News Release April 14, 2014 GS Yuasa Corporation



# GS Yuasa Accredited with an IEEE Milestone for Lead-Acid Storage Batteries

 $\sim$  Contributing to the Development and Spread of the Battery Industry  $\sim$ 

The achievements of GS Yuasa Corporation (Tokyo Stock Exchange: 6674; "GS Yuasa") in the field of lead-acid storage batteries were recognized on April 12, 2014 as "Birth and Growth of Primary and Secondary Battery Industries in Japan, 1893" was accredited as an IEEE Milestone by the IEEE\*, representing the first time GS Yuasa has been accredited in this manner. The IEEE is the world's largest academic association in the field of electronics, electricity, information, and communications technology.

IEEE Milestones is an award system that recognizes innovations in the field of electronics, electricity, information, and communications technology that pays homage to significant historical achievements that make major contributions to regional communities and industries after 25 years have passed since their development. IEEE Milestones were established in 1983 for the purpose of improving the understanding and recognition in general society of outstanding technological achievements and the engineers that enabled these achievements. There have been 137 Milestones established on a global level, and 18 Milestones established in Japan.

Ever since Genzo Shimadzu succeeded in producing the first lead-acid storage battery prototype in Japan in 1895, GS Yuasa has made efforts to achieve higher capacity for lead-acid storage batteries. With the reactive lead oxide production method invented in 1919, GS Yuasa has contributed to the progress of manufacturing technologies for lead-acid storage batteries. Following this, the production of high-performance lead-acid storage batteries by both Japan Storage Battery Co., Ltd. that was founded by Genzo Shimadzu in 1917 and Yuasa Storage Battery Co., Ltd. that was established by Shichizaemon Yuasa in 1918 (later becoming Yuasa Corporation) made a significant contribution not only to the motorization of Japanese society, but also to the development of social infrastructure.

Following the merger of Japan Storage Battery and Yuasa Corporation to form the current GS Yuasa, the various secondary batteries produced by the company, including lead-acid storage batteries and lithium-ion batteries, continue to be widely used in society.

The GS Yuasa Group will utilize its energy technologies that it has fostered over the years to contribute to the safe and comfortable lifestyles of people in the future.

\*IEEE (official name: The Institute of Electrical and Electronics Engineers, inc.)

The IEEE is the world's largest academic association for electrical and electronics engineers. It was founded in 1963 and is headquartered in the United States. It is a non-profit organization with over 400,000 members in over 160 countries around the world. The IEEE serves a leading role in technical fields such as computers, biotechnology, communications, electric power, aerospace, and electronics, and many standards and specifications that are stipulated by the IEEE have been adopted as international standards by the ISO (International Standards Organization).

#### [Milestone accreditation]

Title of IEEE Milestone:

Birth and Growth of Primary and Secondary Battery Industries in Japan, 1893

Reason for accreditation:

Yai Dry Battery Limited Partnership Company received a patent for Yai's battery invention in 1893, which led to the birth of the Japanese dry cell battery industry and contributed to the development of that industry. Following this historic achievement, GS Yuasa Corporation and Panasonic Corporation developed the massive market for primary and secondary batteries for industrial equipment and home appliances, which enabled the development of the battery industry and the consumer electronics industry in Japan.

#### Scope of accreditation:

The former Yai Dry Battery Limited Partnership Company: Invention of dry cell batteries GS Yuasa Corporation: lead-acid storage batteries

Panasonic Corporation: dry cell batteries, lithium primary batteries, and nickel cadmium batteries

### [Accreditation ceremony]







Automotive lead-acid storage batteries when the company was founded (during the 1920s)

Left: a Japan Storage Battery Co., Ltd. product

Right: a Yuasa Storage Battery Co., Ltd. product

The awards ceremony

Left: GS Yuasa President Yoda

Right: IEEE Past President Dr. Staecker

## [History of GS Yuasa]

Year	History of lead-acid storage batteries at GS Yuasa	
1895	Genzo Shimadzu manufactures Japan's first lead-acid storage battery	GS
1912	Storage battery plant built in Shin-machi, Imadegawa, Kyoto	GS
1915	Yuasa Battery Manufacturing established within the Yuasa Iron Works	Yuasa
	in Sakai City, Osaka Prefecture; production starts on storage batteries	
1917	Genzo Shimadzu established Japan Storage Battery Co., Ltd.	GS
	Shichizaemon Yuasa established Yuasa Storage Battery Co., Ltd.	Yuasa
1919	Genzo Shimadzu invented the reactive lead oxide production method	GS
1920	Production started on automotive lead-acid storage batteries, Tudor	GS
	plating for stationary batteries completed	
1921	Pasted plates type lead-acid batteries for locomotive developed and	Yuasa
	sold	
	OEM production commenced for radio batteries	GS
	Ultra-clad tubular type for electric vehicles developed and sold	Yuasa
1954	Fiber-clad tubular type lead-acid batteries, poly-clad tubular type	GS
	lead-acid batteries, and Evanode lead-acid batteries sold	
1962	Gel storage battery (a non-leaking, liquid form lead-acid battery)	GS
	developed, and aspects such as its form, dimensions, voltage, and	
	capacity became the global standard model for small valve-regulated	
	lead-acid storage batteries	
1965	Valve-regulated lead-acid storage batteries (sealed lead-acid batteries)	Yuasa
1000	developed and sold	
	New headquarters automotive battery plant constructed (Nishioji)	GS
1983	Stationary valve-regulated lead-acid storage batteries developed and	GS,
	sold	Yuasa
1983	Valve-regulated lead-acid storage batteries for motorcycles developed	Yuasa
1005	and sold	
1985	Through joint development with Toyota Motor Corporation, developed	GS
	and sold the world's first valve-regulated lead-acid storage batteries for	
0004	automobiles	00.1/
2004	GS Yuasa Corporation established through the management	GS Yuasa
2000	integration of Japan Storage Battery and Yuasa Corporation	CC Viscos
2009	Lead-acid storage batteries for idle-stop vehicles developed and sold	GS Yuasa