



News Release

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NexSys® ATEX batteries bring advantages of Thin Plate Pure Lead (TPPL) technology to materials handling vehicles operating in hazardous areas

ZUG, Switzerland, 14 May 2020 – NexSys® ATEX batteries, available from EnerSys®, allow materials handling vehicles to work safely in hazardous areas where there is an explosion risk. They conform to ATEX standards, which are compulsory and a legal requirement in Europe and NexSys® batteries are also available world-wide certified in compliance with IECx standards. The new batteries, available in nearly all DIN sizes and capacities, offer significant advantages over both Valve Regulated Lead Acid (VRLA) gel and flooded lead-acid solutions. These advantages result from the Thin Plate Pure Lead (TPPL) technology used in the batteries' construction. Accordingly, they offer outstanding Amp-hour (Ah) capacity.

NexSys® ATEX batteries require much lower maintenance than flooded types, with no need for topping-up. Critically for hazardous environments, the batteries' electrolytes are non-spillable, as they are absorbed into the Absorbent Glass Mat (AGM) separator material. They also recharge faster than gel and flooded batteries, with opportunity charging being possible. This increases productivity and reduces costs. Additionally, service life is longer than for gel batteries.

The term 'ATEX', derived from the French 'ATmosphères EXplosives', applies to atmospheres made potentially explosive by the possible presence of dust or gases likely to ignite or explode, for example in oil and gas, mining and chemicals industries during handling and logistics operations. ATEX product certification verifies the design specification of a manufacturer's product to a series of relevant standards. The certification process includes testing and assessment of the product, with ATEX and IECEx certificates and reports being issued for conforming product.

The NexSys® batteries' ATEX certification was granted by CSA Group SIRA, which is an independent body. SIRA certificate number 01ATEX3022X relates to the complete batteries, while 03ATEX3090U applies to individual cells. It is also available the certification in compliance with IECEx standard– with certificate number IECEx SIR 07.0065X for battery and certificate number IECEx SIR 07.0064U for cells. The company's technical know-how and experience result from many years spent supplying various ATEX battery product ranges to explosion protection solution specialists, material handling equipment manufacturers and other customers.

The battery products and process fulfil ATEX Directive 2014/34/EU, with the production process being externally audited at regular intervals to ATEX standards. The batteries are designed for use in ATEX Zones 1 and 2 (Gases) as well as 21 and 22 (Gas and Dust) and Mining. Each battery is engineered to specific customer requirements. These include specially designed trays and lids for Zone 1 and increased protection and testing for zone 21 and 22 batteries. While Zone 2 product does differ from standard batteries, lids are typically not fitted, as cover protection is usually provided by the equipment/application. Additionally, ATEX-certified plugs can be supplied and installed on request.

The main issue with the special trays is the loss of capacity due to the different fit form. NexSys® batteries, with its higher energy density solves this problem. TPPL plate thickness down to 0.8mm (3x more plates than gel and flooded in same volume) provide an higher energy density and a greater Ah capacity than a VRLA gel battery of the same physical size, together with greater or equal Ah capacity than a flooded battery of the same physical size. NexSys® ATEX batteries can provide 10% more energy and power than standard flooded products and 15% more than standard gel products.

The batteries can be used over a temperature range of 0°C to 40°C, in low and normal duty applications working six days a week. Up to eight hours or more utilisation may be achieved, with a depth of discharge (DoD) to 80 per cent of C5, if recharge times are met. Cycle life can be improved by reducing DoD.

The batteries can be charged using NexSys® or NexSys®+, efficient modular high-frequency chargers. Charging time from 20 per cent state of charge to full charge is typically 6.25 hours or faster.

"In NexSys® ATEX batteries, we have a solution that combines many benefits of flooded and VRLA gel batteries", comments Mattia Bianconi, Application Manager Motive Power EMEA at EnerSys®, "and this is based on our standard NexSys® batteries, which have proven to be a product of choice in regular motive power applications since 2011. The ATEX batteries extend the same advantages, and product confidence, to users in hazardous environments. These are found in many sectors, from mining and tunnelling, chemical and pharmaceutical plants, oil and gas, military and aviation, to food and drink, waste management, printing and paper and many others."

ABOUT ENERSYS®

EnerSys, the global leader in stored energy solutions for industrial applications, manufactures and distributes reserve power and motive power batteries, battery chargers, power equipment, battery accessories and outdoor equipment enclosure solutions to customers worldwide. Motive power batteries and chargers are utilized in electric forklift trucks and other commercial electric powered vehicles. Reserve power batteries are used in the telecommunication and utility industries, uninterruptible power supplies, and numerous applications requiring stored energy solutions including medical, aerospace and defense systems. With the recent Alpha acquisition, EnerSys provides highly integrated power solutions and services to broadband, telecom, renewable and industrial customers. Outdoor equipment enclosure products are utilized in the telecommunication, cable, utility, transportation industries and by government and defense customers. The company also provides aftermarket and customer support services to its customers in over 100 countries through its sales and manufacturing locations around the world.

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