

Rea No: 1999/027771/07

**Explosion Prevention Services** 

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### **GOVERNMENT APPROVED TEST LABORATORY**

IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

## IA CERTIFICATE

Date Issued: 25 Apr 2019 \*Expiry date: 25 Apr 2029 Page 1 of 3

Issue: 0

Ex – Type Examination Certificate

Certificate Number: M-XPL/18.1314 X Equipment: Submersible Pump Model / Type: Varkie S370X **Amandia Pumps** Applicant: P.O Box 26468

**Eastrand** 1462

Manufacturer: **Amandia Pumps** 

Serial No: All serial numbers of equipment covered by a valid report or acceptable

product certification mark.

Supplied by **Amandla Pumps** Identified by Inspection Authority number M-XPL/18.1314 X

And as described in the Explolabs file number XPL/20116/18.1314 is hereby certified "Explosion Protected (Refer to clause 1, for Ex Rating)", having been examined and inspected in accordance with the relevant requirements of South African Standards.

SANS 60079-0: 2012 Ed 5

Explosive atmospheres Part 0: Equipment — General requirements IEC 60079-0: 2011 Ed 6

SANS 60079-1: 2015 Ed 5 IEC 60079-1: 2014 Ed 7

Explosive atmospheres Part 1: Equipment protection by flameproof

enclosures "d"

Risk of ignition provided:

Calcino Provence Services	Protection afforded	Equipment Protection Level (EPL) Group	Performance of protection	Conditions of operation	T class or Max Surface Temp (°C)
February Name of Second	High	Mb Group I	Suitable for normal operation and severe operating conditions	Equipment de-energized when explosive atmosphere present	T150 °C

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

SANS 10086 and IEC/SANS 61241-14 requirements as applicable;

Any conditions mentioned in the above report;

Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and

Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.

A revision certificate replaces all previous version of the certificate.

\* - Only covers equipment Imported between the "Issued" and "Expire" dates.

If and when your QAN (Quality Assurance Notification) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted the existing IA Certification will then be cancelled. It is thus the client's responsibility to always submit the updated and valid QAN certificate(s) to Explolabs (Pty) Ltd





The South African National Accreditation System (SANAS) is a member of the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). This Arrangement allows for the mutual recognition of technical test and calibration data by the member accreditation bodies worldwide. For more information on the Arrangement please





# ANNEX TO CERTIFICATE NO M-XPL/18.1314 X

**GENERAL** 

The marking of the Submersible Pump shall include the following:

Ex db I Mb

The pump was manufactured by Amandla pumps and has the following general length 822.6 mm. The pump comprises of a stator housing, DE shield (Oil box) and NDE shield, and was manufactured from Grade 240-270 Cast Iron. The pump had an internal volume of approximately 15.18%. The stator made provision of a junction box that is incorporated with a previously approved cable gland.

The shaft was manufactured from SS431 with a die cast rotor.

Flameproof joint

Table 1: The pump incorporated the following flameproof joints

Location of joint	Type of joint	Seals
Stator housing and DE shield	Spigot	Nitrile 'O' ring
Bearing Cover and Shaft	Cylindrical	Nitrile 'O' ring
Bearing Cover and DE shield	Cylindrical	N/A
Stator housing and NDE shield	Spigot	Nitrile 'O' ring
Junction box cover and junction box	Spigot	Nitrile 'O' ring

#### **Fasteners**

Table 2: The pump consists of the following fasteners

Location	Qty	Size & Length
NDE Shield and Stator Housing		M12x 30 mm Cap Screw SS304
Junction box cover and junction box	6	M12x 30 mm Cap Screw SS304
Stator housing and DE shield	8	M12 x 55 mm SS304 Stud-nut and washer
DE shield and bearing cover	4	M12 x 75 mm Cap screw SS304

## **Electrical Rating**

1450 rpm, 37 kW

#### **Rated Ambient temp range**

-20 °C ≤ Ta ≤ +40 °C

#### **INSTALLATION INSTRUCTIONS**

It is the manufacturer's responsibility to supply installation instructions with each unit offered for sale as required by IEC/SANS 60079-0 Clause 30.

# SPECIAL CONDITIONS FOR SAFE USE (denoted by "X" after certificate number)

Some flamepath dimensions are different than the relevant values given in Table 1 of SANS 60079-For repair work the Original Equipment Manufacturer must be consulted for information regarding the flamepath length

The pump shall be used in a submerged fluid (clean or dirty water at normal ambient temperature) and shall not expose to the atmosphere when running.

#### **SCHEDULE OF LIMITATIONS** (denoted by "U" after certificate number) None.

#### **CONDITIONS OF CERTIFICATION**

All production units must be covered by a QAN (Quality Assurance Notification), Product Mark Scheme or batch evaluation.

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# ANNEX TO CERTIFICATE NO M-XPL/18.1314 X

**MARKING** 

6.

The following (or similar) information have to be clearly and permanently marked on all units:

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: Amandla Pumps Supplier : Amandla Pumps Manufacturer : Submersible Pump Equipment Model/Type : Varkie S370X

Serial No.

Ex Rating : Ex db I Mb IA Certificate No : M-XPL/18.1314 X

"WARNING: DO NOT OPEN WHEN ENERGIZED"

"WARNING: DO NOT OPEN WHEN AN EXPLOSIVE GAS MAY BE PRESENT"

Tested by: **Technical Signatory:** 

**D** Maree **Technical Signatory Technical Signatory** 

EXPLOLABS EXPLOSION PREVENTION SERVICES

This report/certificate shall not be reproduced except in full without the written approval of the company Explolabs (Pty) Ltd shall not be liable for any losses or damages sustained on account of any failure or omission to properly perform our duties in terms of any contract undertaken by us. This disclaimer is immutable and automatically incorporated in any contract undertaken by us; notwithstanding anything to the contrary, save for the express written waiver of our managing director. By marking the equipment in accordance with the documentation/standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and tests have been successfully completed and that the product complies with the documentation and standard(s). The contents of electronic reports/certificates cannot be guaranteed. Original certification documents will be kept on file at Explolabs (Pty) Ltd

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