1) # EU-TYPE EXAMINATION CERTIFICATE

2) Equipment or protective system intended for use in potentially explosive atmospheres — Directive 2014/34/EU

3) EU-Type Examination Certificate Number : **SCA22ATEX140X**

4) Equipment or Protective System : **EX ROVR ASCENT**, TYPES: **ER20GV**

5) Manufacturer : **Mitsubishi Heavy Industries, Ltd.**

6) Manufacturer Address : 1-1, Wadasaki-cho, 1-chome, Hyogo-ku, Kobe, 652-8585 Hyogo/JAPAN

7) This equipment or protective system and/or any acceptable variation there to is specified in the schedule to this certificate and the documents therein referred to.

8) SCA Belgelendirme ve Ozel Egt. Hizm. Ltd. Sti. Notified Body number 2336 in accordance with the Council Directive 2014/34/EU, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective system intended for use in potentially explosive atmospheres given in 2014/34/EU.

* The examination and test results are recorded in the confidential report B/2022-01-016/Rp.02

9) Essential Health and Safety Requirements is made about reference standard.

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-2:2014, EN 60079-11:2012

10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions of safe use specified in the schedule to this certificate.

11) This EU-Type examination certificate relates only to the design and construction of the specified equipment or protective equipment in the scope of 2014/34/EU. Future requirements of the Directive applies to the production process and the provision of equipment or protective system. These are not discussed in this certificate.

12) Marking of the equipment or protective system must include the following :

II 2G Ex db ib pxb IIB+H_2 T3 Gb

Digitally Signed

The competent person
SCA Technical Manager
İsmail OĞLAKCIOĞLU

Date of Approval : 11.04.2022

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13) **SCHEDULE**

14) **EU-Type Examination Certificate** : **SCA22ATEX140X**

15) **Description of Equipment and/or Protective System:**

EX ROVR ASCENT is an explosion-proof mobility protected by pressurized enclosure developed for the purpose of automatic patrol and inspection of oil and gas chemical plants. It has a cable-less structure with batteries, and can run remotely using LTE or Wi-Fi, or automatically using a laser range finder. It is equipped with individually certified cameras, gas detectors, microphones, and other sensors.

Technical Parameters

Full load current : 15A
Rated Voltage : 29.6 VDC
Minimum overpressure: 3 kPa
Degree of protection : IP 40
Protective gas : Dry air
Min. purge duration : 12 min
Air supply pressure : 0.4 MPa to 0.7 MPa
Ambient temperature : -20°C to 40°C

Ex Equipment List

Equipment	Manufacturer	Ex Marking	Certificate No
Complex gas detection unit, gas detector	New Cosmos Electric Co. Ltd.	Ex II 2G Ex ib IIC T3 Gb	CML20ATEX2314X
Complex gas detection unit, insulation barrier	New Cosmos Electric Co. Ltd.	Ex II (2)G [Ex ib Gb] IIC	CML20ATEX2314X
Ex LED lighting & Ex camera	Mitsubishi Heavy Industries, Ltd.	Ex II 2G Ex db IIB+H_2 T4 Gb	TPS21ATEX0352100003X
Microphone and speaker unit	New Cosmos Electric Co. Ltd.	Ex II 2G Ex db IIC T5 Gb	CML20ATEX1262X
Emergency stop slam button	BARTEC	Ex II 2G Ex eb IIC Gb	CML13ATEX3010U
Mushroom push button	BARTEC	Ex II 2G Ex eb IIC Gb	CML13ATEX3010U
Key-operated switch	BARTEC	Ex II 2G Ex eb IIC Gb	CML13ATEX3010U

16) **Test and Assessment Report** B/2022-01-016/Rp.02

Digitally Signed

The competent person
SCA Technical Manager
İsmail OĞLAKCIOĞLU

Date of Approval : 11.04.2022

CONTINUATION OF SCHEDULE TO EU TYPE EXAMINATION CERTIFICATE SCA22ATEX140X

17) **Special Conditions for Safe Use (X):**

The flameproof joints of battery assembly are not intended to be repaired.

The battery assembly can be installed if there is minimum 2.5/2.0mm clearance between long/short side flange opening and obstacles outside.

Notes for manufacturing and operation

-Conduct a routine overpressure test for the welded construction of battery assembly in accordance with clause 16.3 of EN 60079-1:2014. The pressure should not be less than 2373.15 kPa.
-Verify performance and safety related devices which detects minimum overpressure in accordance with clause 17.1 of EN 60079-2:2014.
-Conduct a leakage test under the specified maximum normal overpressure conditions in accordance with clause 17.2 of EN 60079-2:2014

18) **Essential Health and safety Requirements :**

Met by compliance with the standards listed in Section 9 of this certificate.

19) **Drawing and Documents :**

Technical file T049S-202204-01/Rev.00 dated 25.03.2022 includes drawings, safety, maintenance and mounting instructions.

Drawing No:	Title	Rev.	Page	Date
L5-59EU018	EX ROVR 2nd generation "ASCENT" Purging process Truth Table and Functional Sequence Diagram	1	5	17.03.2022
L5-59EU064	EX ROVR 2nd generation "ASCENT" Drawings of EX ROVR ASCENT ER20GV	1	37	14.03.2022
L5-59EU067	EX ROVR 2nd generation "ASCENT" Explanatory Drawing of the Pressurized Enclosure and Purging Air Route	1	4	03.12.2021
L5-59EU077	EX ROVR 2nd generation "ASCENT" Material List of EX ROVR ASCENT	0	42	06.09.2021
L5-59EU079	EX ROVR 2nd generation "ASCENT" Technical Document of Battery of EX ROVR ASCENT	2	1	15.11.2021
L5-59EU119	EX ROVR 2nd generation "ASCENT" Vehicle Battery Assembly Drawing	4	1	14.03.2022
L5-59EU807	EX ROVR 2nd generation "ASCENT" EX ROVR System Diagram	2	3	01.12.2021
L9-85XY411	EX ROVR 2nd generation "ASCENT" General EX ROVR ASCENT Nameplate	0	2	16.03.2022
L9-85XY414	EX ROVR 2nd generation "ASCENT" Station Battery for EX ROVR ASCENT	0	1	16.03.2022
L9-85XY418	EX ROVR 2nd generation "ASCENT" Charging Station Piping System Diagram	3	4	11.03.2022

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The competent person
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Date of Approval : 11.04.2022