

# A HSTORY OF RELIABLE SAFETY **SYSTEMS**

#### The Evolution of Crane Safety

B&A Engineering was founded on the release of the first Factorate Inspectorate Approval Certificate for Cranes in 1933. A year later, in 1934, they bought their competitor, Wylie Systems. Using their combined knowledge, the amalgamated companies produced the first mechanical overload warning systems and load indicators. Revolutionising crane safety, these mechanical systems continued to lead the way into the 1970's.

With the introduction of hydraulic machines, starting in the 1960s, there became a need for higher capacity, microprocessor based safety systems. This technology was in its infancy during the 1960s, and was therefore not commercially adopted until the 1980s.

#### The Dawn of Microprocessor Systems

1982 saw the B & A Engineering Company, (by now known as Wylie), purchase another competitor, Weighload Ltd. The resulting collection of experience allowed the development of more reliable microprocessor systems, leading to the production of the WW225, WW230 and the WW250 systems, which continues to provide safety systems for cranes today.

#### Today's RaycoWylie

In 1994, the Rayco Technology Group purchased the B & A Engineering Company forming RaycoWylie Systems as we know it today. Through joint experience, shared passion and combined expertise, the company has been able to develop the W2245, i3000, i3500, i4000, R180 and the latest RaycoWylie i4500 Series.

**RESEARCH &** DEVELOPMENT

RaycoWylie are driven by innovation, with product and software development an unceasing priority. Whether designing or improving safety systems for a specific bespoke machine, fully integrated systems with leading manufacturers or focusing on refining the current technology ranges, our R&D engineers work constantly to help improve reliability, reduce cost, and incorporate developments in international standards.

Our development engineers constantly review and evolve the current range, incorporating the best of innovative technologies into each; further driving the high standards RaycoWylie upholds. From minicranes to some of the world's largest heavy lift barges, our engineers have developed safety systems which have revolutionised safety on them all. This approach has left us with an ever increasing pool of knowledge to help us to continue driving crane safety into the future.

### CONTENTS







### OUR PRODUCTS

Providing holistic safety systems for all categories of cranes, the current product range includes the W2245, i4000, R180 and i4500 series of systems. At the heart of all the current systems are simple, intuitive controls and straight-forward, precise procedures to operate and calibrate systems. Integrating advances in technology, the i4000 and i4500 series also utilise USB connectivity to make the transfer of calibration files. load charts, software and more, easier than ever before.

The complete range of systems is designed for practical use, without the need for specialist hardware or software, with calibration and operation performed through the display itself.

- 9 R180 Wireless Wind Speed Indicator
- 10 W2245 Rated Capacity Indicator
- 11 i4300 Rated Capacity Indicator
- 12 i4000 Multipurpose Indicator Range Limiting Device
- 13 Sensors & Spares
- 16 Global Contacts

## **14500** SERIES



The i4500 series of systems (i4500, i4507 and i4510) were first brought into production in 2013. These systems have been developed to meet the ever demanding regulations and standards of the crane and lifting industry while maintaining simple, clear information for the operator.

Utilising a full colour display in 4.3", 7" and 10" models mean there is always an option to suit your requirements. This coupled with self-diagnostics, operator usability, and ease of calibration keeps the i4500 series ahead of the competition. The systems use the CANbus J1939 protocol to communicate with each interface, constantly monitoring all the cranes sensors to give clear accurate information to the operator, the CANbus network also allows requirements as we may be able to help.

huge amounts of flexibility allowing you to add or remove sensors when required at any time throughout the life of the equipment.

The i4500 series has been developed with your crane in mind, whether it's a 5te telescopic mobile, 100te crawler, 80m luffing tower, 10te flat top tower, swan-neck tower, port crane, barge crane, rail crane or even a complete bespoke machine the i4500 series from RaycoWylie will have the solution for your machine.

Application specifics are detailed on the coming pages, however, as our team in R&D are constantly developing the systems if there is anything not shown in the brochure please contact us to discuss your





### **TECHNICAL DATA**

#### 6 4500

Display Size	4.3" (16/9 ratio)
Screen Resolution (pixels)	480x272
Display Rating	
Accuracy (of rated capacity)	
Operating Temperature	
Extended Temperature	
Supply Voltage	
CANbus Protocol	

### **USER** FRIENDLY

- Centralised information on one screen
- Colour screen
- High resolution LCD Screen readable in direct sunlight
- Night mode images
- Operator selected units
- m/te, m/kg, ft/klbs, ft/tons, ft/long tons, ft/lbs
- Camera input ready (only available on 4507 & 4510)

## **FLEXIBILITY**

- Engineered to fit all applications Multilingual interface for international use
- Choice of 10 languages Tactile button interface with simple intuitive icons
- Compatible with many canbus sensors

DESIGNED FOR SERVICEABILITY

- Load chart, software and calibration file with transfer via USB stick
- Canbus communication link Utilising top quality Deutsch connectors
- and industry standard M12 5 pin connections Quick and easy to install and calibrate
- Ultra fast calibration using pre-entered weight data for all attachments





• 7" display • 800x480 pixels resolution screen camera display



**1** 4510

• 10.4" display • 800x600 pixels resolution screen winch line display

## SAFETY PERFORMANCE

- Compliant with current international standards
- Self diagnostic mode Fault log
- Event recorder
- Datalogger optional
- Inbuilt operator audible and visual warnings



## **14500** MOBILE

## **14500** CRAWLER



**1**4500 4.3" display

 480x272 pixels resolution screen

RaycoNylie 14507 0 Duty:0005 21.1 13.0

Crawler cranes, similar to mobiles, come in all shapes and sizes, whether it is a 5te telescopic, 120te lattice or 50te telescopic with outriggers the i4500 series has a solution. The ability to recondition and reuse existing load sensors to minimise the financial impact of needing a new system coupled with intuitive controls, simple calibration procedures, outstanding functionality and excellent customer support mean the i4500 series is the unit for your crane. From a basic system comprising of display, relay controller, boom angle sensor, load interface and load cell to roped luffing Our R&D department are constantly fly jibs and more. This leaves the

i4500 series the perfect choice for your machine.

Using centre of gravity calculations for attachments has removed the need to calibrate every attachment and reduce the calibration time required on site. With load calibration interpolation between boom lengths of up to 15m, new easy to use deflection, load and friction compensation calibrations means the i4500 series calibration can be completed faster and with more accurate results than ever before.

developing both software and

## OPTIONS

#### Load

0

- Angle Relay controller Extension Over hoist input (ATB) Boom tip wind speed XY chassis angle Slew encoder Camera inputs Data logger Virtual wall range limiting
- Outrigger position monitoring
- Travel monitoring
- Hook height monitoring
- Rope pay-out monitoring

More options available upon request, please contact RaycoWylie.

i4500 mobile crane applications can vary massively depending on your specific requirements. From basic kits utilising CANbus sensors to monitor load, boom angle and boom extension to more complex systems including multiple reeling drums, hydraulic luffing jibs and more. The i4500 series and its software are perfectly suited to mobile cranes and the needs of their owners and operators.

The software has been developed to make operation, calibration and fault finding as fast and simple as practically possible. This is done through listening to the needs and recommendations of our customers, from flexible calibration points, Centre of Gravity calculations for attachments, USB connectivity, the ability to add extra sensors when and if required mean the clean, intuitive software is easy and simple for both operators and engineers to use.



carried out by PSM - South Africa

## **OPTIONS**

- Load
- Angle Relay controller
- Extension
- Over hoist input (ATB)
- Boom tip wind speed
- XY chassis angle
- Slew encoder
- Camera inputs
- Data logger
- Virtual wall range limiting
- Outrigger position monitoring
- Travel monitoring
- Hook height monitoring
- Rope pay-out monitoring

More options available upon request, please contact RaycoWylie.





 7" display • 800x480 pixels resolution screen

hardware meaning the i4500 series continues to develop with your machines requirements.

The software has been developed to make operation, calibration and fault finding as fast and simple as practically possible. This is done through listening to the needs and recommendations of our customers, from flexible calibration points, Centre of Gravity calculations for attachments, USB connectivity, the ability to add extra sensors when and if required mean the clean, intuitive software is easy and simple for both operators and engineers to use.





## **14500** TOWER



Tower cranes are the newest application the i4500 series has been developed for. RaycoWylie have worked extensively with tower crane specialists and invested heavily to develop a truly flexible and versatile system that is perfectly suited to the tower crane and it's market's.

Be it Luffers, Flat Tops or Swan Necks, operators and owners worldwide. the software has been developed to work

with all of them. From utilising current machine sensors to upgrading with CANbus encoders, the i4500 series can handle it all.

With clear, easy to understand system controls, calibration procedures, state of the art diagnostics and industry competitive pricing, the i4500 series is the choice of

## **R180** WIRELESS WIND SPEED INDICATOR



The R180 is the cost effective, easy to install and simple to use wireless wind speed indicator.

With an inbuilt relay output to trigger an external alarm, internal audible and

visual operator warnings, clear LCD indication needs.

Currently in development we have a new series of both wired and wireless wind speed sensors and displays, due for release 2017. For more information

### **3D WORK AREA LIMITATION**



The prohibited zone function allows to limit access of the jib or trolley and lifted load to different zones without losing sight of the critical load information. You get 1 zone to determine the job site and up to 10 zones (3D) to determine obstacles inside the jobsite.

## OPTIONS

Load

Angle

Trolley position

- Relay controller Cab height wind speed
- Boom tip wind speed
- Slew encoder
- Camera inputs
- Data logger
- 3D work area limitation
- Travel monitoring (rail mounted cranes)

**1** 4507

 800x480 pixels resolution screen

7" display

- Hook height monitoring
- Anti-collision interface

More options available upon request, please contact RaycoWylie.

## **FEATURES**

please contact RaycoWylie.

Direct Sequence spread spectrum transmission technology for an enhanced range of operation and better RFI resistance (2.4 GHz transceivers) Internal antenna on both the display and sensor, which means low susceptibility to damage Selectable units MPH, KM/H, M/S Display and sensor pre-calibrated Easy installation and sensor replacement Uses lithium 'D' Battery Battery life : up to 2 years ( low battery warning) User friendly display Pre-set limits with audible and visual warning Operating range: 300m

display, low battery warning and the ablilty to display the speed in various units of measurement. The RaycoWylie R180 is the answer to your wind speed



## **TECHNICAL DATA**

**Display Size** 

Supply Voltage

Relay Output

Accuracy

Display & Sensor Rating

Operating Temperature

#### R180

4.69"x3.13"x2.13" (11.95cmx 7.90cmx5.55cm)

IP67

10.2 to 30vdc

-30°C to 70°C (-22°F to 158°F)

1 (500mA)

<0.2 mpg for the range 11mph to 55mph



## W2245 RATED CAPACITY INDICATOR

# **14300** RATED CAPACITY





Install of W2245 to a Valla 90E carried out by RaycoWylie - United Kingdom





The new cost effective retrofit system from RaycoWylie. Although still in the final stages of R&D RaycoWylie are proud to introduce the successor to the W2245. Brought specifically to the European markets as a cost effective retrofit solution the i4300 will boast a 4.3" screen, USB connectivity, full on For more information on the i4300 screen calibration (no need for laptops please contact RaycoWylie.

or expensive specialist equipment) and CANbus communication. The i4300 will bring your machine up to date with a simple clear display, easy to follow calibration procedures and state of the art diagnostics.

The W2245 is a time served quality and a bar graph representation of % of system with years of experience and continues to be the choice for many retrofit applications. By offering top quality hardware at a reasonable price the W2245 is hard to beat.

safe working load. All critical data is presented in a clear, simple fashion to the operator.

Compact design, easy to install and the i4300 system. This system will be calibrate, the W2245 combines a clear superseding the W2245 by the end LCD display of load, safe working load, of 2016. For more information please hoist selection, radius/boom length, boom angle, parts of line, duty number

**TECHNICAL DATA** 

Control Box Dimensions

**Operating Temperature** 

Display Rating

Supply Voltage

**Relay Outputs** 

R&D are currently putting the final touches to the W2245's replacement

### **FEATURES**

- The W2245 is a rated capacity indicator with chart programming
- Indication of approach, overload,
- anti-two block, and cut out conditions The processor is self contained in the display. Intelligent self diagnostic system warns
- the operator of system failure
- Continuous display of load, SWL and parts of line settings.
- All system settings are saved on system power down
- Compatible with most existing sensors
- Quick and easy installation and calibration. Calibration is password and hardware protected
- Settable limits for load, angle , length and radius are standard
- Audible and visual alarms warn the operator of
- approach to overload and capacity overload
- Data protection in case of power failure
- Motion cut-out output
- **Display illumination**
- Conforms to European (CE) standards

## **FEATURES**

- Continuous display of load on hook, current hoist selected and part of line settings
- Diagnostic menu and continuous error detection and recording
- Audible and visual alarms indicating two-block, load limit conditions and range limiting device
- Adjustable high and low angle, load, length and wind speed limits
- Optional lock-out for load, A2B and range limiting device
- Easy calibration via keypad. No additional programming hardware necessary
- Quick and easy installation
- USB port for updates
- 3 language interface; English, Spanish, French
- Selectable units
- Upgradable to the i4500 LMI Series



contact RaycoWylie.

W2245

99mm x 81mm x 200mm

IP67 (option)

12 to 27 vdc

-25°C to 60°C (-10°F to 140°F)

1 (300mA)

## NEW



• 4.3" display • 480x272 pixels resolution screen

## **TECHNICAL DATA**

#### **1**4300

Display Size	4.3" (16/9 ratio)
Screen Resolution (pixels)	480x272
Display Rating	IP67
Accuracy (of rated capacity)	In accordance with SAE J159
Operating Temperature	-20°C to 70°C (-4°F to 158°F)
Extended Temperature	-40°C to 70°C (-40°F to 158°F)
Power Requirement	11 to 36 vdc
CANbus Protocol	J1939
Power Requirement	11 to 36 vdc



## **14000** MULTIPURPOSE INDICATOR RANGE LIMITING DEVICE



**1** 4000

6.15" x 3.56" x 2.36"

(15.61cmx9.03x5.99cm)

3.5" LCD Colour Screen

(320x240)

IP67

10 to 30 Vdc

-20°C to 70°C (-4°F to 158°F)

-40°C to 70°C (-40°F to 158°F)

J1939

A new product to the range, the i4000 is a multi-application indicator for use as load, range limiting, boom angle, boom length, radius, height, hoist or slew indication. Unlike the W2245, i4300 and i4500 series, the i4000 has no your indicator system.

**TECHNICAL DATA** 

Display Size

Screen Size

**Display Rating** 

Supply Voltage

Operating Temperature

Extended Temperature

CANbus Protocol

programmed load charts. It is best suited to fixed capacity machines. Still boasting the latest CANbus communication, high quality components and colour screen the i4000 is ready to meet the needs of

**1**4000 • 3.5" display 320x240 pixels

resolution screen

## **SENSORS & SPARES**

Sensor options and system configurations are becoming a never ending list for RaycoWylie. Our R&D departments are constantly looking ahead to meet the requirements of the next project whilst ensuring price and quality remain at the forefront of RaycoWylie values.

If you have a bespoke project or specific sensor option you require please contact RaycoWylie.

### SENSORS





LOAD LINKS

#### LOAD PINS

Load pins come in all sizes to suit a full range of applications, from a tiny 1k pin installed to a 4" dynamometer to 20+te pins custom made to fit your machines existing dimensions.

A full range of load links are also available and again our engineers are ready to find the load link which best suits your machines requirements. From 1te links up to 50+te our engineers are ready to help, we can also supply load tested side plates and pins to ensure your installation goes to plan.



#### **3 SHEAVE DYNAMOMETERS**

The 33Y series are available in 3 sizes 4", 6" and 8", to suit rope sizes from 12-38mm and are available in either mild or Stainless Steel. Dynos can be supplied with amplifiers, junction boxes or CANbus load interfaces and can be mounted vertically or horizontally on either fixed or pantograph mountings which are all available from RaycoWylie.

Knowing an accurate windspeed is considered essential information for many crane manufactures, owners, customers and operators and is required for the safe use of the crane. RaycoWylie offer a range of windspeed sensors, from the R180 wireless stand alone unit to fully integrated windspeed into the latest of systems, windspeed is now an option on all i4500 series systems.

R&D are currently working on new wired and wireless windspeed systems due for release in 2017.



### WINDSPEED SENSORS

WWW.RAYCOWYLIE.COM - CRANE SAFETY SYSTEMS

## **FEATURES**

- Diagnostic menu and continuous error detection and recording
- Inbuilt audible and visual alarms indicating two-block, load limit conditions and range limiting device
- Easy calibration via keypad. No additional programming hardware necessary

- Quick and easy installation USB port for updates 3 language interface; English, Spanish, French Selectable units
- Upgradable to the i4500 LMI Series









#### PRESSURE TRANSDUCERS

Pressure transducers are available with a variety of outputs, mV, 4-20 mA or J1939 CANbus. Transducers are supplied with 1/4 BSPP hydraulic fittings to make them easy to install to your machine.

#### CANBUS ENCODERS

Used to monitor any rotation based input the 24bit CANbus encoders consistently provide an accurate measurement. Whether used to monitor slew angle for slew specific load charts, range limiting, work area limitation, hook height and direction, tower crane trolley position or hoist rope pay out this new range of encoders is perfect for your application.



## **SENSORS & SPARES**



#### ANGLE SENSOR

The voltage based 33A0001 angle sensor is a tried and tested 0-5v non potentiometric angle sensor, this means your old worn out pot can now be replaced by this robust angle sensor.



#### CANBUS ANGLE SENSOR

CANbus angle sensors housed in a IP66 cast aluminium enclosure this means the new angle sensor is ready for anything. Simply set which side of the boom the sensor is fitted and set the zero point and you're ready to work. Sensor calibration has never been easier.



#### X/Y ANGLE SENSOR

Used for a variety of applications to monitor chassis tilt of the machine, the RaycoWylie X/Y sensor is sturdy yet simple to install.



#### **A2B SWITCH**

Available in both aluminium and stainless steel the latest anti-two block / over hoist switches are built to last. Exposed to the harshest of weathers, RaycoWylie switches have been manufactured to the highest of standards and are perfect for new and retrofit applications.



#### **CANBUS LOAD INTERFACES**

CANbus load interfaces can now be used to convert either mV or mA signals into CANbus. This has opened the opportunity to reuse sensors and therefore minimise the cost to upgrade or renew your system.

CAMERAS



#### GPIO 33M0106

The general purpose input/output interface is used for a variety of applications. From switch inputs to converting analog signals to CANbus the GPIO is as flexible as they come.



#### RADIO REMOTES

Remote controls are rapidly becoming a popular option offered by both crane manufacturers and retrofit suppliers, to meet the need for operators to constantly monitor safety critical information. RaycoWylie has collaborated with several of the top radio remote manufactures in the industry and are always happy to collaborate with new companies and your chosen remote control supplier.



Cameras, whether winch view, rear view, boom tip or even hook view are becoming a popular tool to aid in the safe operation of cranes. This is why RaycoWylie now offer an integrated camera option on the i4507 and i4510 systems. On these larger screens it is possible to clearly view the camera and all critical load information on one screen. Take the chance to save money and cab space by adding the camera option to your new RaycoWylie system.

For boom tip and hook block cameras RaycoWylie have collaborated with some of the biggest names in the industry and are always happy to work with your chosen camera supplier.

### ADDITIONAL ACCESSORIES



Dataloggers are rapidly becoming a standard requirement Warning lights and alarms are some of the most important components to any safety system. RaycoWylie utilise a full for all working in the crane industry. RaycoWylie have range of both audible and visual alarms. Taking advantage developed the i4500 series logger and its software to be of the latest LED technology means lights are not only more user friendly than ever before. From the USB download brighter but also last longer than ever before. procedure which removes the need for heavy or specialist equipment to the user friendly software supplied to all who purchase the datalogger option. RaycoWylie are always happy to help interpret any datalogger information.

REELING DRUMS

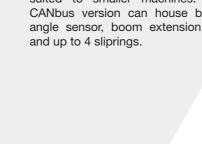


#### **33R4000 SERIES**

With an extension range of up to 12m the 33R4000 series is a high quality compact reeling drum perfectly suited to smaller machines. The CANbus version can house boom angle sensor, boom extension pot



most applications.









#### DATALOGGER



the 33R6000 series is perfect for



#### **33R2000 SERIES**

The 33R2000 drums are the largest of the range, servicing machines with a boom extension of up to 46m and available with voltage based sensors which can be easily converted to CANbus through a CAN interface and up to 4 slip rings. The 33R2000 series is ready for the bigger machine in your fleet.



## **GLOBAL CONTACTS**

At Rayco Wylie Systems we pride ourselves on the knowledge we have acquired through time, this has allowed us to focus on product reliability and strengthen relationships with our customers and partners. With locations across the globe, customer care and support is our primary focus. We strive to find the right solution for customers safety needs and are always happy to discuss any requirements you may have. Rayco Wylie Systems have a team of qualified and dedicated engineers available to ensure our customers remain supported wherever they may be in the world.

### UNITED STATES

RaycoWylie Systems 1020 9th Avenue, SW, Suite 124 Bessemer, Alabama, AL35022 T: 001 205 481 2080

All Enquiries rayco@raycowylie.com

## CANADA -

RaycoWylie Systems 2440 avenue Dalton Sainte-Foy Quebec Canada G1P 3XI T: 001 418 266 6600 F: 001 418 266 6610

Sales sales@raycowylie.com Service rayco@raycowylie.com **Technical Support** stechnic@raycowylie.com **General Enquiries** rayco@raycowylie.com

## **SALES PROMISE**

- Available products and parts at all times
- Fast and simple installation and calibration
- Reliability and quality you can count on
- Expert advice and support, when you need it the most
- Fast delivery, when time counts

## - UNITED KINGDOM

RaycoWylie Systems Drury Lane St Leonards On Sea East Sussex TN38 9BA T:0044 1424 421 235 F:0044 1424 433 760

Sales chris.cartwright@raycowylie.com susan.yates@raycowylie.com Service kevin.kellaway@raycowylie.com Technical Support chris.cartwright@raycowylie.com **General Enguiries** wylie@raycowylie.com

## LATIN-AMERICA

RaycoWylie Systems Carrera 22 No. 150-55 Bogotá Colombia T:00571 6313 355

All Enquiries lilian.cardenas@raycowylie.com

## SINGAPORE -

RaycoWylie Systems Singapore Pte Ltd 48 Toh Guan Road Eat #02-146 Singapore (608586) T: 0065 6908 1127 F: 0065 6795 0938

**All Enquiries** 

16 WWW.RAYCOWYLIE.COM - CRANE SAFETY SYSTEMS

- Adaptable, versatile systems and products
- All systems are designed to be user-friendly • All RaycoWylie products are certified to meet your requirements.
- Priced right for tremendous value





enquiry.sgp@raycowylie.com



## DISTRIBUTORS

#### LONDON & SOUTH EAST

NRC Plant Dave Rees dave.rees@nrcplant.co.uk 01375 361616



#### EAST ANGLIA

Demap Crane & Plant Solutions Mark Parish demap.cp@btinternet.com 07918 821742



#### MIDLANDS

AGD Equipment Ltd info@agd-equipment.co.uk 01789 292227



#### SCOTLAND

**RST Crane Services Richie Tannock** richie.tannock@live.com 07889 363078



S & K Safeload Steve Knight stevegknight@yahoo.com 01179 776146



**SPECIALISES IN:** 

SWL Rope Lifting & Testing Ltd **Richard Ormiston** poole@swl.org.uk 023 80 338286



### NORTH

Wycliffe Electrical Services Jim Carney jim@cranesafety.co.uk 01325 300322

GGR Group info@ggrgroup.com 0161 683 2580



**MJ** Electrical Martin Beck martin.beck95@yahoo.co.uk 07912 318345

ACB Cranes Paul Ruscoe enquiry@acbcranes.com 01782 385188



CM Cranes Chris Teasdale cmcranes@outlook.com 00353 87 4562222

IRELAND



## **REST OF THE WORLD**

PSM

- France Netherlands Malta South Africa Cyprus Turkey Nigeria
- Jean Pierre Thomas Eacosys Arie Rolloos Rolloos Systems Galea Garage Paul Galea Charlie McNair SLI Services Andreas Elia Das Otomotiv Orcun Urcan Paul Aghadiuno Akolisa Ventures

**BTI Services** 

Derrick Wright

0121 328 0800

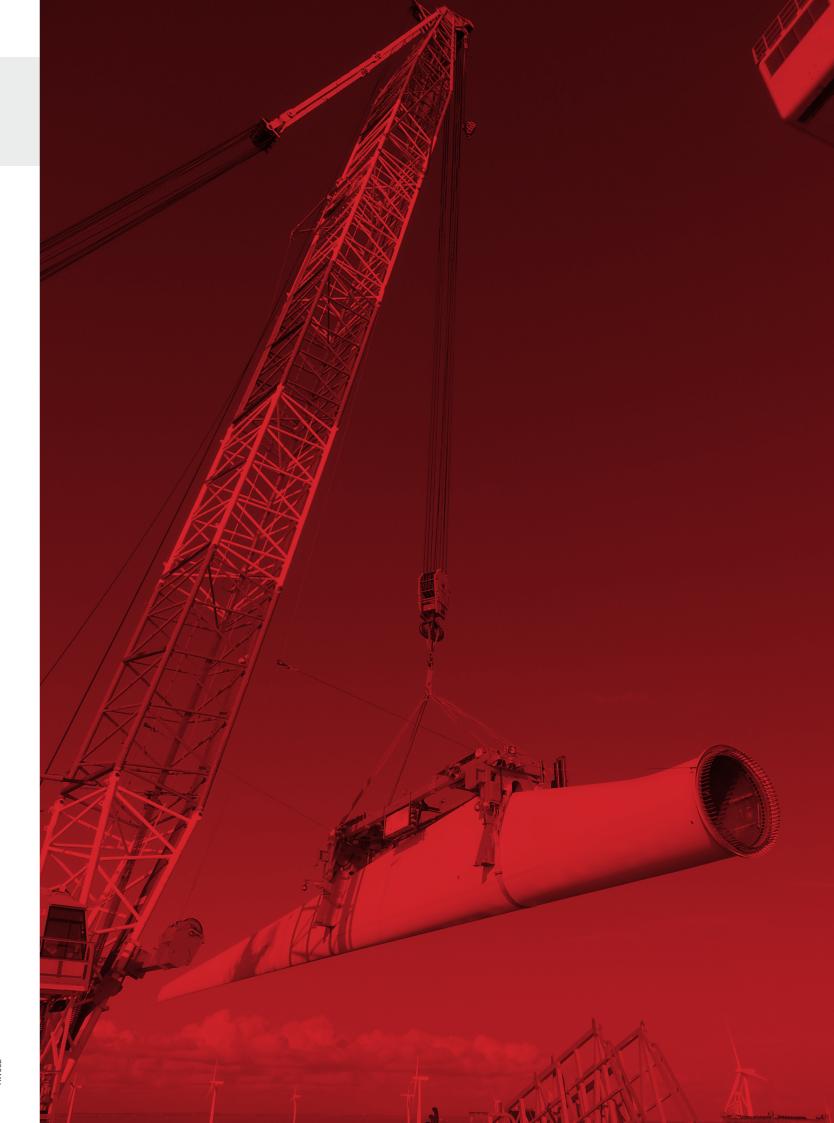
derek@btiservices.net

jp.thomas@raycowylie.com 0033 777 371686 info@rolloos.com palgal@maltanet.net cmac@netactive.co.za andelia@cytanet.com.cy info@dasoto.com.tr akolisaventures@yahoo.com 00234 8064 347013

0031 10 4500500 00356 21582338 0027 11 8681076 00357 24645246 0090 216 4565705



FIND US ON FACEBOOK FOR OUR LATEST NEWS & INFORMATION! FACEBOOK.COM/RAYCOWYLIESYSTEMS





#### UNITED KINGDOM

RaycoWylie Systems Drury Lane St Leonards On Sea East Sussex TN38 9BA T: 0044 1424 421 235 F: 0044 1424 433 760 CANADA

RaycoWylie Systems 2440 avenue Dalton Sainte-Foy Quebec Canada G1P 3XI T: 001 418 266 6600 F: 001 418 266 6610

#### **UNITED STATES**

RaycoWylie Systems 1020 9th Avenue, SW, Suite 124 Bessemer, Alabama, AL35022 T: 001 205 481 2080

#### LATIN-AMERICA

RaycoWylie Systems Carrera 22 No. 150-55 Bogotá Colombia T: 00571 6313 355

#### SINGAPORE

RaycoWylie Systems Singapore Pte Ltd 48 Toh Guan Road Eat #02-146 Singapore (608586) T: 0065 6908 1127 F: 0065 6795 0938