



(Pty) Ltd
Reg No: 1999/027771/07

APPROVED INSPECTION AUTHORITY

IN TERMS OF:
R21.17.2 OF THE MINERALS ACT (INCORPORATED IN THE MINE HEALTH AND SAFETY ACT, NO 29 OF 1996); AND
EMR 8(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, NO 85 OF 1993

CERTIFICATE

**ZEST ELECTRICAL MOTORS
PRIVATE BAG X10011
SANDTON
2146**

**Issued: 27 June 2007
*Expires: 4 June 2017
Page 1 of 3**

Equipment: Motor and Auxillary terminal Boxes
Model: 0.15kW to 330kW; Aluminium Frame Sizes: L63 to L132
Serial No: XPL/091006/DM01 and all serial numbers of equipment covered by a valid report or an accepted product certification mark, and specified in a diagram certified by an AIA approved Ex test laboratory:

Supplied by

Zest Electrical Motors

Identified by Inspection Authority number

S-XPL/07031

And as described in the ExploLabs test report number XPL/8668/07072 is hereby certified "Explosion Protected Ex tD A21 IP65 T180°C", having been examined and inspected in accordance with the relevant requirements of South African Standards.

SANS 61241-1:2005 "Electrical apparatus for use in the presence of combustible dust, Part 1: Protection by enclosures "tD""

SANS 61241-0:2005 "Electrical apparatus for use in the presence of combustible dust, Part 0: General requirements"

Locations	Zone 21	Dust Surface
Environment		Combustible and Explosive Dust
Frequency		Occurrence of explosive dust clouds infrequently or for short periods or of dust layers in a hazardous location on a surface plant.
Limiting Temperature		180°C

This certification indicates compliance with R21.17.2 of the Mine Health and Safety Act and/or EMR 8(1) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

- i) SANS 10086 requirements and SANS 61241-10 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) *-New equipment may only be presented for sale between the "Issued" and "Expire" dates.

**JJ Joubert
SENIOR TESTING OFFICER**

**E Zuppa
SENIOR TESTING OFFICER**

XPL0105

1. GENERAL

The Motor assembly (see below) can be described as follows:

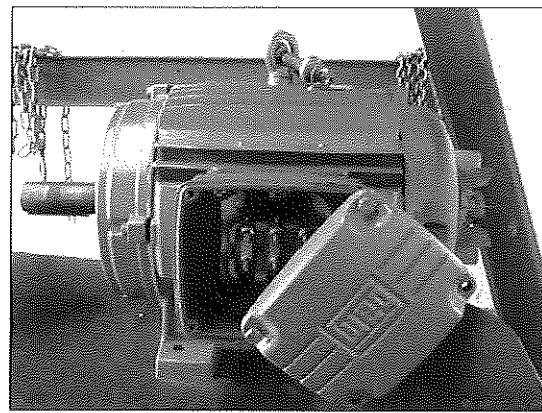
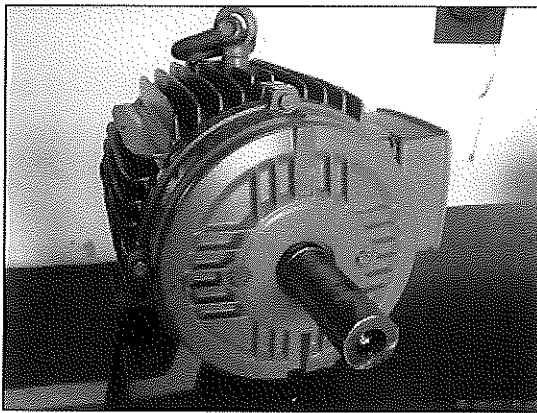
The WEG motor was a 3 phase, 525 V, type BT96211, foot mounted motor. It had a cast steel frame or a aluminium frame with heavy ventilation ribs, a lifting facility (eye-bolt), and an externally mounted plastic fan with a steel cover.

Rubber gaskets were fitted between the terminal box cover and the body of the box, and between the body of the box and the motor casing. The Auxiliary terminal box had the same seal construction and was fastened to the existing terminal box by means of Conduit.

A steel barrier was fitted between the stator casing and terminal box and contained insulated connecting cables with terminals on both sides. The motor leads were ended in soldered lugs and fixed to the internal terminals with nuts. Slotted clamp terminals with one clamping screw each, were provided for making external connections. An internal earth clamp was provided.

The cable was not supplied, but shall meet the following requirements: Depending on such loads as will occur in practice, the cable shall be clamped as close as possible to the cable gland in such a way that any mechanical stress on the cable is not transmitted to the cable terminals and that the cable is not damaged. If the cable is prone to mechanical damage, the cable shall additionally be protected. Ferrell's shall be crimped or soldered onto the ends of the cable conductors to make the terminal connections. The cable gland shall be an approved DIP compression gland.

The shaft of the motor had an oil seal fitted to it to prevent the ingress of dust and moisture. The unit tested is considered a typical example of the Ex tD motor series.



3 SPECIAL CONDITIONS FOR SAFE (X)

None.



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4 MARKING


The following (or similar) information had to be clearly and permanently marked on all units covered by this report:

Zest Electrical Motors
Motor and Auxillary terminal Boxes
Model : 0.18kW to 330kW
Volts : 380V to 550V
Amps : up to 330kW
Aluminium frame sizes : L63 to L132
Serial no. : ----
Ex tD A21 IP65 T180°C
IA No. : S-XPL/07031

5 ROUTINE TESTS

It is the manufacturer's responsibility to do the following routine tests:

- Inspection on all terminals
- Inspection on the silicon seal for cracks



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