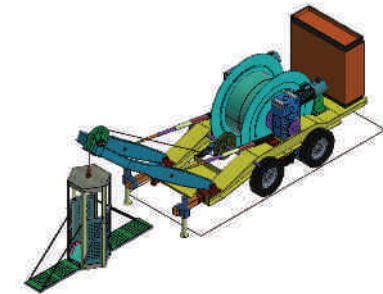
The scope of supply of deceleration devices includes:

- Four sets of headframe arresters
- Four sets of shaft bottom arresters

Each set consists of:

- One arrester frame including four impact buffers.
- Four roller boxes and fasteners.
- Four brake strips 130 mm x 12 mm x approx. 9 500 mm at headgear.
- Four brake strips 180 mm x 20 mm x approx. 7 000 mm at bottom of shaft.
- Associated strip support brackets and fasteners.

- Gravity feed brake release systems
- Pony drive feed
- Mobile emergency escape hoists



REFERENCE PROJECT



Nchwaning III Shaft, Double-drum Persons Winder – Northern Cape, South Africa

Incorporating a 650 kW, 1 000 rpm, 690 V AC motor. The motor will have forced cooling, a tacho generator and a class F temperature rise.

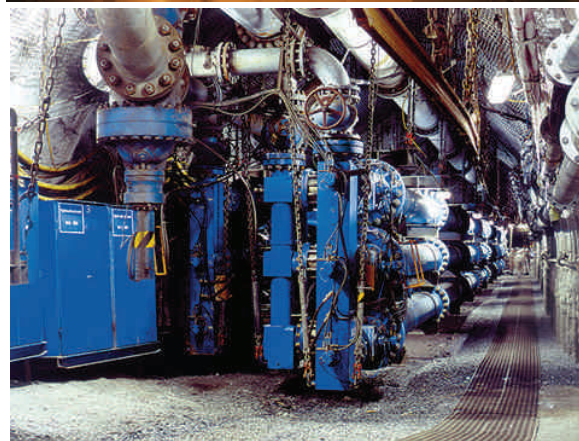
- Complete materials handling systems
- Surface and underground conveyor systems
- Loading and unloading systems
- Headframes



The SIEMEG TECBERG Group is a world leader in the application of the 'Three Chamber Pipe Feeder' technology to mine cooling and desalination systems. Many mine-cooling systems rely on turbines for the recovery of energy from descending chilled water, however this is an inefficient solution and with today's heightened awareness of ecological considerations and energy constraints, a new solution is required.

The group's pressure exchange systems are operating successfully on a significant number of mines around the world, eliminating the power requirements of high-pressure pumping and increasing reliability.

We offer design, manufacture, installation, commissioning and maintenance of pressure exchange systems for new mine designs as well as for the conversion of existing turbine systems.

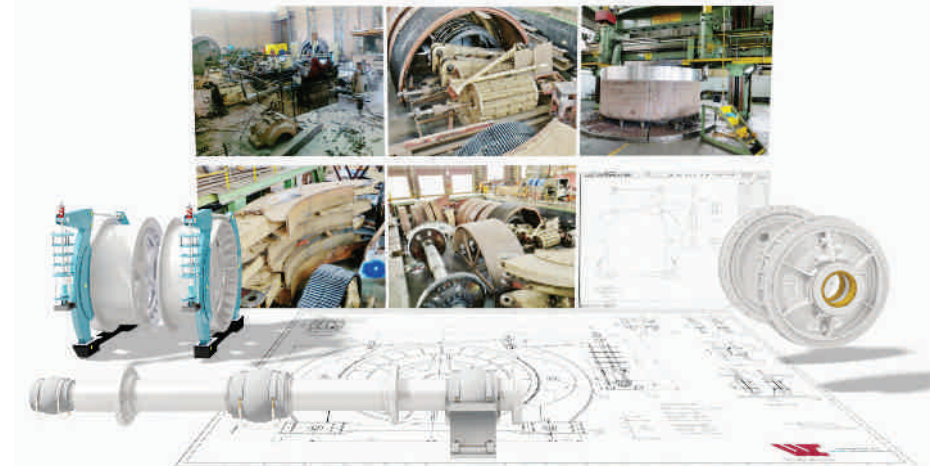


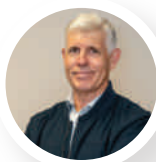
Winder Controls has extensive experience in the upgrading and refurbishment of all types of winders and related equipment.

We have carried out a significant number of large refurbishment projects, ranging from the replacement of worn components, to the total replacement of rotating masses to suit existing foundations and drive systems.

Inspection services and upgrade products:

- Full inspection including ultrasonic and magnetic particle testing.
- Mechanical and electrical design audits and establishing of duty cycles.
- Brake rigging upgrades.
- Brake path replacements or linishing.
- Modernization of hydraulic brake systems.
- Conversion to disc brake systems.
- Drum barrel replacements.
- Bearing system replacements.
- Drum shaft replacements.
- Clutch system conversions and replacements.
- Motor and gearbox modernization or replacements.
- Uplifting, installation and re-commissioning.





TIM KEEGAN
MANAGING DIRECTOR

Tim started his career as a Junior Design and Commissioning Engineer with Winder Controls in 1990, having obtained his National Higher Diploma in Mechanical Engineering. He then went on to obtain his BSc in Mechanical Engineering at Wits University and joined Genrec Engineering in the role of Project Engineer for winders and associated rope-handling equipment on the Phalaborwa Underground Mining Project. In 2000, he joined SIEMAG to assist with the establishment of SIEMAG South Africa. After the purchase of Blane & Co. Engineers by SIEMAG South Africa, Tim held the position of Capital Projects and Engineering Manager until he was transferred to SIEMAG's sister company, SMS Demag, to take up the position of manager of the projects department until July 2006. After a three-year period in the construction industry as a Construction Director with Murray & Roberts, Tim rejoined SIEMAG TECBERG in May 2009 as Projects and Engineering Director and was then further appointed Mechanical Divisional Director in January 2013. Tim was appointed Joint Managing Director of Winder Controls on 1 January 2015 and became the sole Managing Director in June 2017.



JOHANN LOMBARD
DIRECTOR SALES AND MARKETING

Johann started his career with Gold Fields of South Africa in 1985 as a Junior Engineer. After obtaining a Higher National Diploma in Mechanical Engineering, he joined Dorbyl Heavy Engineering as a Commissioning Engineer of grinding mills, open gears and general products. In 1992, he left Dorbyl Heavy Engineering to pursue his interests in laser alignment and condition monitoring of rotating machinery by establishing his own company, Laser Alignment Services and Construction. In 1995, he sold the company to Blane & Co Engineers and has since played an anchor role in various departments within the company. In 2009, he was appointed as the Sales and Marketing Director of Winder Controls.



CHRIS DE BEER
TECHNICAL DIRECTOR - AUTOMATION

Chris obtained his National Technical Diploma at Wits Technikon whilst working as a Computer Engineer at IBM. He then worked at Computer Scientist Cigma for two years before joining Winder Controls in 1976 as an Electrical Engineer. He became Technical Director in 1983. Chris is highly respected in the mining industry and is recognized as the foremost expert on Mine Winder Electrical Systems.



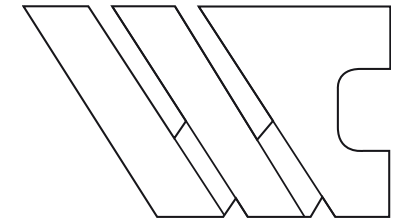
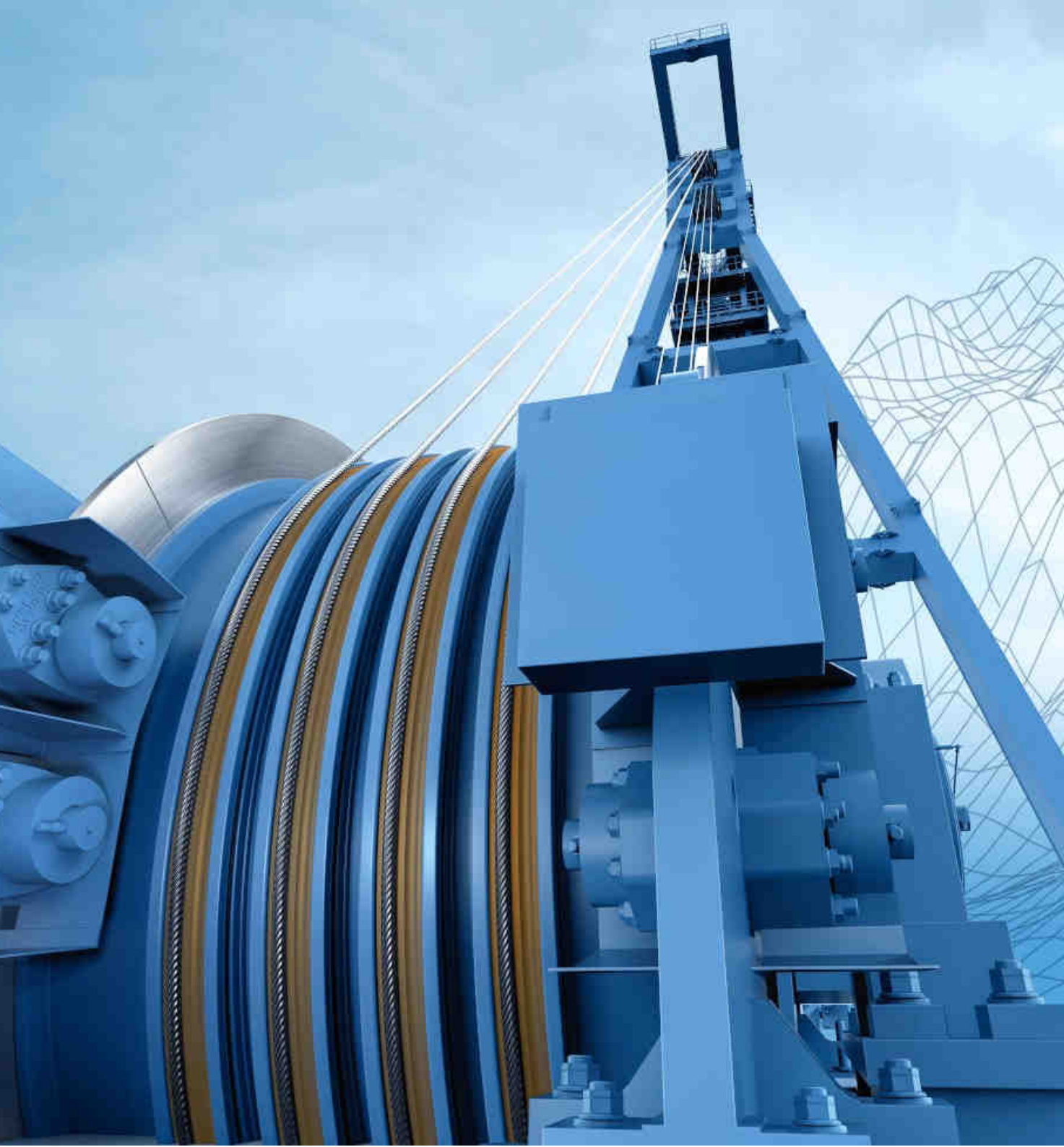
DELIN DE LANGE
FINANCIAL DIRECTOR

Delin started his career as a client liaison officer for Master Currency in 2002. In 2004, he began his articles with L Reyneke & Associates Inc. while studying for his BCompt degree through Unisa. He completed his articles in 2009 and obtained his BCompt degree in 2010. In 2009, on completion of his articles, he joined Winder Controls. In 2016, Delin became an Associate General Accountant (SA) through SAICA and was also appointed to the Winder Controls Executive Team as Financial Manager. In 2019, Delin was appointed as Financial Director.



NICO DE WET
COMPANY SECRETARY

Nico obtained a BCom degree in 1995 from the University of Stellenbosch, and then went on to obtain a Master's degree in Town and Regional Planning, also from the University of Stellenbosch. His professional career started in 1998 at the Namibian Ministry of Regional and Local Government and Housing, where he was appointed as Town and Regional Planner. Later he joined Urban-Econ as a Development Economist and in 2001 he joined Bank Windhoek as a Corporate Manager. He enjoyed an 11-year career in Corporate and Business banking, working for a number of listed companies in Namibia and South Africa. In 2012 he joined VASTech as Company Secretary and later became GM for Corporate Services. In 2019 he joined Winder Controls as Commercial Manager and Company Secretary. Nico also holds a Master's Degree in Business Leadership.



Winder Controls

HEAD OFFICE

1st Floor, Osborne Office Suites,
4 Osborne Lane, Bedfordview, 2007
South Africa
PO Box 3037, Bedfordview, 2008
South Africa,
Tel. +27 11 383 9300

WADEVILLE FACTORY

112 Tedstone Road, Wadeville, 1428
Ekurhuleni, South Africa,
PO Box 3037, Bedfordview, 2008
South Africa
Tel. +27 11 824 4743

www.winder.co.za