

## Report

### The Museum of Pile Drivers opens in Kochi, Japan

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Photo1 a view inside the museum

GIKEN LTD. (Hereafter, GIKEN) unveiled the Museum of Pile Drivers at a ceremony which celebrated the “fiftieth foundation” and “listing on the Tokyo Stock Exchange 1st section” on 25<sup>th</sup> July 2017. There are 26 valuable pile drivers collected from all over the world at the headquarters of GIKEN in Kochi, Japan, from which we can learn the history of pile drivers and piling methods.

Piling is essential for infrastructure: to build foundations, retaining walls and cofferdams. In the past, conventional piling works caused severe construction pollution (excessive noise and vibration), in contrast to the development of the modern state. However, in 1975, the Silent Piler was developed by GIKEN as the world’s first “reaction based” hydraulic sheet pile machine. Since then, construction pollution

has been greatly reduced and GIKEN has been pioneering new use of pilers.

Traditional, rare, and valuable pile drivers (i.e. the diesel hammer, steam hammer, vibratory hammer, earth auger and other apparatuses) collected by Mr Akio Kitamura (President of GIKEN and Honorary President of International Press-in Association) in the world, as well as the initial Silent Piler and thirteen representative models which introduce both the environmentally-friendly technique and the IT function, are on display. Moreover, the full-scale soil investigation rig reproduced from the drawing by Leonardo da Vinci is displayed and visitors are able to learn about the past, examine the present and look into the future of piling there.

GIKEN is prepared to expand and improve the collection at the exhibition facility as well as supplementary materials, and aims to have open days for the public as well as people involved in the construction industry.

#### ◆ Some comments from Visitors



Photo2 the signboard of the museum

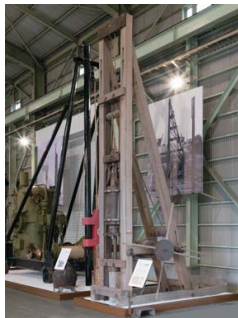
1 For me, Museum of Pile Driver is an expression of evolution in piling technologies. It is there to highlight the past, present and the future of this technology. Therefore, it such a privilege to visit this museum!

From Dr. Nor Azizi Bin Yusoff (Malaysia)

2 I got the opportunity to visit "World Pile Driving Machine Museum" newly established in GIKEN LTD.. Since I had few opportunities to see pile driving machines up close, the appearance of old and new machines were really impressive and overwhelmed. It was a very valuable time to see and feel the history of the progress of pile driving techniques.

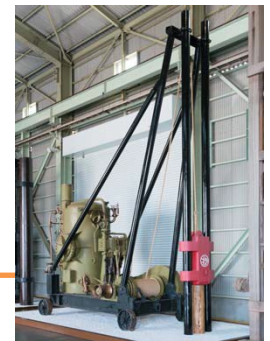
From Prof. Kentarou Nakai (Japan)

## History of Pile Drivers in the world



**Around 1500**

**Da Vinci's Soil Investigation Machine**  
Pile driver reproduced from Da Vinci's design



**Around 1720**

**Drop Hammer Pile Driver**  
Drop hammer pile driver using steam power, among others



**Around 1870**

**Steam Hammer**  
Impact driving systems with steam driven pistons



**Around 1930**

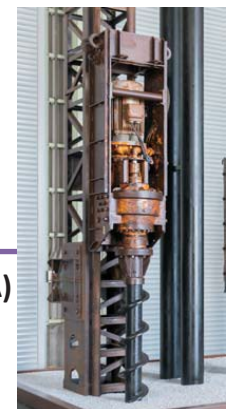
**Vibratory Hammer**  
Vibration systems which drive piles using high frequency



**Diesel Hammer**  
Impact driving systems using diesel engines

**Around 1940**

**Continuous Flight Auger (CFA)**  
Machine that excavates and builds piles through augering



**Around 1960**

**Pile Master**  
Multi-ram pressing machine with panel driving method



**1975**

**Giken first Silent Piler KGK-100A**  
Founder's Dreams come true - The 1st Silent Piler

