IHI
Realize your dreams

Corporate Profile

I&H Engineering Co., Ltd.

Management Message

Minoru Tonegawa
Managing Director

We will establish a solid leading position in the field of infrastructure development in Myanmar in collaboration with the Ministry of Construction and IHI Corporation, Japanese leading heavy industry manufacturer, as the production center for Precast Concrete Products, such as PC girder, PC Pile, Box Culvert, Building Component and others.

We are confident that we can manufacture our products with our strict quality control and supply our quality product to Myanmar market. As a result our products will support to improve the infrastructure in Myanmar. We also shall act as a main player of the development of roads and bridges in engineering and construction fields.

We would like to contribute to the economic development of Myanmar through our technology and realize the technical transfer to Myanmar.

Company Outline

I&H Engineering Co., Ltd. (I&H) is the joint venture between Ministry of Construction, the Republic of the Union of Myanmar and IHI Asia Pacific Pte. Ltd..

IHI Corporation
Japan

Ministry of Construction
Myanmar

IHI Asia Pacific Pte. Ltd.
Singapore

Department of Highways
Myanmar

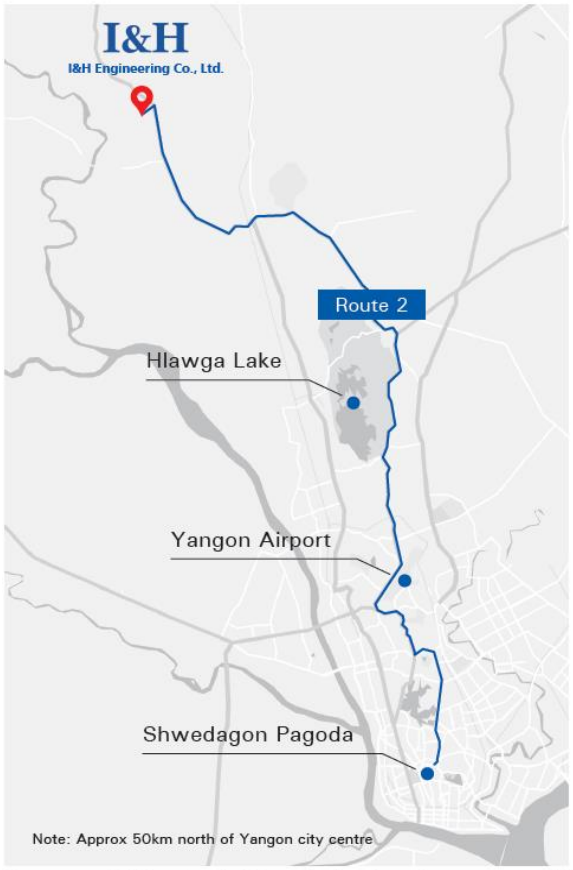
I&H Engineering Co., Ltd.

Company Profile

Establishment	February, 2016
Capital Stock	USD 12,238,500
Share Holders	IHI Asia Pacific Pte. Ltd. 60% Department of Highways 40%
Managing Director	Mr. Minoru Tonegawa
Address	Plot No.3, Kalakone Village, Myaungdagar Steel Industrial Zone, Hmawbi Township, Yangon Region, The Republic of the Union of Myanmar
Business Scope	i) PC Spun Pile (JIS A 5335 and JIS A 5373 Equivalent, Class A, B, C) ii) PC Bridge Girder iii) Pre-cast and Pre-tensioned Bridge Slab iv) Building Components v) Box Culvert vi) Other Pre-cast Concrete Product

Factory Location & Layout

Factory Location



1 Technological University, Hmawbi

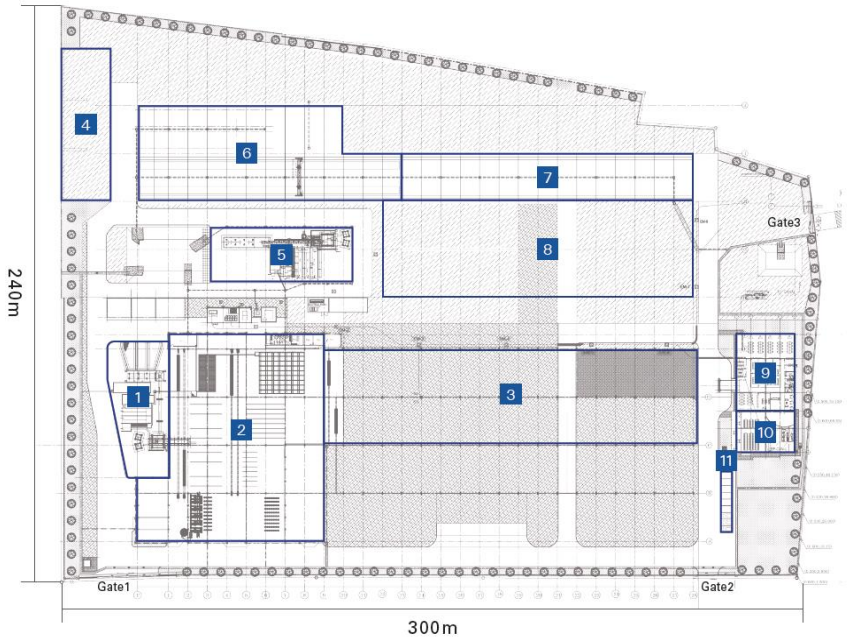
2 Mani factory

3 Zina Man Aung Pagoda

4 at Crossing Point of Transmission Lines

If you enter I&H into Google-Maps, the location of our company will be displayed.

Factory Layout



Total Area 65,727m²

1 Batching Plant for Spun Pile (60 m³/h)
2 Factory for Spun Pile
3 Storage Yard for Spun Pile
4 Storage yard for Aggregate
5 Batching Plant for Precast Concrete Products (90 m³/h)
6 Factory for PC Girder
7 Storage Yard for PC Girder
8 Factory for Precast Concrete Products
9 Main Office
10 Canteen
11 Car Parking

Certification

ကုမ္ပဏီဖွဲ့စည်းခြင်းနှင့် မှတ်ပုံတင်ခြင်းလက်မှတ်

Certificate of Incorporation and Registration

အိုင်အင်န်အိတ်ချ် အင်ဂျင်နီယာရင်း ကုမ္ပဏီ လီမိတက်

I & H ENGINEERING COMPANY LIMITED

Company Registration No. 114935808

အထူးကုမ္ပဏီအက်ဥပဒေ ၁၉၅၀ အရ

အိုင်အင်န်အိတ်ချ် အင်ဂျင်နီယာရင်း ကုမ္ပဏီ လီမိတက်

အား ၂၀၁၆ ခုနှစ် ဖေဖော်ဝါရီလ ၈ ရက်နေ့တွင် ဖွဲ့စည်းပြီး မြန်မာနိုင်ငံကုမ္ပဏီများ

အက်ဥပဒေ ၁၉၁၄ နှင့် အညီ မှတ်ပုံတင်ခွင့်ပြုလိုက်သည်။

This is to certify that

I & H ENGINEERING COMPANY LIMITED

was incorporated under the Special Company Act 1950 and registered under the Myanmar Companies Act 1914 on 8 February 2016.

ကုမ္ပဏီမှတ်ပုံတင်အရာရှိ

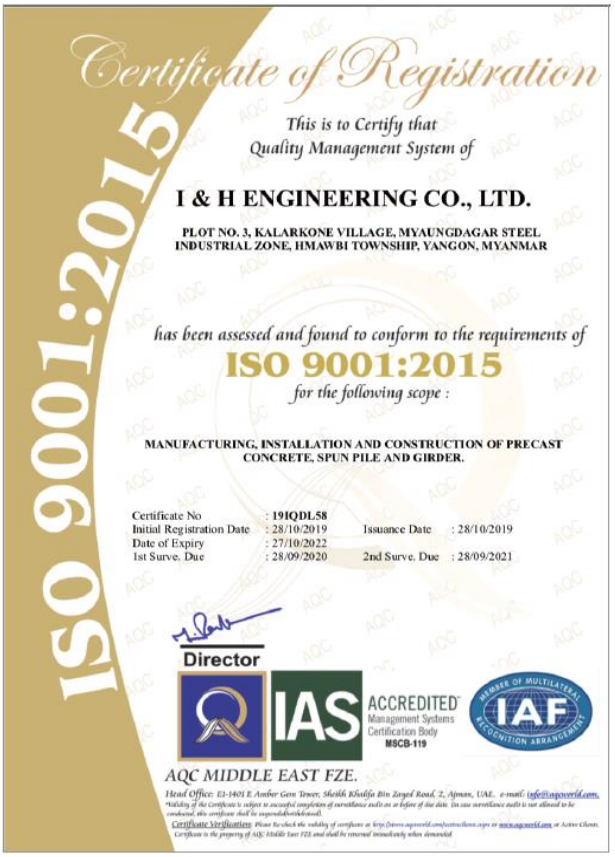
Registrar of Companies

ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန

Directorate of Investment and Company Administration

Former Registration No. 8JV/2015-2016

Certificate of Incorporation and Registration



ISO 9001:2015

Certificate of Registration

This is to Certify that
Quality Management System of

I & H ENGINEERING CO., LTD.

PLOT NO. 3, KALARKONE VILLAGE, MYAUNGDAGAR STEEL INDUSTRIAL ZONE, HMAWBI TOWNSHIP, YANGON, MYANMAR

has been assessed and found to conform to the requirements of

ISO 9001:2015

for the following scope :

MANUFACTURING, INSTALLATION AND CONSTRUCTION OF PRECAST CONCRETE, SPUN PILE AND GIRDER.

Certificate No	: 19IQDL58		
Initial Registration Date	: 28/10/2019	Issuance Date	: 28/10/2019
Date of Expiry	: 27/10/2022		
1st Surve. Due	: 28/09/2020	2nd Surve. Due	: 28/09/2021

Director

IAS ACCREDITED Management Systems Certification Body MSCB-119

IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

AQC MIDDLE EAST FZE.

Head Office: E1-1401 E Amber Gem Tower, Sheikh Khalifa Bin Zayed Road, 2, Ajman, UAE. e-mail: info@aqcworld.com.

Validity of the Certificate is subject to successful completion of surveillance audits on or before of due date. In case surveillance audit is not allowed to be conducted, this certificate shall be suspended/withdrawn.

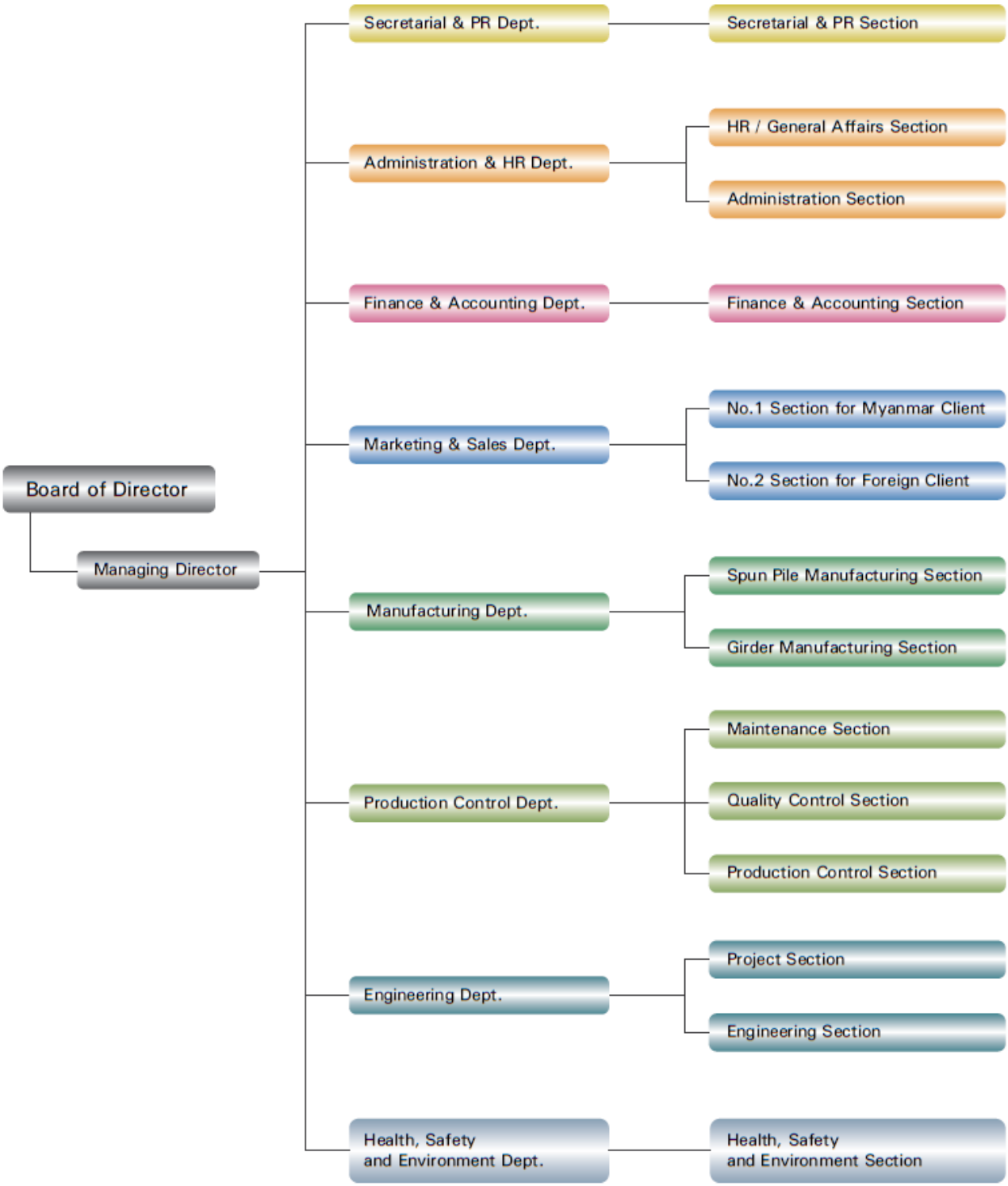
Certificate Verification: Please Re-check the validity of certificate at http://www.aqcworld.com/activeclients.aspx or www.aqcworld.com at Active Clients.

Certificate is the property of AQC Middle East FZE and shall be returned immediately when demanded.

Certificate of ISO 9001:2015

Factory Location & Layout

Organaization



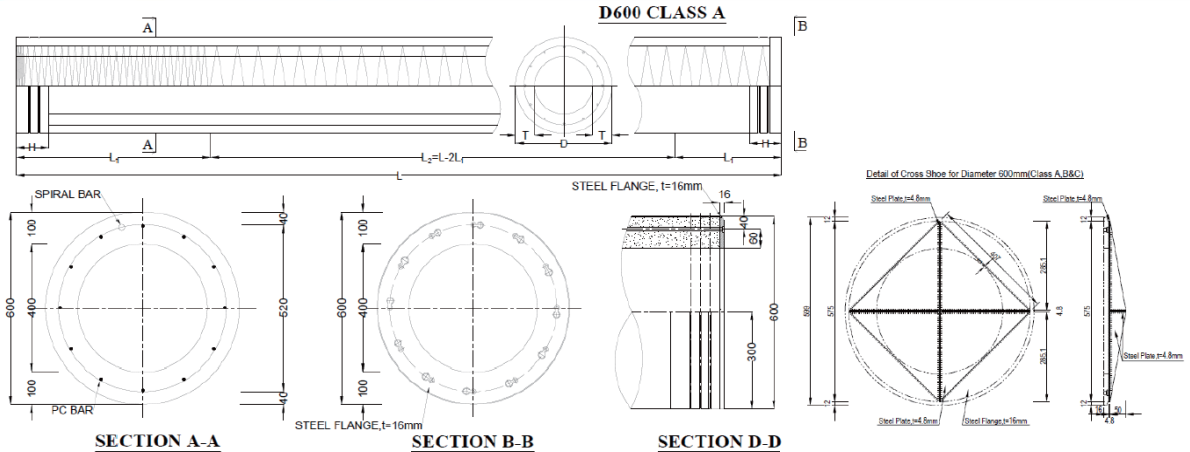
Product Lineup

PC Spun Pile

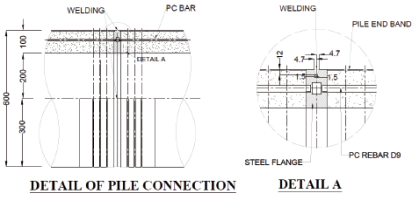
Advantage of PC Spun Pile

- Save the construction expense
- Minimize the construction period
- High concrete strength, high bearing capacity and high bending capacity
- High quality can be maintained by manufacturing in the factory
- Easy to control the pile quality
- Less Noise, less vibration and no excavated soil, environmentally friendly
- No interruption due to rain

Drawing Sample (D600, Class-A)



PILE D (mm)	PILE T (mm)	PILE L (m)	TYPE	PC BAR		SPIRAL WIRE (mm)	L_1(mm)		L_2(mm)		PC BAR Dp (mm)	H(mm)
				DIA. (mm)	QTY. (nos.)		PITCH	LENGTH	PITCH	LENGTH		TYPE-I
600	100	7~15	A	9.0	12	4.0	50	1500	100	$L-2L_1$	520	150



Product Lineup

Specification of Spun Pile

No.	Dimension					PC-bar Dia. (mm)	No.of PC Bar (Nos)	Effective Pre-stress (N/mm2)	Crack Bending Moment (kN.m)	Break Bending Moment (kN.m)	Allowable Bearing Capacity	
	Dia. (mm)	Thick-ness (mm)	Length (m)	Weight (ton/m)	Class						Per-manent (kN)	Tem-porary (kN)
PHC Spun Pile (Concrete strength : Cylinder 80 N/mm2)												
1	300	60	5~13	0.118	A	7.1	6	4.2	27.7	42.0	1,173	1,760
					B	10.0	6	8.1	37.8	72.3	1,141	1,711
					C	10.0	8	10.3	43.8	89.9	1,124	1,686
2	350	65	5~15	0.151	A	7.1	7	4.0	41.8	58.7	1,510	2,265
					B	10.0	7	7.4	55.4	102.5	1,475	2,212
					C	10.0	9	9.2	62.9	124.6	1,457	2,185
3	400	75	5~15	0.199	A	7.1	10	4.3	64.4	94.7	1,983	2,974
					B	10.0	10	8.0	86.7	164.0	1,932	2,898
					C	10.0	11	8.7	91.0	176.7	1,923	2,884
4	450	80	5~15	0.242	A	9.0	7	4.0	87.2	121.5	2,413	3,619
					B	10.0	14	8.4	124.7	253.0	2,351	3,526
					C	10.0	14	9.0	129.4	253.8	2,331	3,496
5	500	90	5~15	0.301	A	9.0	9	4.1	121.4	172.6	3,006	4,509
					B	9.0	18	7.8	164.0	306.0	2,929	4,393
					C	10.0	18	9.3	182.0	358.9	2,898	4,348
6	600	100	5~15	0.408	A	9.0	12	4.1	202.4	279.8	4,071	6,107
					B	9.0	24	7.7	271.8	500.7	3,971	5,956
					C	10.0	24	9.1	300.1	587.9	3,935	5,902
PHC Spun Pile (Concrete strength : Cube 80 N/mm2)												
1	300	60	5~13	0.118	A	7.1	6	4.4	24.6	40.2	938	1,407
					B	9.0	8	8.7	35.7	72.0	897	1,346
					C	10.0	8	10.3	40.1	82.8	882	1,323
2	350	65	5~15	0.151	A	7.1	7	4.0	36.4	56.6	1,212	1,818
					B	10.0	7	7.4	49.8	96.6	1,170	1,755
					C	10.7	9	10.3	61.9	127.6	1,135	1,702
3	400	75	5~15	0.199	A	7.1	10	4.3	56.2	90.9	1,590	2,385
					B	10.0	10	8.0	78.3	154.1	1,530	2,294
					C	10.7	11	9.7	88.9	181.9	1,503	2,254
4	450	80	5~15	0.242	A	9.0	7	4.0	75.8	117.2	1,936	2,905
					B	10.0	14	8.4	113.0	236.6	1,858	2,787
					C	10.7	14	10.1	127.3	260.8	1,817	2,726
5	500	90	5~15	0.301	A	9.0	9	4.1	105.7	166.3	2,412	3,618
					B	9.0	18	7.8	147.9	288.1	2,320	3,480
					C	10.7	18	10.4	179.2	367.5	2,257	3,386
6	600	100	5~15	0.408	A	9.0	12	4.1	176.2	270.5	3,267	4,900
					B	10.0	24	8.4	260.3	548.3	3,141	4,712
					C	10.7	24	10.2	295.4	604.5	3,067	4,600
PC Spun Pile (Concrete strength : Cylinder 50 N/mm2)												
1	300	60	5~13	0.118	A	7.1	6	4.4	24.6	40.2	706	1,059
					B	9.0	8	8.7	35.7	72.0	658	987
					C	10.0	8	10.3	40.1	82.8	640	960
2	350	65	5~15	0.151	A	7.1	7	4.0	36.4	56.6	914	1,371
					B	10.0	7	7.4	49.8	96.6	865	1,298
					C	10.7	9	10.3	61.9	127.6	824	1,236
3	400	75	5~15	0.199	A	7.1	10	4.3	56.2	90.9	1,197	1,795
					B	10.0	10	8.0	78.3	154.1	1,127	1,691
					C	10.7	11	9.7	88.9	181.9	1,095	1,643
4	450	80	5~15	0.242	A	9.0	7	4.0	75.8	117.2	1,460	2,190
					B	10.0	14	8.4	113.0	236.6	1,366	2,049
					C	10.7	14	10.1	127.3	260.8	1,321	1,981
5	500	90	5~15	0.301	A	9.0	9	4.1	105.7	166.3	1,818	2,727
					B	9.0	18	7.8	147.9	288.1	1,712	2,568
					C	10.7	18	10.4	179.2	367.5	1,637	2,456
6	600	100	5~15	0.408	A	9.0	12	4.1	176.2	270.5	2,462	3,693
					B	10.0	24	8.4	260.3	548.3	2,309	3,463
					C	10.7	24	10.2	295.4	604.5	2,227	3,341

Φ300-ϕ450: Factory, Warehouse, Building, Airport, Retaining Wall
Φ500-ϕ600: Bridge, Power Plant, Petrochemical, LNG Plant, Shopping Mall, Piled Slabs

*Bending Strength at application of axial-tension N = 0kN
*Allowance bearing capacity includes safety factor for breaking capacity as 3 for permanent and 2 for temporary.
*Note : For type-C, please order in advance 2 months.

Quality Control for Spun Pile

Cylinder Compression Test for Checking Strength of Concrete

PC Steel Bar Tensile Test for Checking Material Tensile Strength

Dimension Inspection for Length, Thickness and Diameter.

Pile Bending Test for Checking Cracking and Breaking Strength.

Product Lineup

PC Bridge Girder

Advantage of Pre-cast and Post tensioned Segmental Bridge Girder

- High quality can be maintained by manufacturing in the factory
- Minimize the temporary yard at the project site
- Minimize the work period at the project site
- Minimize the supervising engineer at the project site
- No interruption due to the rain
- Easy to transport the segmental girder to the erection point

Post-tensioned Segmental I Girder

Post-tensioned Box Girder

Post-tensioned Segmental T Girder

Pre-tensioned Hollow Girder

PC Bridge Panel & Slab

Advantage of Pre-Cast and Pre-tensioned Bridge Panel & Slab

- High quality can be maintained by manufacturing in the factory
- Easy installation on the girder without scaffolding
- Minimize the work period at the project site


Mold for PC Bridge Panel


Production of PC Bridge Panel


Installation of PC Bridge Panel


View of installed PC Bridge Panel

Box Culvert

Advantage of Pre-Cast Concrete Box Culvert

- High quality can be maintained by manufacturing in the factory
- No concrete work at project site
- Minimize the work period at the project site
- Minimize the supervising engineer at the project site
- No interruption due to rain


Demolding of U Type Culvert


U Type Culvert


Top Lid for U Type Culvert


Boxculvert

Building Components and Other Pre-Cast Concrete Products

Advantage of Pre-Cast and Pre-tensioned Bridge Panel & Slab

- High quality can be maintained by manufacturing in the factory
- Minimize the work period at the project site
- No interruption due to rain


Precast Concrete Segment


Building Components

Factory Main Equipment - Casting

Form works (Φ300-600)

Cutting and Heading machine

Tension Jack

Spinning Machine

Auto-Cage Forming Machine

Vacuum Lift

Factory Main Equipment - Utility

Boiler

Overhead Crane

Concrete Batching Plant (2 nos.)

Suspension Crane

PC Girder Production

PC Panel Production

Spun Pile Process

Spun Pile Production Process

Material delivery

Cutting and heading of PC Bar

Caging

Anchoring

Casting Concrete

Tensioning

Spinning

Steam Curing

Unmolding

Curing

Storage

Shipment

Spun Pile Installation Process

Surveying and marking of piling center

Mobilization of pile machinery

Storage of delivered pile

Marking of length point on pile

Slotting of pile into pile machine

Checking the Alignment

Installation of Jack-in-pile

Welding of pile joint

Cutting of pile if it stopped higher elevation

Girder Process

Girder Production Process

Preparation of Formwork

Assembly of Rebar

Setting of PC Duct

Casting of Concrete

Demolding of Formwork

Storage of Girder

Formwork & Tensioning PC Wire for PC Panel

Casting of Concrete for PC Panel

Storage of PC Panel

Girder Installation Process

Transportation by Trailer

Transportation by Barge

Setting of Assembly Base

Unloading of Segment Block

Setting of Segment Block

Tensioning

Erection of Girder

Completion of Erection of Girder

Setting of PC Panel

First Bridge Project Constructed in Cooperation with Ministry of Construction (New Myaung Mya Bridge)

Project Information

Project Owner	Ministry of Construction
Project Site	Myaung Mya District, Ayeyarwaddy Region, Myanmar
Standard Specification	Japanese Industrial Standards (JIS)
Bridge Type	(Main) Steel Truss Bridge (Approach) 4 Post-tensioned Segmental I Girders
Bridge Length	(Total Length) 830m (Main) 290m (Approach) 540m

Myaung Mya Side Approach Bridge

Pathein Side Approach Bridge

I&H Company Mission

“We shall contribute to the development of Myanmar and shall develop the human resources through our technical transfer”

I&H

I&H Engineering Co., Ltd.

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URL : http://www.iandhengineering.com/

IAS
ISO 9001. MSCB-119.
Certificate No. 19IQDL58.

IHI Group Offices

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