M.G.C.
MorioKagumi Co.,Ltd.

Make it for the Next 100 Years.
http://moriokagumi.co.jp
Message from the President
About us Moriokagumi Co.,Ltd.

Since its founding in 1957, Moriokagumi Co., Ltd. seeks to contribute to the society through providing various underground pipe lines. Then through a time of 60 years, our business is expanding from gas pipe lines to water supply pipe lines, sewer pipe lines, power cable pipe lines, telephon pipe lines and to general civil engineer works. We have enhanced the technological capabilities and earned the respect and trust of clients by meeting engineering needs all the time.

Now take a look at our domestic market, Underground pipe market in Japan is currently moving from newly constructions to renovations of existing pipe. To meet this market needs, we are providing several renovation method such like LCR, PFL and SPR.

International market of underground pipe, there exist infinitely many possibilities in overseas countries. So, we are currently focusing on especially South East Asian countries to contribute to urbanization, Since 2014, we've been constructing newly underground pipe line in Vietnam and Myanmar. In 2017, we established Moriokagumi Vietnam Co., Ltd in Ho Chi Minh City, Vietnam. This is the company running by the regional engineers who got trained our Japanese-standard technology of pipe jacking for at least 3 years in Japan.

Now and then, and from now on, we go together with the society, its people and its needs. And we are sure our technology can contribute to urbanization to enrich the people’s life for the next 100 years.

Thank you.

Moriokagumi Co.,Ltd.

Masahiro Kawata
Company Profile

Company name: Moriokagumi Co., Ltd.
Location: 91-5, Sugawa-cho, Gojo city, Nara, Japan
TEL/FAX: +81-747-23-5111 / +81-747-23-5118
Establishment: Sep. 5, 1957
Board of Directors: President Representative Director: Masahiro Kawata
Senior Managing Director: Osamu Wada
Board Director: Kazuya Nagayoshi
Capital: 40 million yen
ISO: Management System Standard
JIS Q 9001:2008/ISO9001:2008 (construction of civil engineering)
URL: http://moriokagumi.co.jp

Service Office

Head Office: 91-5, Sugawa-cho, Gojo city, Nara, Japan

Tokyo Office: Kent Bill 3F, 6-10-12, Sotokanda, Chiyoda-ku, Tokyo, Japan
TEL. +81-3-5830 7860 FAX. +81-3-5830-7861

Osaka Office: Senbagland Bill, 3-4-30, Kyutaro-machi, Chuo-ku, Osaka, Japan
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Overseas Office: MORIOKAGUMI VIETNAM CO.,LTD.
Unit 302/5, No.19 Ba Huyen Thanh Quan, Ward 6,
District 3, Ho Chi Minh City, Viet Nam
Chairman: Masahiro Kawata
President, Representative Director: TRÀN HỮU ĐỨC

Business Activities

1. Underground Pipe Jacking (for water supply, sewer, Gas, telephone line and power cable)
2. Renovation of existing pipe
3. General civil engineer works, soil improvement
4. Machine rental and sales
1. Underground Pipe Jacking (Jacking Method)

2. Machine Rental

3. General Civil Engineering

4. Soil Improvement

5. Pipe Rehabilitation
1. Underground Pipe Jacking   ( Jacking Method )

What’s Jacking Method?

--- It is a method of making the pipe line in underground by pushing the pipe from the driving shaft with the jack.

Advantage compare with the trench method

--- Shortening term of work  
--- The digging soil is a little  
--- The influence n the thing of the existing laying underground is a little  
--- The range of the road occupation can be reduced  
--- The occurrence of the construction pollution is few

Usage

--- Water supply  
--- Sewer  
--- Gas  
--- Telephone Line  
--- Power Cable

The high-density slurry pipe-jacking method has been shown.  
This method has been developed for the pipe long and curved jacking in soft clay, sand and weak ground with much water from 20 years before in Japan. Afterward, the request of pipeline for the big cobble ground and bedrock layer has increased as the national land lifeline project. So this pipe-jacking method has extended over for the main execution of works for life line in Japan.
System: A

System of high-density slurry pipe-jacking
System : B

A CONCEPTUAL DRAWING OF A TYPICAL SLURRY SHIELD TYPE PIPE JACKING SYSTEM
Construction Results

Case: 1
Round type: $\phi$ 2200mm
Distance of pipe-jacking: $L = 218.06m$
Carve conditions:
- $R_1 = 60.0m$, $\alpha = 57^\circ 00' 00''$
- $R_2 = 60.0m$, $\alpha = 30^\circ 00' 01''$
- $R_3 = 60.0m$, $\alpha = 6^\circ 31' 04''$
- $R_4 = 60.0m$, $\alpha = 36^\circ 09' 33''$
Soil conditions: fine sandy soil
N-value: 15 ~ 60
Earth cover: GL-6.60m ~ GL-8.98m
Case:2

Round type: φ 1000mm
Distance of pipe-jacking: L = 194.20m
Carve conditions: R1 = 150.0m, IA = 5° 42’ 00” (Vertical)
R2 = 300.0m, IA = 2° 20’ 24” (Vertical)
R3 = 300.0m, IA = 3° 24’ 00”
Soil conditions: fine sandy soil
N-value: 20 ～ 40
Earth cover: GL-3.00m ～ GL-4.53m
## 2. Machine Rental Service

Our Possession of Jacking Machine are following

<table>
<thead>
<tr>
<th>type</th>
<th>usage</th>
<th>ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushing type 1</td>
<td>φ 600mm ~ φ 2400mm</td>
<td>MAX UCS of rock 300MPa</td>
</tr>
<tr>
<td>Crushing type 2</td>
<td>φ 250mm ~ φ 3000mm</td>
<td>MAX UCS of rock 200MPa</td>
</tr>
<tr>
<td>Normal type 1</td>
<td>φ 800mm ~ φ 2200mm</td>
<td>Maximum drive length (~750m)</td>
</tr>
<tr>
<td>Normal type 2</td>
<td>φ 200mm ~ φ 2000mm</td>
<td>Maximum drive length (80m~600m)</td>
</tr>
<tr>
<td>Microtunnelling type 1</td>
<td>φ 250mm ~ φ 700mm</td>
<td>Maximum drive length (~250m)</td>
</tr>
<tr>
<td>Microtunnelling type 2</td>
<td>φ 200mm ~ φ 500mm</td>
<td>Maximum drive length (~60m)</td>
</tr>
<tr>
<td>Microtunnelling type 3</td>
<td>φ 150mm ~ φ 1000mm</td>
<td>Maximum drive length (~15m)</td>
</tr>
</tbody>
</table>

![Crushing type 1](image1.png) ![Crushing type 2](image2.png) ![Normal type 1](image3.png) ![Normal type 2](image4.png) ![Microtunnelling type 1](image5.png) ![Microtunnelling type 2](image6.png) ![Microtunnelling type 3](image7.png)
3. General Civil Engineering

4. Soil Improvement

5. Pipe Rehabilitation
Finally, our underground works shall be useful for both water and electricity systems in your country.

We can contribute to your country for using trenchless technology.

These methods will be made the new another surrounding for the underground constructions!

Thank you