

CERTIFICATE OF ACCREDITATION

In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-

MINING AND SURFACE CERTIFICATION (PTY) LTD

Co. Reg. No.: 2015/021934/07

CENTURION

Facility Accreditation Number: **T0444**

is a South African National Accreditation System accredited facility
provided that all conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of accreditation,
Annexure "A", bearing the above accreditation number for

EXPLOSION PREVENTION TECHNOLOGY, SAFETY AND PERFORMANCE TESTING

The facility is accredited in accordance with the recognised International Standard

ISO/IEC 17025:2017

The accreditation demonstrates technical competency for a defined scope and the operation of a
quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to
use the relevant accreditation symbol to issue facility reports and/or certificates

Mr M Phaloane
Acting Chief Executive Officer

Effective Date: 23 February 2020
Certificate Expires: 22 February 2025

ANNEXURE A

SCHEDULE OF ACCREDITATION

Facility Number: **T0444**

Permanent Address of Laboratory:

Mining and Surface Certification (Pty) Ltd
 Unit 5, Lelyta Park
 45 Jurg Street, Hennospark Ext 87
 Centurion
 0157

Technical Signatories:

Mr F du Toit (All Methods)

Mr R Viljoen (All methods, excluding Items.
 8.1 to 8.7 / 9.1 / 10.1 to 10.4 / 13.1
 to 13.4)

Mr G Schepers (Item 1.1 / 1.2 / 1.3 / 1.7/
 1.8 / 1.18 / 3.1 / 6.1 / 7.1 / 8.1 / 8.2 / 8.3 /
 8.4 / 8.5 / 8.6 / 8.7 / 9.1 / 10.1 / 10.2 /
 10.3 / 10.4)

Mr EL van Niekerk (Item 1.1 / 1.2 / 1.7 /
 1.8 / 1.14 / 3.1 / 6.1 / 7.1 / 8.1 / 8.2/
 8.3 / 8.4 / 8.5 / 8.6 / 8.7)

Mr D Visser (Item 1.1 / 1.5 / 1.6 / 1.7 /
 1.8 / 1.9 / 1.11 / 1.12 / 1.13 / 1.14 / 1.15/
 1.16 / 1.17 / 1.18 / 1.19 / 1.20 / 2.1 /
 4.1 / 4.2 / 4.3 / 4.4 / 4.5 / 5.1 / 5.2 / 5.3/
 6.1 / 12.1 / 13.1 / 13.2 / 13.3 / 13.4)

Mr R Zeelie (Item 1.1 / 1.2 / 1.5 / 1.6 / 1.7 /
 1.8 / 1.9 / 1.11 / 1.14 / 1.15 / 1.18 / 1.19 /
 1.20 / 2.1, 3.1 / 6.1 / 7.1)

Mr R Booysen (Item 1.1 / 1.2 / 3.1 / 6.1 / 7.1)

Mr C Welthagen (Item 1.1 / 1.6 / 1.8 / 1.9 /
 1.11 / 1.12 / 1.13 / 1.14 / 1.15 / 1.16 /
 1.17 / 1.18 / 1.19 / 1.20 / 2.1 / 3.1 /
 4.1 / 4.2 / 4.3 / 4.4 / 4.5 / 5.1 / 5.2 / 5.3 /
 6.1 / 12.1 / 13.2)

Mr W Haywood (Item 1.1 / 1.2 / 1.14 / 3.1 /
 6.1 / 7.1)

Mr I Gumede (6.1)

Mr J Peens (Item 1.1 / 1.2 / 1.5 / 1.7 / 1.8 /
 1.9 / 1.11 / 1.12 / 1.13 / 1.14 / 1.15 /
 1.16 / 2.1 / 3.1 / 4.1 / 5.1 / 5.2 / 5.3 / 6.1 /
 7.1 / 10.1 / 10.2 / 10.3 / 10.4 / 10.5 / 10.6 /
 10.7 / 11.1 / 11.2 / 11.3 / 11.4 / 11.5 /
 11.6)

Mr M Sadler (Item 1.1 / 1.2 / 1.5 / 1.7 / 1.11 /
 1.14 / 1.15 / 1.18 / 1.19 / 1.20 / 3.1 / 7.1)

Mr M Erasmus (Item 1.1 / 1.2 / 1.14 / 3.1/
 5.1 / 5.2 / 5.3 / 6.1 / 7.1 / 13.1 / 13.2)

Postal Address:

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Nominated Representative:

Mr WP Mouton

Issue No.: 21

Date of Issue: 05 November 2021

Expiry Date: 22 February 2025

Materials / Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Techniques / Equipment Used
Electrical apparatus for explosive gas atmosphere	Item 1.1 – Part 0: Equipment – General requirements	SANS 60079-0: 2019 IEC 60079-0: 2017 SANS 60079-0: 2012 IEC 60079-0: 2011 SANS 60079-0: 2009 IEC 60079-0: 2007 SANS 60079-0: 2005 IEC 60079-0: 2004 SABS/IEC 60079-0: 2000
	Item 1.2 – Part 1: Equipment protection by flameproof enclosure “d”	Item 1.2 – Part 1: Equipment protection by flameproof enclosure “d” SANS 60079-1: 2015 IEC 60079-1: 2014 SANS 60079-1: 2009 IEC 60079-1: 2007 SANS 60079-1 :2004 IEC 60079-1: 2003 SABS/IEC 60079-1: 2001
	Item 1.3 – Part 2: Equipment protection by pressurized enclosures “p”	SANS 60079-2: 2015 IEC 60079-2: 2014 SANS 60079-2: 2007 IEC 60079-2: 2007 SANS 60079-2: 2001 IEC 60079-2: 2001 SABS/IEC 60079-2: 2001
	Item 1.4 – Part 5: Equipment protection by powder filling “q”	SANS 60079-5: 2016 IEC 60079-5: 2015 SANS 60079-5: 2009 IEC 60079-5: 2007 SANS 60079-5: 1997 IEC 60079-5: 1997 SABS/IEC 60079-5: 1997
	Item 1.5 – Part 7: Equipment protection by increased safety “e”	SANS 60079-7: 2019 IEC 60079-7: 2015 SANS 60079-7: 2007 IEC 60079-7: 2006 SANS 60079-7: 2003 IEC 60079-7: 2001 SABS IEC 60079-7: 1997

Item 1.6 – Part 11: Equipment protection by intrinsic safety “i”	SANS 60079-11: 2012 IEC 60079-11: 2011 SANS 60079-11: 2007 IEC 60079-11: 2006 SANS 60079-11: 1999 IEC 60079-11: 1999 SABS/IEC 60079-11: 1999
Item 1.7 – Part 15: Equipment protection by type of protection “n”	IEC 60079-15: 2017 SANS 60079-15: 2010 IEC 60079-15: 2010 SANS 60079-15: 2006 IEC 60079-15: 2005 SANS 60079-15: 2001 IEC 60079-15: 2001 SABS/IEC 60079-15: 2001
Item 1.8 – Part 18: Equipment protection by encapsulation “m”	SANS 60079-18: 2017 IEC 60079-18: 2014 SANS 60079-18: 2009 IEC 60079-18: 2009 SANS 60079-18: 2005 IEC 60079-18: 2005 SABS/IEC 60079-18: 1992
Item 1.9 – Part 25: Intrinsically safe electrical systems	IEC 60079-25: 2020 SANS 60079-25: 2010 IEC 60079-25: 2010 SANS 60079-25: 2003 IEC 60079-25: 2003
Item 1.10 – Part 26: Equipment with Separation Elements or combined Levels of Protection	IEC 60079-26: 2021 SANS 60079-26: 2019 IEC 60079-26: 2014 SANS 60079-26: 2007 IEC 60079-26: 2006
Item 1.11 – Part 28: Protection of equipment and transmission systems using optical radiation	SANS 60079-28: 2016 IEC 60079-28: 2015 SANS 60079-28: 2009 IEC 60079-28: 2006
Item 1.12 – Part 29-1: Gas detectors – Performance requirements of detectors for flammable gases	IEC 60079-29-1: 2016 SANS 60079-29-1: 2012 IEC 60079-29-1: 2007
Item 1.13 - Part 29-2: Gas Detectors - Selection, installation, use and maintenance of detectors for flammable gasses and oxygen	SANS 60079-29-2: 2017 IEC 60079-29-2: 2015 IEC 60079-29-2: 2007
Item 1.14 – Part 31: Equipment dust ignition protection by enclosure “t”	SANS 60079-31: 2014 IEC 60079-31: 2013 SANS 60079-31: 2009 IEC 60079-31: 2008
Item 1.15 – Part 33 - Equipment protection by special protection "s"	SANS 60079-33: 2013 IEC 60079-33: 2012

	Item 1.16 – Part 35-1: Caplights for use in mines susceptible to firedamp — General requirements — Construction and testing in relation to the risk of explosion	SANS 60079-35-1: 2013 IEC 60079-35-1: 2011
	Item 1.17 – Part 35-2: Caplights for use in mines susceptible to firedamp — Performance and other safety-related matters	SANS 60079-35-2: 2013 IEC 60079-35-2: 2011
	Item 1.18 – Part 46: Equipment assemblies	IEC TS 60079-46: 2017
	Item 1.19 – Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements	SANS 80079-36: 2018 ISO 80079-36: 2016
	Item 1.20 – Part 37: Non-electrical equipment for explosive atmospheres – non-electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k"	SANS 80079-37: 2018 ISO 80079-37: 2016
2. Caplights	Item 2.1 – Portable light assemblies for underground use in mines	SANS 1438: 2018 SANS 1438: 2013
3. Ingress protection	Item 3.1 – Degrees of protection provided by enclosures (IP Code)	SANS 60529: 2013 IEC 60529: 2013 SANS 60529: 2001 IEC 60529: 2001 SABS/IEC 60529: 1989
4. Gas measuring equipment primarily for use in mines	Item 4.1 – Part 1: Battery-operated portable, flammable gas measuring instruments and warning devices	SANS 1515-1: 2020 SANS 1515-1: 2014 SANS 1515-1: 2006
	Item 4.2 – Part 2: Fixed, transportable, and vehicle-mounted flammable gas measuring and warning sensor heads, devices and instruments	SANS 1515-2: 2014 SANS 1515-2: 2006
	Item 4.3 – Part 3-1: Battery-operated, portable, toxic gas measuring instruments and warning devices	SANS 1515-3-1: 2015
	Item 4.4. – Part 4-1: Battery-operated portable, oxygen-deficient/oxygen-enriched measuring instruments and warning devices	SANS 1515-4-1: 2015

	Item 4.5 – Part 5: Fire detectors	SANS 1515-5: 2016
5. Flexible electric trailing cables for use in mines	Item 5.1 – Part 1: Cables with operating voltages of 640/1100 V and 1900/3300 V	SANS 1520-1: 2016 SANS 1520-1: 2008
	Item 5.2 – Part 2: Cables with operating voltages of 38/6,6 kV to 19/33 kV	SANS 1520-2: 2020 SANS 1520-2: 2017 SANS 1520-2: 2008
	Item 5.3 – Part3: Cables with operating voltage of 1 500 V d.c.	SANS 1520-3: 2013
6. Batch Sampling	Item 6.1 – Batch sampling and acceptance criteria for explosion-protected apparatus (EPA)	SANS 96: 2018 SANS 96: 2006
7. Cable Glands	Item 7.1 – Cable glands for use on flameproof enclosures (Ex d)	SANS 808: 2013 SABS 808: 1967
	Item 7.2 – Mechanical cable glands	SANS 1213:2017 SANS 1213:2011 SANS 1213:2002
8. Compression-ignition engine systems and machines powered by such engine systems, for use in mines and plants with explosive gas atmospheres or explosive dust atmospheres of both	Item 8.1 – Part 1-1: Hazardous locations in underground mine - Basic explosion protected engines	SANS 868-1-1: 2018 SANS 868-1-1: 2005
	Item 8.2 - Part 1-2: Hazardous locations in underground mines - Explosion protected engine systems	SANS 868-1-2: 2018 SANS 868-1-2: 2005
	Item 8.3 – Part 1-3: Part 1-3: Hazardous locations in underground mines - Machines	SANS 868-1-3: 2013
	Item 8.4 - Part 3-1: Hazardous locations on surface - Basic explosion-protected engines	SANS 868-3-1: 2016 SANS 868-3-1: 2012
	Item 8.5 – Part 3-2: Hazardous locations on surface - Explosion protected engine systems	SANS 868-3-2: 2012
	Item 8.6 – Part 3-3: Hazardous locations on surface - Machines	SANS 868-3-3: 2017 SANS 868-3-3: 2012
	Item 8.7 – Part 4: Non-hazardous locations in underground coal mines	SANS 868-4: 2005
9. Battery operated machines	Item 9.1 – DC-powered (battery-operated) machines for use in hazardous locations in mines	SANS 1654: 2018 SANS 1654: 2014 SANS 1654: 2009
10. Plugs and Sockets	Item 10.1 – Electrical connectors in group I and group II hazardous locations Part 1: General requirements for group I hazardous areas	SANS 1489-1: 2016 SANS 1489-1: 2014

11. Luminaires

Item 10.2 – Electrical connectors in group I and group II hazardous locations Part 2: Restrained type plugs and sockets for group I hazardous areas	SANS 1489-2: 2013
Item 10.3 – Electrical connectors in group I and group II hazardous areas Part 3: Bolted type plugs and sockets for group I hazardous areas	SANS 1489-3: 2014 SANS 1489-3: 2012
Item 10.4 – Electrical connectors in group I and group II hazardous areas Part 4: Medium voltage couplers and adaptors for group I hazardous areas	SANS 1489-4: 2013
Item 10.5 – Plugs, socket-outlets, and couplers for industrial purposes	SANS 1239: 2004 SANS 1239: 2001
Item 10.6 – Plugs, socket-outlets, and couplers for industrial purposes Part 1: General Requirements	IEC 60309-1: 2021 SANS 60309-1: 2012 IEC 60309-1: 2012 SANS 60309-1: 2006 IEC 60309-1: 2005
Item 10.7 – Plugs, socket-outlets, and couplers for industrial purposes Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories	IEC 60309-2: 2021 SANS 60309-2: 2012 IEC 60309-2: 2012 SANS 60309-2: 2006 IEC 60309-2: 2005
Item 11.1 – Luminaires for interior lighting, street lighting and floodlighting - Performance requirements	SANS 475: 2013 SANS 475: 2012
Item 11.2 – Luminaires Part 1: General requirements and tests	SANS 60598-1: 2014 IEC 60598-1: 2014 SANS 60598-1: 2009 IEC 60598-1: 2008
Item 11.3 – Luminaires Part 2-1: Particular requirements — Fixed general-purpose luminaires	SANS 60598-2-1: 2020 IEC 60598-2-1: 2020 SANS 60598-2-1: 1979 IEC 60598-2-1: 1979
Item 11.4 - Luminaires Part 2-2: Particular requirements – Recessed luminaires	SANS 60985-2-2: 2013 IEC 60598-2-2: 2011 SANS 60598-2-2: 1997 IEC 60598-2-2: 1996
Item 11.5 – Luminaires Part 2-3: Particular requirements – Luminaires for road and street lighting	SANS 60598-2-3: 2013 IEC 60598-2-3: 2011 SANS 60598-2-3: 2003 IEC 60598-2-3: 2002
Items 11.6 - Luminaires Part 2-5: Particular requirements — Floodlights	SANS 60598-2-5: 2016 IEC 60598-2-5: 2015 SANS 60598-2-5: 1998 IEC 60598-2-5: 1998

12. Safety Helmets	12.1 – Industrial safety helmets	SANS 1397: 2003 EN 397: 1995
13. Electrical appliances	Item 13.1 – Audio, video, and similar electronic apparatus – Safety requirements	SANS 60065: 2015 IEC 60065: 2014
	Item 13.2 – Household and similar electrical appliance – Safety - Part 1: General Requirements	SANS 60335-1: 2018 IEC 60335-1: 2016
	Item 13.3 – Information Technology equipment – Safety Part 1: General Requirements	SANS 60950-1: 2014 IEC 60950-1: 2013
	Item 13.4 – Hand-held motor-operated electric tools – Safety Part 1: General Requirements	SANS 60745-1: 2010 IEC 60745-1: 2006

Original Date of Accreditation: 22 February 2010

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

Accreditation Manager