



Certificate Number:
Issue:
Expire:
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MASC M/19-0148X
28 January 2019
28 January 2029
1 of 3

IA – CERTIFICATE

IN TERMS OF REGULATION 21.17.2 OF THE MINERALS ACT (INCORPORATION THE MINE HEALTH AND SAFETY ACT) AND REGULATION 9 (1) OF THE ELECTRICAL MACHINERY REGULATIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT

Ex – Type Examination

Certificate number:

MASC M/19-0148X

Equipment:

HAWKEYE DISPLAY PANEL

Serial No:

(See “Conditions of Certification”)

Applicant:

Nautitech Mining System Pty Ltd

Address:

Unit 3/9 Packard Avenue,
Castle Hill,
NSW 2154
Australia

Manufacturer:

ExIS Engineering (Pty) Ltd

Address:

8 Graphite Close,
Driehoek,
Germiston Ext. 28
South Africa

DESCRIPTION:

The HAWKEYE DISPLAY PANEL was manufactured by Exis Engineering (Pty) Ltd. The enclosure consisted out of welded steel, with a steel lid. The lid housed a polycarbonate window with approximate viewing dimensions of 205mm x 125mm. The unit makes use of a flange joint between the enclosure and the lid. The lid was fastened to the enclosure by means of eight M8 x 1.25p x 25mm socket head cap screws. The enclosure had approximate dimensions of 290mm x 210mm x 112.2mm.

The unit made provision for six M20 x 1.5p threaded entries.

Note: The exact entry combination by the certification drawings. All threaded entries has a pitch of 1.5 and the holes are tapped 6H.

Population of the HAWKEYE DISPLAY PANEL:

HAWKEYE 7 DIGETAL DISPLAY HUB Drawing Number (ME5700-2-16-016) pages 1 to 3.

MARKING:

Applicant: Nautitech Mining System Pty Ltd
Manufacturer: ExIS Engineering (Pty) Ltd
Type: HAWKEYE DISPLAY PANEL
Serial No: (See “Conditions of Certification”)
Ex Rating: Ex db I Mb
I.A. No: MASC M/19-0148X

WARNING:

**“ISOLATE ELSEWHERE BEFORE OPENING” and
“DO NOT OPEN WHEN ENERGIZED OR AN EXPLOSIVE ATMOSPHERE IS PRESENT”**

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COMPLIANCE:

The equipment as described above and in MASC report 19-0148 is hereby certified Explosion Protected Ex db I Mb and is suitable for use in hazardous locations as stated below and as tested, assessed and inspected in accordance with the relevant requirements of SANS/IEC Standards:

The evaluation was conducted according to the requirements of:

- i) **SANS (IEC) 60079-0 : 2018 “General Requirements”**
- ii) **SANS (IEC) 60079-1 : 2015 “Flameproof enclosures ‘d’”**

Location	Zone 1 & 2	Mining
Hazard Frequency	---	Intermittent as could occur under normal operating conditions in hazardous area
Environment		Methane & Coal dust
Limiting Temperature	150°C	
Ambient Temperature	-20°C to +40°C	

The use of apparatus in hazardous locations is subject to the following provisions as applicable, which shall be adhered to:

- i. SANS 10086 requirements;
- ii. Any conditions mentioned in the above report;
- iii. Codes of Practice enforced in terms of Regulations 21.17.2 of Minerals Act, by Chief Inspector of Mines;
- iv. Any restrictions and conditions enforced by Chief Inspectors of Mines, Principal Inspector (Group I equipment) of Chief Inspector of Factories (Group II equipment);
- v. Any relevant requirements of the MHS Act or the OHS Act.

CONDITIONS OF CERTIFICATION: SPECIAL CONDITIONS OF USE “X”:

- Only suitably certified glands may be used. All unused entries must be sealed using suitably certified blanking elements.
- The special fasteners used may only be grade 12.9 or higher.
- The rating(s) of the unit(s) may not be exceeded
- Supply to the unit must be done in an Ex manner.

Flange:

Type of Flameproof Joint	Minimum Length		Maximum Gap
Cover flange joint	L= 30 mm	l= 14 mm	0.5 mm
Window flange joint	L=15 mm	-	0.5mm

/ . CONDITIONS...

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CONDITIONS OF MANUFACTURE:

- A routine overpressure test of 1325kPa must be conducted on each compartment of all production enclosures, according to the requirements of SANS 60079-1.
- The cable termination shall be done in a certified Ex manner.
- A copy of the instruction / parts manual and the type certificate must be provided with each enclosure.

According to the relevant requirements of the MHS Act and the OHS Act, production units of explosion protected equipment are required to comply with third party quality assurance (an approved mark scheme or batch testing by an accredited test laboratory.)

Approved on behalf of MASC



F du Toit
TECHNICAL SPECIALIST



J Peens
TECHNICAL OFFICER

Mining And Surface Certification

This document is issued based on Mining And Surface Certification's Standard Contract terms and conditions available on request.

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MASC takes no responsibility for any non-conformances, exclusions or any results / assessments not in compliance with the standards. 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 routine tests have been successfully completed and the product complies with the documentation and standard(s).

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