UNPRECEDEDENT MIRACLE OF INDUSTRIALIZATION

UNESCO has inscribed “Sites of Japan’s Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining” on the World Heritage List. Consisting of twenty-three component parts, they tell a story of uncommon historical value.

TAMI KAWASAKI

In July 2015, the decision was made to inscribe the property on the World Heritage List, grouped under the appellation “Sites of Japan’s Meiji Industrial Revolution: Iron and Steel, Shipbuilding and Coal Mining.” The twenty-three component parts, which span eight prefectures and eleven cities, tell the tale of how Japan seized the initiative and adopted Western technology between the closing days of the Tokugawa Shogunate (the final years of the Edo Era, 1603-1867) and the Meiji Era (1868-1912), developing human resources, constructing modern industries, and becoming an industrialized nation. This property represents the first successful transfer of industrialization from the West to a non-Western nation and was evaluated as the outstanding universal value essential for a World Heritage designation.

The trajectory of Meiji industrial development

In only five decades, from the second half of the nineteenth century to the early years of the twentieth, Japan rapidly industrialized in the fields of shipbuilding, iron and steel manufacturing and coal mining, industries that would become keys to the country’s economy. Among historians, this transition is known as a miracle of industrialization unprecedented in history. As opposed to developments that relied on foreign funding, Japan’s industrialization was fueled from within—the Japanese people energetically and proactively took it upon themselves to learn about Western technology. Their trial-and-error approach, which emphasized studying and researching Western industry and inviting Western engineers to Japan for guidance, was incorporated into Japan’s traditional culture. Through continuous practice and application, this approach laid the foundation for the Japanese system of industry.

“The World Heritage registration effort spanned eight years, from its conception to the sites being added to the World Heritage List,” says Kengo Iwamoto, Counsellor of the Cabinet Secretariat of Japan from the Department of Industrial Heritage World Heritage Inscription and a central figure in the movement to have the sites recognized. “We were intent on having all twenty-three component parts inscribed, because together they paint a picture and provide a chronological map of Japan’s industrial development.”

Meiji Japan’s technology and spirit live on

The unique “chronological testimony” these heritage sites provide creates a matrix that reveals the progress of Japanese industry. For example, one can sense how the high level of maritime technology at Miike Port, fostered by the Miike Coal Mine, dramatically accelerated the development of Japan’s contemporary transportation and shipping industries. The fact that Miike Port is a productive asset that is still in use today demonstrates that these sites are not relics but remain useful technology with great value.

Iwamoto explains their merits: “As ‘working industrial heritage sites,’ these sites have real authenticity. While one of the objectives of the World Heritage List is conservation, it’s performing the maintenance intrinsic to keeping these sites operational that allows us to conserve them for the future.”

The twenty-three component parts do not merely provide a technological ensemble; they offer snapshots of the ideas and knowledge flourishing in Japan during its industrialization. In particular, the Shokasonjuku Academy in Hagi, led by Yoshida Shoin, became a hotspot of overseas ideology in the Choshu
(Hagi) Clan, and produced many great statesmen and leaders of social change. The Shuseikan in Kagoshima was where Satsuma Clan lord Shimazu Nariakira enthusiastically studied Western ideas and consequently took a proactive approach to adopting Western industrial technology. The site reveals the larger story behind the rise of big business in Japan. The Former Glover House and Office was the workplace of Scottish merchant Thomas Glover, who made major contributions to Japan’s shipbuilding and coal industries, and served as a gathering place for those involved in the industrial science and technology of the day. Overseas ideas were combined with Japanese values that had a huge impact on the luminaries of the Meiji Era, who refined these concepts to create new value. It is this history that these sites embody and illustrate. **Preserving Japan’s roots as an industrial nation**

A pillar of the World Heritage Sites project—and a key part of preservation efforts—is to share information about the sites with the world to promote understanding. Iwamoto says: “To properly communicate the value of these historic sites, it’s vital to provide more than just visual information. We also must promote understanding of the culture, history and heart of the people of Japan that constructed them.” He adds that there are plans to provide an improved website for global tourists and a 3D app that allows views of areas inaccessible to the general public.

Discussions have been held with the owners of sites still in operation that are privately owned, where the owners have been asked to cooperate in site conservation. A buffer zone has also been established around each industrial site to regulate future use and to preserve the surrounding environment in the hopes of maintaining each site’s primary value.

“The industrial might that lay in the primary technologies of the day enabled Japan to reestablish itself after the devastation of two world wars, and became the very foundation of contribution to Japanese society,” Iwamoto explains. “The Meiji industrial heritage sites are the birthplaces of Japan’s technological strength and as an industrial nation. It is essential that we conserve the sites themselves and the great value they represent.”

### CHRONOLOGICAL DEVELOPMENT PHASE OF THREE INDUSTRIAL TYPOLOGIES (1850s TO 1910)

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The Hagi (Choshu) Clan and its surrounding communities challenged themselves to adopt Western technology and were formative locations for Japan’s industrial culture. Their spirit and unique qualities are preserved at this heritage site. This site became one of the ideological birthplaces of Japan’s modernization.

Satsuma lord Shimazu Nariakira launched the Shuseikan project in response to challenges from the major Western powers in the closing days of the Tokugawa Shogunate. The site is preserved to tell the story of Satsuma’s attempts to build a reverberatory furnace and the surrounding trial-and-error experimentation.

The site of the kiln that created the charcoal used to fuel the Shuseikan project.

Information on Western technology and traditional Japanese construction techniques were combined to construct these furnaces, which were used to produce cannons for coastal defense in the face of antagonism by Western powers.

In the closing days of the Edo Era, the Saga Clan established the Mietsu Naval Dock for coastal defense.
Miike Coal Mine is now closed, but traces of the private railroad connecting the mine’s main pits, Miyanohara and Manda, with the Miike Port remain.

Designed by Dutch engineer A. Rouwenhorst Mulder, this port was constructed with government subsidies and became one of the Meiji Era’s three biggest harbor construction projects.

Japan’s first Western-style slipway, equipped with a steam-powered winch, is still in existence today. In 1869, this ship repair facility was established at Nagasaki Port through a collaboration between Scottish merchant Thomas Glover and the Satsuma Clan.

Takashima Coal Mine was an island coal mine developed using technology from Takashima Coal Mine. The base of operations for Scottish merchant Thomas Glover, who assisted in Japan’s industrialization.

From the closing days of the Tokugawa Shogunate to the Meiji Era, the demand for coal in Japan increased greatly, needed to power Western machinery. On Takashima Island off the coast of Nagasaki, the Saga Clan, together with Scottish merchant Thomas Glover, developed a coal mine.

Overlooking the third dock from the hillside, this Western-style, two-story wooden house was built during Mitsubishi’s limited-partnership era in the formative years of Japan’s shipbuilding industry. Although completed in 1904 as the residence of Heigoro Shoda, head of Nagasaki Shipyard, it was used as a reception hall rather than a private home.

This dry dock, constructed from 1901 to 1905, was used to repair large ships built during Mitsubishi’s limited-partnership era.

This was Japan’s first electric crane, constructed in 1909 during Mitsubishi’s limited-partnership era in conjunction with the electrification of the shipyard.

Built in 1898 to produce wooden patterns for castings, this pattern shop was constructed during Mitsubishi’s limited-partnership era in response to the increased demand in Japan for cast-metal goods.

A pumping facility that transported water from the mouth of the Onga River to the Imperial Steel Works about ten kilometers away. The facility is still operational today.

The first head office of the steel works is in a symmetrical edifice rendered in red brick with a dome at its center. The German firm Gutehoffnungshütte Co. (GHH) designed and provided the steel frame for the steel works’ repair shop, where machinery was repaired and components manufactured for the steel works. The repair shop has been in continuous operation for over 110 years. GHH also designed and provided the steel frame for the former forge shop, which manufactured the products needed to construct the steel works.

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Mitsubishi’s limited-partnership era in the formative years of Japan’s shipbuilding industry. Although completed in 1904 as the residence of Heigoro Shoda, head of Nagasaki Shipyard, it was used as a reception hall rather than a private home.

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• Please refer to the map on page 8 for the locations of these sites •