IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx SIR 07.0062U issue No.:1	Certificate history: Issue No. 1 (2010-3-4) Issue No. 0 (2008-1-25)
Status:	**Current**	
Date of Issue:	**2010-03-04**	Page 1 of 4

Applicant: **Enersys S.A.R.L.**
ZI Est
Rue Alexander Fleming
62033 Arras
France

Electrical Apparatus: **Type D Lead Acid Motive Power Cells**
Optional accessory:

Type of Protection: **Increased safety and dust**

Marking: **Ex e I**
Ex e II
Ex tD A21 T80°C IP65.

Approved for issue on behalf of the IECEx Certification Body: D R Stubbings BA MIET

Position: Certification Manager

Signature:
(for printed version)

Date: 2010-03-04

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.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira CERTIFICATION

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Date of Issue: **2010-03-04** Issue No.: **1**

Manufacturer: **Enersys S.A.R.L.**
ZI Est
Rue Alexander Fleming
62033 Arras
France

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus 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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-7 : 2001 Edition: 3	Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety 'e'
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*This Certificate **does not** indicate compliance with electrical 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:

GB/SIR/ExTR07.0110/00
GB/SIR/ExTR10.0026/00

Quality Assessment Report:
GB/SIR/QAR08.0003/00

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Type D Lead Acid Motive Power Cells
The Type D range of lead acid traction cells are designated by the manufacturer as IEC 254-2 Serie L cells. Each cell is 198 mm wide and has 2 to 10 positive plates terminated on two or four terminal posts. Connection to the terminal posts may be by the use one of the following methods:

1 Sealed post terminals, welded, with insulating covers.
2 Induction welded terminals with encapsulated caps.
3 Female threaded inserts with insulated bolt heads.
4 Female threaded inserts incorporating insulated caps.
5 Male threaded inserts with insulated anti-vibration locknuts.
6 An alternative solid link cell connector for those batteries where no movement of the cell is possible after installation.
7 An alternative cell connector where the end of the connecting cable is welded to a copper strip to form a termination, which is then fastened to the cell terminal post by a threaded fastener.

See Annexe for additional design options, cell type designation and correlation of cell types and conditions of manufacture and installation.

CONDITIONS OF CERTIFICATION: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 – this Issue introduced the following changes:	
1	To recognise the introduction of the type PzM range of cells, these cells utilise an alternative terminal post.
2	To allow the introduction of an alternative polypropylene copolymer housing material.
3	The recognition of minor drawing modifications; these amendments are administrative or involve changes to the design that do not affect the aspects of the product that are relevant to explosion safety.
4	To recognise a rise in the maximum discharge current from 270 A to 310 A.
5	Drawings SIRAATEX1, SIRAATEX4 P25127 and P25128 are amended to remove reference to the minimum contact area.
6	Drawings SIRAATEX1, SIRAATEX4 P25127, P25128, P24807 and P24808 have been modified to include a wider range of cable cross sections.
7	To allow the PzW cells to be replaced by PzM cells.

Annexe: IECEx SIR 07.0062U_Iss1_Annexe.pdf

Vent plugs are fitted to the top of the cell casing and may be a flip-top type or a type having an indicator/float arrangement. The cell is topped up in a non-hazardous area. An air mixing tube is also provided for use during charging of the cell, which is also an operation carried out in a non-hazardous area.

Typical European Low Maintenance designation: S6PZW55WF
S = (S)ingle or (D)ouble posted cells
6= Number of positive plates
PZW55 = Type

Typical European cell type designation: S6PZS60
S = (S)ingle or (D)ouble posted cells
6= Number of positive plates
PZS60 = Type

Typical Hawker Traction cell type designation: SCUH5
S = (S)ingle or (D)ouble posted cells
CUH = Type
5 = Number of positive plates

Correlation of cell types		
European low maintenance	**European**	**Hawker Traction**
PZM60	PZS60	CUH
PZM80	PZS80	CVH
PZM90	PZS90	CWH
PZM105	PZS105	CXH
PZM115	PZS115	CYQ
PZM125	PZS125	CYX
PZM140	PZS140	CZH
PZM155	PZS155	CZH

Conditions of manufacture

1 The manufacturer shall include the full cell marking details in the instruction leaflet.

The user shall be advised of the following special points for installation:

1. These components comply with IEC 60079-7:2006 clauses 5.7.2.3 (acceptable electrochemical systems), 5.7.2.2 (classification), 5.7.1.3 (cells), 5.7.1.4 (connections) and 6.6.3 (shock test). When they are assembled into a battery, the remaining clauses of IEC 60079-7:2006 need to be addressed with particular reference to clauses 5.7.2.1 (general requirements), 5.7.2.4 (charging in hazardous areas), 5.7.2.5 (discharge of cells), 5.7.2.6 (incorporation of other protection concepts), 5.7.2.7 (disconnection and transportation), 5.7.1.2 (battery containers), 6.6 (secondary batteries) and 6.6.4 (ventilation).

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