

NuGen Systems™ Awarded New Patents in the Lithium Ion and New Energy Technologies Area that Provide Safe Features

ATLANTA, GA - October 20, 2020 - NuGen Systems, an Atlanta-based developer of green and clean energy systems, combines their batteries and unique packaging solutions with their data and communications platforms to disrupt legacy systems with new energy solutions. They were recently awarded two patents. These patents add safety and unique operational features for lithium ion batteries.

The first patent involves a sensor that detects a faulty condition. It also features an external monitor which could control external devices. For example, actions could include how and when one might shut off charging or even shut off a machine based on data from the battery. This would allow customers to use their legacy lead acid battery chargers with Lithium ion batteries.

“Additionally, it could be used by delivery drones. Amazon has a patent that disintegrates the battery if there is a faulty situation, says Venus Desai, Co-Founder of NuGenSystem. “Now, in a faulty situation, NuGen’s patent disengages the battery from the device and then the battery parachutes to safety.”

Another patent emulates a lead acid battery fuel gauge based on voltage. For example, with a lead acid battery, a forklift driver would know how much fuel is left based on voltage. Lithium ion batteries have a flat voltage curve and therefore difficult to tell level of fuel based on voltage alone. By emulating lead acid voltage, this patent allows legacy forklifts to use this invention with their existing voltage-based fuel gauges.

Lead Acid versus Lithium Ion

NuGen has developed its 12 volt and 24 volt, 80 Ah and 40 Ah advanced Lithium ion battery modules as building blocks to assemble batteries that meet the application requirements of numerous solutions, including those of material handling equipment of various sizes. They provide a better performance and a more cost-effective power source for material handling equipment, with an initial focus on AGVs. NuGen batteries are capable delivering 7-8 times longer daily cycles versus that of corresponding lead acid batteries. While lead acid batteries are restricted to 80% of useful capacity (DOD), NuGen Li-ion batteries deliver 100% of its stored capacity. NuGen batteries are capable of pulse charging up to 180A for 2-3 minutes in an “opportunity charge” profile as well. NuGen batteries can be used right after charging without any rest steps that are required for lead acid batteries.

“Experts are predicting that over the next 3-5 years most equipment in material handling, such as the AGVs, Pallet Jacks, Forklifts will use Li-ion batteries. We have had great interest in the market due to the extra-ordinary capabilities and total lower cost of ownership of NuGen Li-ion batteries over lead acid batteries,” said Dr. George Thomas the CEO of NuGen Systems.

Some of the advantages of Li-ion batteries over lead acid batteries include:

- faster recharging (including opportunity charge at, as high as, 180A)
- longer life cycles (3000 cycles)

- 100% Charge efficiency
- maintenance-free

“We have customers that have already tested our products in their warehouses for switchover from lead acid early next year. Since there are also interesting solutions for our batteries in the energy storage area, we are looking forward to meeting with possible investors, other partners and customers at Venture Atlanta”, said Venus Desai, one of the co-founders, of NuGen Systems. “We see a great need in this market and others for Li-ion batteries.”

About NuGen Systems, Inc.

NuGen Systems, www.NuGenSystems.com, develops advanced Lithium ion rechargeable battery solutions optimized to meet the power, clean energy, quality, and safety requirements for the numerous industrial and commercial markets. These new, clean and green batteries disrupt and directly replace legacy solutions such as lead acid batteries and other fossil fuel products. NuGen Systems, using their battery expertise, works with customers to create custom systems solutions for specialty equipment and battery needs. Collectively, NuGen’s founding team has more than 50 patents and more than 100 years of relevant experience in developing and launching engineering and power solutions with Fortune 50 companies across a variety of consumer and industrial markets. NuGen has built a network of partners that includes well established cell suppliers, component and contract manufacturers, and in-depth testing organizations to ensure that the product is delivered to meet high quality and stringent reliability standards.

###
