

# Access



**Access to Nagaoka Works**

- Approx. 8 minutes on foot from the JR Shinetsu Main Line (Kita-Nagaoka Station)
- Approx. 10 minutes by taxi from the Joetsu Shinkansen (Nagaoka Station)
- Approx. 20 minutes by car from both the Kanetsu Expressway (Nagaoka Interchange) and the Hokuriku Expressway (Nakanoshima-Mitsuke Interchange)

**TB Global Technologies Ltd.**

# NAGAOKA WORKS



**MY HOME TOWN**

Nagaoka Works is in Nagaoka City, which is located in central Niigata Prefecture (Chuetsu Region) and has the second largest population in Niigata Prefecture. Nagaoka Festival, which is held every August, features a fireworks event named the "Grand Fireworks Festival". This fireworks event is said to be one of Japan's three greatest fireworks shows.

Grand Fireworks Festival of Nagaoka Festival

## TB Global Technologies Ltd.

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Nagaoka Works	2-5-1, Jooka, Nagaoka City, Niigata, 940-0021, Japan	TEL +81-258-24-1650	FAX +81-258-24-0000
Nagaoka Service Center	2-5-1, Jooka, Nagaoka City, Niigata, 940-0021, Japan	TEL +81-258-24-1660	FAX +81-258-24-1653
Tohoku Service Center	13th Floor, Aobadori PLAZA, 3-2-1, chuou, Aoba-ku, Sendai, Miyagi 980-0021, Japan	TEL +81-22-221-1431	FAX +81-22-266-8263
Tohoku Service Center Sapporo Office	6th Floor, Miyamura Bldg., 3-1-1 Kita 8-jo Higashi, Higashi-ku, Sapporo, Hokkaido 060-0908, Japan	TEL +81-11-751-6470	FAX +81-11-751-6471
Tohoku Service Center Tomakomai Office	1F-B Hime Prio, 3-16-13 Kasugacho, Tomakomai City, Hokkaido 053-0031, Japan	TEL +81-144-38-3456	FAX +81-144-38-3457
Kanto Service Center	2-15-5, Goichuo-nishi, Ichihara City, Chiba, 290-0081, Japan	TEL +81-436-25-1216	FAX +81-436-25-1208
Osaka Service Center	6F OCAT, 1-4-1, Minatomachi Naniwa-ku, Osaka, 556-0017, Japan	TEL +81-6-6645-7520	FAX +81-6-6645-7529
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Hiroshima Service Center	5th Floor, NREG Hiroshima Tatemachi Bldg., 1-20 Tatemachi, Naka-ku, Hiroshima City, Hiroshima 730-0032, Japan	TEL +81-82-246-1512	FAX +81-82-247-4550
Fukuoka Service Center	8th Floor, NMF Hakataekimae Bldg., 1-15-20 Hakata-ku, Fukuoka City, Fukuoka 812-0011, Japan	TEL +81-92-471-6055	FAX +81-92-474-2627
Singapore Branch	2 Venture Drive #16-12, Vision Exchange, Singapore, 608526	TEL +65-6909-2333	FAX +65-6909-3474
Beijing Office	Room 1014, Lucky Tower B, No.3 Dong San Huan Bei Lu, Chaoyang Discrit, Beijing, China 100027	TEL +86-10-65516609	FAX +86-10-65518229

# Nagaoka Works

The Nagaoka Works of TB Global Technologies Ltd. (TBG) produces loading arms, swivel joints, butterfly valves and other fluid handling equipment and devices that are undertaking an important role in stable supply of energy. Emergency Release System (ERS unit), coupler (QCDC), and hydraulic control unit, which are ancillary equipment for loading arms, are also manufactured at this plant.

The Nagaoka Works produces superior quality products that meet the needs of the new energy age by making full use of its accumulated experience, outstanding technological capabilities, and state-of-the-art processing equipment cultivated over more than 100 years of history.



As of 2019



## Factory Profile

Site Area: 29,480 m<sup>2</sup>  
Building Area: 15,950m<sup>2</sup>

As of 2019

## Quality Assurance System

We have acquired ISO 9001 international quality certification and perform continual activities in compliance with its quality management process that bring to achieve the improvement in customer's satisfaction.

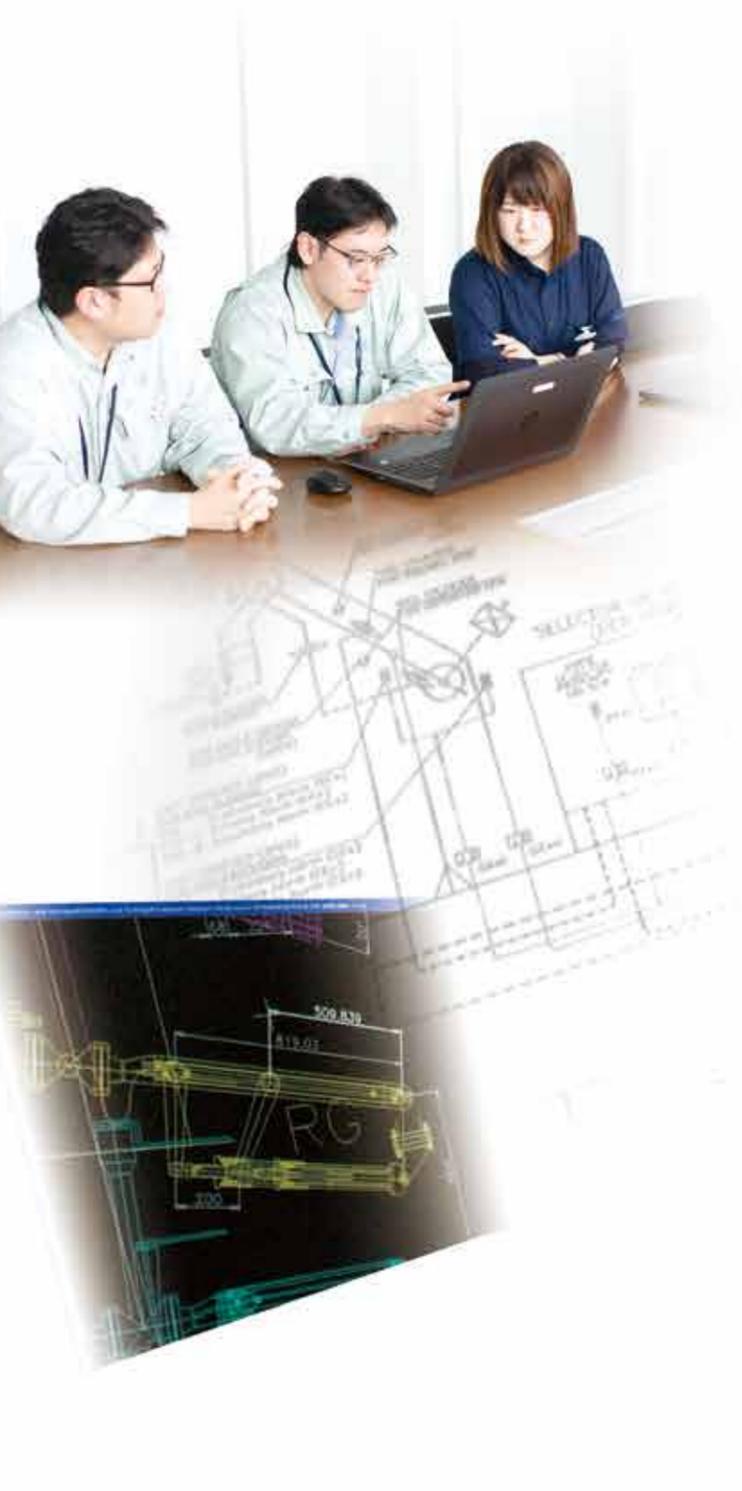


## History

1902	Founded under Nippon Oil Co., Ltd. as the Nagaoka Branch Factory of Niigata Steel Works. Began business for the repair of oil drilling machinery.
1910	Established as the Niigata Engineering Co., Ltd. Nagaoka Factory together with the founding of Niigata Engineering Co., Ltd.
1961	Formed a technological partnership with America's FMC Corporation (Chiksan Corporation) to begin production of Swivel Joints and Loading Arms.
1968	Delivered Japan's first LNG Loading Arm to Tokyo Gas Co., Ltd. (12B x 42' PCMA, 3 units)
1987	Developed a 16B Butterfly Valve ERS Unit for LNG and a tanker mooring position monitoring system (PMS). Began ERS construction (retrofitting) for the existing LNG Loading Arm of Osaka Gas Co., Ltd.
1988	Completed ERS retrofitting for the existing 16B LNG Loading Arms of 4 companies.
1989	Developed a 1/4 Ball Valve ERS Unit (NT-DBV). Installed the unit in an LNG Loading Arm and delivered the arm to Tokyo Gas Co., Ltd. 16B x 60' RCMA-S, 4 units
1993	Delivered an automatic LNG Loading Arm to Osaka Gas Co., Ltd. 16B x 60' RCMA-S, 4 units
1995	Delivered the world's largest LNG Loading Arm to Korea Gas. 16B x 91' DCMA-S, 4 units
1998	Acquired ISO9001 certification (Lloyd's Register QA)
2001	Delivered a LNG Loading Arm with a design life of 30 years to Malaysia LNG. 16B x 79' DCMA-S, 3 units Developed a 16B Butterfly Valve for LNG land piping.
2002	Founded Niigata Loading Systems, Ltd.
2003	Established Niigata Loading Systems, Ltd. Delivered the first Butterfly Valve (diameter of 40B) for LNG land piping to Sakai LNG Co., Inc. Developed a 16B hydraulic coupler for LNG. Both the coupler and NT-DBV passed the test for Shell Certification.
2005	Delivered LNG Loading Arms to Sakhalin LNG. All of the accessories were manufactured by Niigata Loading Systems, Ltd., including the hydraulic coupler and the NT-DBV. 16B x 79' DCMA-S, 4 units Delivered LNG Loading Arms to Guangdong LNG, China's first LNG receiving station.
2015	Changed the company name to Tokyo Boeki Engineering Ltd. (abbrev.TEN)
2017	Developed a light weight type ERS with single cylinder for oil and LPG Marine Loading Arm.
2019	Developed World's First Loading Arm for Ship-to-Shore Transfer of Liquefied Hydrogen.
2021	Merged with Tokyo Boeki Machinery Ltd. and changed the company name to TB Global Technologies Ltd. (abbrev.TBG)

## Development

We perform thorough research and development in order to meet with the market demand and create products with concepts that fit the needs of a new era.



### ■ Development Planning Meeting

By developing ideas from a variety of perspectives, we strive to manufacture appealing products that fit the global market.



Meeting Room

### ■ Design

From product planning to production design, we perform detailed examination of designs while analyzing vast amounts of data in order to create inexpensive products which satisfy market needs.



Engineering Department

## Production

Because high level of technical capabilities are required, our products are subject to the strict quality management standards of our company in addition to compliance with applicable laws, regulations, and standards. In principal, all machining, welding, inspection and assembly for pressure-related parts are performed under the coherent quality management of Nagaoka Works. This ensures high reliability for our products.

### ■ Procurement

We procure high quality and appropriately priced materials and components from cooperating domestic and international companies. Quality assurance for purchased materials is achieved through continuous instruction in quality management and, when necessary, through onsite surveys of pre-shipping inspection.



### ■ Machining

Advanced dedicated facilities are used to perform precision processing of materials.



Production Building No. 2

### ■ Welding

Welding is performed by skilled experts that possess certification as established by all applicable laws, regulations and standards. Also, high efficiency welding is performed by welding robots.

#### Welding Certification

JIS Z3801 N-2F, P/T-1F, P  
JIS Z3821 TN-F, P(Stainless Steel)/MA-F, H(Stainless Steel)  
JIS Z3841 SA-2F  
JIS Z3811 TN-2F(Aluminum)/NA-2F(Aluminum)

#### Laws Governing Welding Certification

Electricity Business Act, Gas Business Act, High Pressure Gas Safety Act



Production Building No. 2

### KAIZEN Productivity

To achieve the streamlined manufacturing process in our own unique KAIZEN. Periodic reform proposals and reports are shared by the entire staff, and an efficient production system is constantly pursued.



## Production

### ■ Assembly

Products are efficiently assembled in accordance with a manual. Furthermore, we provide in-shop overhaul service by our skilled experts.



Production Building No. 3 (Arm assembly)



Production Building No. 3 (Arm assembly)



Production Building No. 4 (Arm assembly)



Production Building No. 4 (Joint assembly)

### ■ Testing/Inspection

Before shipping, a strict quality check is performed for use in severe operating environments.



Cryogenic temperature test for LNG Butterfly Valves



Low temperature test for ERS Units



Hydrostatics and pneumatic test



Quality inspection

### ■ Shop Erection/Operations Test

Before shipping, completed loading arms are actually assembled and subjected to a variety of performance tests.



Shop erection test

## Installation

We provide site installation service including transportation, installation, adjustment and commissioning and ready for turn-key operation.



Onsite installation (using a on shore crane)



Onsite installation (using a marine crane)

## Maintenance Service

We provide long term maintenance support by experienced experts including preventive maintenance inspection and technical advice on proactive maintenance practice.



Onsite removal



Shop inspection



Transportation after completion of maintenance