

March 4th, 2019

NORITAKE CO., LIMITED

TOTO LTD.

NGK INSULATORS, LTD.

NGK SPARK PLUG CO., LTD.

**Four companies in the Morimura group
(NORITAKE CO., LIMITED, TOTO LTD., NGK INSULATORS, LTD.,
and NGK SPARK PLUG CO., LTD.)
concluded a memorandum of understanding
regarding the establishment of joint venture for Solid Oxide Fuel Cell**

Four companies in the Morimura group (NORITAKE CO., LIMITED (President: Hiroshi Kato, hereafter NORITAKE), TOTO LTD. (President: Madoka Kitamura, hereafter TOTO), NGK INSULATORS, LTD. (President: Taku Oshima, hereafter NGK), NGK SPARK PLUG CO., LTD. (President: Shinichi Odo, hereafter NGK SPARK PLUG)) jointly concluded on a memorandum of understanding regarding the establishment of a joint venture (JV) for Solid Oxide Fuel Cell (SOFC) and agreed to make a concrete plan for the JV establishment.

SOFC, which each company possesses its technology, is expected to realize a high-efficiency power generation system even at small scale. Moreover, it is expected as one of measures to solve energy and environmental problems in various fields such as home use, business and industrial use and so on. Development of SOFC is with high technical difficulty, such as using ceramic as the core material of power generation and operating in a high temperature reactive atmosphere. The main issues for commercialization and practical application of SOFC are low cost and high durability; however, research and development of lifetime evaluation and its corresponding technologies takes a long time to be realized. Moreover, it requires a considerable effort and cost until the commercialization.

Therefore, four companies in the Morimura Group will work together to maximize the JV's corporate value in order to increase the profitability of the JV.

c.f.

a Strategic Road Map for Hydrogen and Fuel Cells, published June 2014 and revised March 2016 by METI

http://www.meti.go.jp/english/press/2016/0322_05.html

1. Outline of the JV Company (planned)

(1) Name	TBD
(2) Location	2808, Iwasaki, Komaki, Aichi
(3) Representative Director and his/her Name	TBD
(4) Business	Business related to research, development, manufacturing, and sales of SOFC
(5) Capital	TBD
(6) Investment Ratio	TBD
(7) The scheduled date of the commencement of operation	December 1 st , 2019

2. About History of the Morimura Group

NORITAKE, TOTO, NGK, and NGK SPARK PLUG, the companies represent Japan's ceramic industry, are members of Morimura group. Our root is the Morimura Gumi (currently Morimura Bros., Inc.), which was founded by Morimura Ichizaemon the sixth and his younger brother Toyo.

1876	Ichizaemon Morimura the sixth and his brother Toyo founded the Morimura Gumi (currently Morimura Bros., Inc.)
1904	Foundation of Nippon Toki Gomei Kaisha (currently NORITAKE CO., LIMITED)
1917	The sanitary ware division of Nippon Toki Gomei Kaisha was spun off to establish Toyo Toki Co., Ltd. (currently TOTO LTD.)
1919	The insulator department of Nippon Toki Gomei Kaisha was spun off to establish NGK INSULATORS, LTD.
1936	The spark plug division of NGK INSULATORS, LTD. was spun off to establish NGK SPARK PLUG CO., LTD.