



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

UNIT VERIFICATION

Certificate No.:	IECEX KLCS 23.0006X	Page 1 of 3	Certificate history:
Status:	Current	Issue No: 0	
Date of Issue:	2023-07-25		
Applicant:	PetroHab, LLC 2808, Virginia Street, Houston, Texas 77098 United States of America		
Equipment:	PetroHab A3 Shelter System		
Serial number(s) or Unique Identification:	A3-YY-001.		
Type of Protection:	Flameproof enclosures "d", Equipment protection by pressurized room "pb"		
Marking:	Ex db pb IIB T4 Gb (-17 °C ≤ Ta ≤ +40 °C)		

Approved for issue on behalf of the IECEx
Certification Body:

Ravi Paranjpe

Position:

Director (Operations)

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

Karandikar Laboratories Certification Services
Gat No. 142, Boisar Chillar Rd.,
Opp. Union Park, At Betegaon,
Boisar (E), Tal- Palghar
Maharashtra 401501
India





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Certificate No.: **IECEX KLCS 23.0006X**

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Date of issue: 2023-07-25

Issue No: 0

Manufacturer: **PetroHab, LLC**
2808, Virginia Street,
Houston,
Texas 77098
United States of America

Manufacturing locations:

This Unit verification certificate is issued as verification that the Apparatus identified on page 1, was assessed and tested and found to comply with the IEC Standard list below. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2011](#) Explosive atmospheres - Part 0: General requirements
Edition:6.0

[IEC 60079-1:2007](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:6

[IEC 60079-13:2017](#) Explosive atmospheres - Part 13: Equipment protection by pressurized room "p" and artificially ventilated room "v"
Edition:2.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[IN/KLCS/ExTR23.0014/00](#)

Quality Assessment Report:

As this is a Unit Verification Certificate, no QAR is applicable as this certificate is specific to the items listed by serial number or other unique identification.



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Date of issue: 2023-07-25

Issue No: 0

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

PetroHab A3 Shelter System, Serial number A3-YY-001 is designed to provide a safe working environment for hot work (welding).

The PetroHab A3 Shelter system consists of two main parts which are connected by a 300 mm diameter flexible duct-

1. Module Control Unit (MCU)
2. Habitat

The MCU includes the shut-down system, gas detectors and a flow meter which is responsible for control of the purging and pressurization of the habitat.

The Habitat is constructed from a number of panels made from fabric material. Access to the habitat is via a self-latching metal door.

The PetroHab A3 Shelter System requires an air supply from a non-hazardous area according to the minimum pressurization data of flow and pressure listed. A purge of 10 times the internal air volume must be completed before the internal non-hazardous area equipment used/ energised.

The PetroHab A3 Shelter System is fitted with a gas detectors located inside the habitat and at the inlet of air supply. The air pressure and air flow inside the habitat is also monitored. Detection of loss of pressure or loss of flow will activate audible and visual alarms and shut the habitat down by isolating electrical supply to the habitat.

For details of pressurization data, list of pre-certified devices and specific condition of use refer ANNEX to IECEx KLCS 23.0006X

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer ANNEX to IECEx KLCS 23.0006X

Annex:

[ANNEX to IECEx KLCS 23.0006X.pdf](#)



ANNEX to IECEx KLCS 23.0006X, Issue No. 00

Date: 25/07/2023

Data of Pressurization:

Volume of the enclosure	75 m ³ (75000 litre)
Minimum purging flow rate	65 m ³ /minute (65000 Litre per minute)
Minimum purge duration	22 Minutes
Minimum overpressure	30 Pa
Maximum overpressure	45 Pa
Type of protective gas	Clean Dry Compressed Air (From Non-Explosive area)
Maximum temperature of protective gas	+40 °C maximum

List of pre-certified devices:

SR. NO.	MANUFACTURER	MODEL NO.	ITEM SHORT DESCRIPTION	TEMP. RANGE	IP RATING	IECEx CERTIFICATE NO.	MARKING	STANDARD
1	CORTEM S.p.A.	EJB-4B (75W)	Enclosure(without signaling lamp and LED)	-60°C to +55°C	IP66	IECEx CES 16.0012X, Issue No.00	Ex db IIB+H2 T5 Gb	IEC 60079-0:2011 IEC 60079-1:2014-06
2	AMETEK Magnetrol	TD2-8D01-0G0/TMC-A110-005	TD2 Thermal Dispersion Switch and Thermal Probe	-40°C to +70°C	IP66	IECEx FMG 19.0047X, Issue 02	Ex db II T5...T4 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06
3	HANWEI Electronics Group Corporation	GT-8002Q-WD2200	H2S detector	-40°C to +60°C	IP66/67	IECEx TUR 20.0081X, Issue 00	Ex db IIC T6 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06
4	HANWEI Electronics Group Corporation	GTQ-WD2200	LEL Detector	-40°C to +60°C	IP66/67	IECEx TUR 20.0081X, Issue 00	Ex db IIC T6 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06
5	CZ EXPLOSION-PROOF ELECTRIC APPLIANCES Co., LTD	CZ1242/011L-T2/X2-A10	Hot work Control station (Push button ON/OFF Box)	-40°C to +40°C	IP66	IECEx CML17.0044X, Issue 02	Ex db eb IIC T5 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06 IEC 60079-7:2017
6	HANWEI Electronics Group Corporation	GTQ-WD2200	Co2 Detector	-40°C to +60°C	IP66/67	IECEx TUR 20.0081X, Issue 00	Ex db IIC T6 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06
7	HANWEI Electronics Group Corporation	GTQ-WD2200	O2 detector	-40°C to +60°C	IP66/67	IECEx TUR 20.0081X, Issue 00	Ex db IIC T6 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06
8	EURAMCO Safety Inc	UB20XX	Blower	-20°C to +40°C	IP55	IECEx UL 13.0062X, Issue 05	Ex db eb IIB T6 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06 IEC 60079-7:2017
9	Qlight Co., Ltd	QNES-W8	Flameproof Fire Warning Light and Siren Buzzer	-40°C to +60°C	IP66	IECEx KTL 18.0029X, Issue 02	Ex db IIC T5 Gb	IEC 60079-0:2011 IEC 60079-1:2014-06
10	CORTEM S.p.A.	GUB-01 (24W)	Enclosure	-40°C to +40°C	IP66	IECEx CES 16.0013X, Issue No.00	Ex db IIC T5 Gb	IEC 60079-0:2011 IEC 60079-1:2014-06
11	CORTEM S.p.A.	SX-26.1N	Enclosure	-20°C to +40°C	IP66/67	IECEx CES 14.0018X, Issue No.00	Ex db IIC T6 Gb	IEC 60079-0:2011 IEC 60079-1:2007
12	Troxle Ltd	TX3706.3	TX3706 Falcon 25 Series Connector	-50°C to +60°C	---	IECEx CML 15.0070X, Issue No.05	Ex db eb IIC T4 Gb or db IIC T4 Gb Ex	IEC 60079-0:2011 IEC 60079-1:2014-06 IEC 60079-7:2015
13	CORTEM S.p.A.	NAV1NB, NAV3NB	Cable Gland	-60°C to +130°C	---	IECEx IMQ 17.0010X, Issue No.01	Ex db IIC Gb	IEC 60079-0:2017 IEC 60079-1:2014-06
14	CORTEM S.p.A.	NPS 2N 0722	Nipples (Stainless Steel)	-50°C to +110°C	IP 66/67	IECEx CES 10.0003U, Issue No.02	Ex db IIC Gb	IEC 60079-0:2011 IEC 60079-1:2014-06
15	CZ EXPLOSION-PROOF ELECTRIC APPLIANCES Co., LTD.	CZ0251 4304 0001	Full Plastic Explosion-proof Plugs and Sockets	-40°C to +55°C	IP66/IP65	IECEx CQM 10.0013X, Issue No.01	Ex db eb IIC T5 Gb	IEC 60079-0:2011 IEC 60079-1:2014-06 IEC 60079-7:2015
16	Bartec	07-2511-	Limit Switch	-20°C to +60°C	---	IECEx EPS 14.0092X, Issue 01	Ex db IIC T6...T5 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06
17	Dwyer Instruments LLC	1950G-00-B-24	DP switch	-17°C to +60°C	---	IECEx UL 19.0045X, Issue No.02	Ex db IIB + H2 T6 Gb	IEC 60079-0:2017 IEC 60079-1:2014-06



ANNEX to IECEx KLCS 23.0006X, Issue No. 00

Date: 25/07/2023

Specific Conditions of Use:

1. In the case of system failure, all hot parts shall immediately, and before opening of the habitat door, be quenched. Water or other appropriate means based on application to quickly cool hot surfaces is to be readily available to prevent an ignition in the event the pressurization or ventilation system fails.
2. Power for the MCU and the WCU must be provided from independent sources.
3. For pre-certified devices, Flameproof Fire Warning Light and Siren Buzzer IECEx KTL 18.0029X, Issue 02
 - For information on the dimensions of the flameproof joints, the manufacturer shall be contacted.
 - Potential electrostatic charging hazard - See instructions.
 - Use Fasteners with yield stress ≥ 899 MPa, where the 899 MPa is determined by the applicable testing.
4. For Pre-certified devices, cable glands, IECEx IMQ 17.0010X, Issue no.01
 - The coupling of the cable glands to the enclosure in relation to threads type and torque values of clamping shall be made as indicated in manufacturer's instructions, in order to respect the type of protection of the electrical apparatus on which cable glands are mounted.
 - The cable gland installation shall be done according to safety manufacturer instructions to maintain degree of protection.
 - Un-armour cable should be used.
5. For pre-certified devices, Full Plastic Explosion-proof Plugs and Sockets IECEx CQM 10.0013X, Issue no.01
 - If needed, repair of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer.
6. For pre-certified devices, Gas detector IECEx TUR 20.0081X, Issue 00
 - This specific condition of use will continue to apply for Equipment. Please refer "Specific Condition of Use" in Cover Sheet of this ExTR.
7. For pre-certified devices, TD2 Thermal Dispersion Switch and Thermal Probe IECEx FMG 19.0047X, Issue No.02
 - The enclosure contains aluminum and is considered to present a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.
 - To maintain the T5 to T4 temperature code care shall be taken to ensure the "Enclosure Temperature" does not exceed 70°C
 - The risk of electrostatic discharge shall be minimized at installation, following the direction given in the instructions.
 - Contact the original manufacturer for information in the dimensions of flameproof joints.
 - Contact the original manufacturer for information in the dimensions of flameproof joints.
8. For pre-certified devices Explosion-proof Electric Appliances Box IECEx CML17.0044X, Issue 02
 - Any replacement fasteners shall meet or exceed the yield stress of the original fasteners as defined by the components used.
 - The equipment incorporates components that have flame path dimensions that differ from the requirements of EN/IEC 60079-1 Table 2. Therefore, the flame paths shall not be repaired or modified by anyone other than the manufacture.
9. For pre-certified devices DP switch IECEx UL 19.0045X, Issue No.02
 - The cover bolts have a minimum property class of 10.9.
 - Repairs to the flamepaths are only to be performed by Dwyer Instruments LLC.

END OF DOCUMENT