



Government Approved Test Laboratory
(Previously AIA)

Reg No: 1999/027771/07

ACCREDITED AND APPROVED TEST LABORATORY
IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATU

SUPPLEMENTARY CERTIFICATE

AMANDLA PUMPS (PTY) LTD
PO BOX 75229
GARDENVIEW
2047

Issued: **25 Jul 2018**
*Expire: **26 Jul 2027**
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Supplement to Certificate number: M-XPL/16.0844 X

Equipment : Squirrel Cage Induction Motor
Manufacturer : Amandla Pumps (Pty) Ltd
Type : VARKIE S55X, VARKIE S110X and VARKIE S220X
Serial No : All serial numbers of equipment covered by a valid report, or accepted product certification mark.

Supplied by
Amandla Pumps (Pty) Ltd
Identified by Inspection Authority number
M-XPL/16.0844 X

and as described in the Explolabs test report number XPL/19698/18.0694.

This supplement certificate extends the existing product design as described in certificate M-XPL/16.0844 X to include also the variations as described in this certificate. This supplement certificate shall be held with the original certificate.

Risk of ignition provided:

Protection afforded	Equipment Protection Level (EPL)	Performance of protection	Conditions of operation	T class or Max Surface Temp (°C)
	Group			
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:

- i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
- ii) Any conditions mentioned in the above report;
- iii) Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
- iv) Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
- v) A revision certificate replaces all previous version of the certificate.
- vi) * - Only covers equipment Imported between the "Issued" and "Expire" dates.
- vii) 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



T0104

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 consult www.ilac.org

DOCUMENT No: XPL0105 RELEASE DATE: 12/08/2014 REV : 4

VARIATION 2**VARKIE S220X**

Speed : 1450rpm
 Power : 22kW
 Volts : 380V

The type VARKIE S220 squirrel cage induction motors are manufactured from Grade 240-270 Iron (Cast iron) and comprise of a stator casing, DE endshield, NDE endshield, and connection box. The motor had a general length of $\pm 520.8\text{mm}$ and an internal free volume of approximately 5965m^l.

The motor has a connection box which is fabricated to the motor casing. The connection box made provision for one cable gland which formed part of the connection box housing. The motor stator casing and connection box was separated by means of epoxy resin. The connection box had an internal free volume of approximately 1350m^l.

The motor incorporated the following flameproof joints:

Location of joint	Type of joint	Seals
Motor casing & Oil Box (DE endshield) Drawing # VARKIE S220X Flameproof assy - Detail D	Spigot	Nitrile O-ring type seal fitted into a groove on the oil box (DE End-shield).
Oil box (DE endshield) & Inner Bearing cover Drawing # VARKIE S220X Flameproof assy - Detail E	Flange joint	N/A
DE Inner bearing cover & DE shaft Drawing # VARKIE S220X Flameproof assy - Detail E	Cylindrical	N/A
Motor Casing & NDE Endshield Drawing # VARKIE S220X Flameproof assy - Detail C	Spigot	Nitrile O-ring type seal fitted into a groove on the flameproof cover.
Connection Box & Motor Casing Drawing # VARKIE S220X Flameproof assy - Detail F	Flange	FKM O-ring type seal fitted into a groove on the cover.
Connection Box & Packing gland assembly Drawing # VARKIE S220X Flameproof assy - Detail G	Cable Gland	Polycast 1001/1022/0457 type packing gland seal fitted.
Connection Box & Lead through Seal Drawing # VARKIE S220X Flameproof assy - Detail F	Cemented	N/A

Fasteners

The following fasteners were used in the assembly of the motor:

Location	Qty	Size & Length	Pitch	Class
Motor Casing & oil box (DE Endshield)	8	HTS Capscrews M12 x 30	1.5	SS304
Oil box (DE Endshield) & Inner Bearing Cover	4	HTS Capscrews M8 x 25	1.25	SS304
Motor Casing & NDE Endshield	8	HTS Capscrews M12 x 30	1.5	SS304
Connection Box & Motor Casing	6	HTS Capscrews M12 x 25	1.25	SS304
Connection Box & Cable Gland	6	HTS Capscrews M8 x 30	1.25	SS304
Gland Clamp	2	HTS Capscrews M8 x 25	1.25	SS304

2. SAFETY PARAMETERS

None.

3. SPECIAL CONDITIONS OF USE (denoted by "X" after certificate number)

No additional special conditions of safe use were included as part of this supplement report. All special conditions of safe use as stated in original certificate M-XPL/16.0844 X remains valid and unchanged.

4. MARKING

The following markings shall be added to the unit in a legible and durable manner:
Amandla Pumps (Pty) Ltd
Squirrel Cage Induction Motor model VARKIE S55X, VARKIE S110X and VARKIE S220X
Manufacturer: Amandla Pumps (Pty) Ltd
Classification: Ex db I Mb
IA No.: M-XPL/16.0844 X
Serial no.: As set out in the batch reports.

Responsible Testing Officer:

Reviewed by:



K Malibe
Testing Officer

D Maree
Senior Testing Officer

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