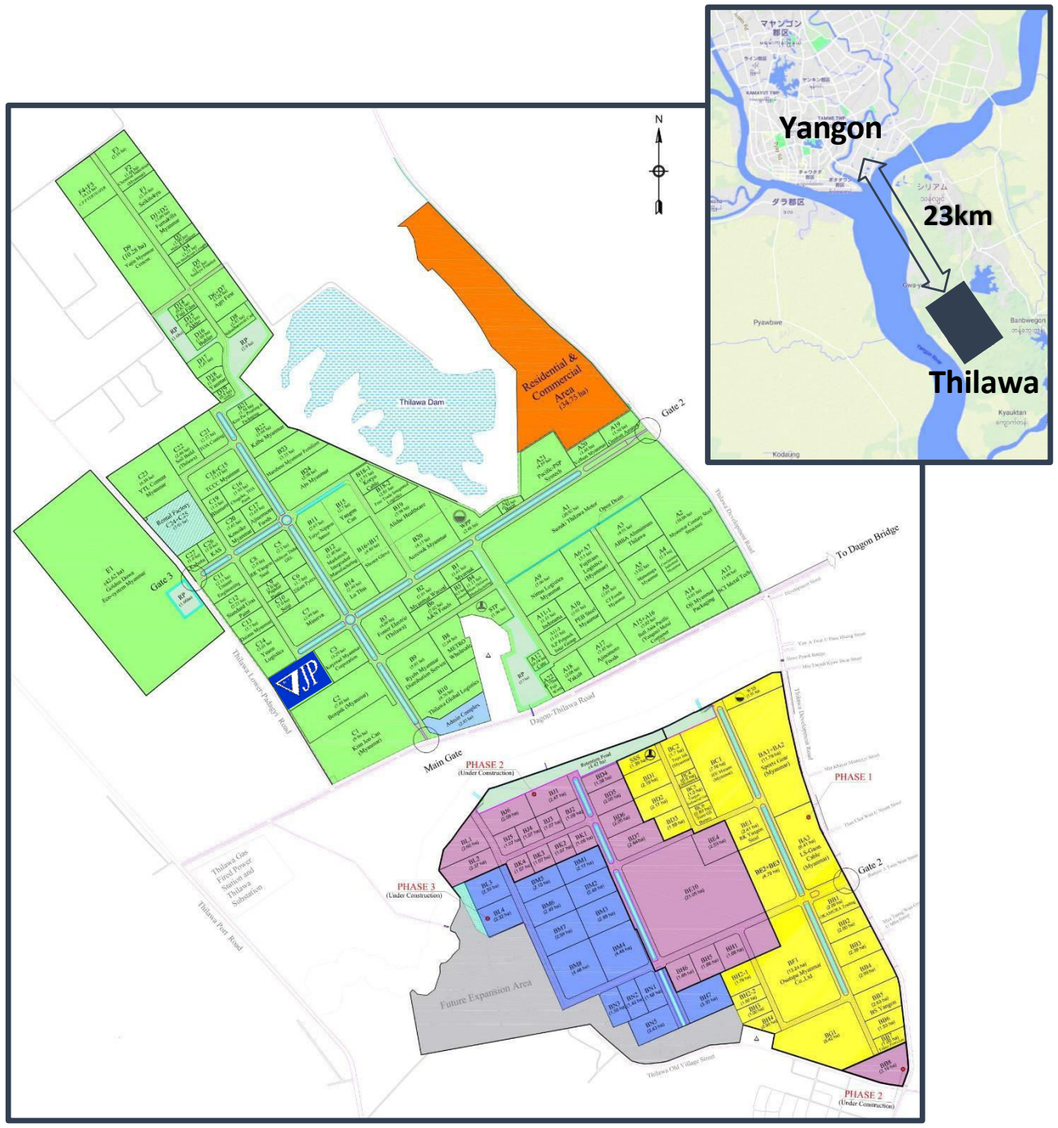


VJP Co., Ltd.

Lot No. C-4, Thilawa SEZ Zone A, Yangon
The Republic of the Union of Myanmar

VJP Co., Ltd.

Message from Managing Director

Dear Valued Clients

Mingalarbar

VJP Company Co., Ltd. was incorporated in 2017 in Myanmar with core belief to fulfill the high demand of construction industry needs for infrastructure and buildings' foundation of Myanmar and VJP has been manufacturing pre-stressed high strength concrete spun pile for quality foundation.

Our vision is to be the market leader in Foundation Industry with our dedicated and professional team by delivering high quality products for our valued customers.

Therefore, we are striving to introduce the advanced technology of “Pre-bored piling method" that we have acquired through our experience and achievements.

Dr. Sone Han
Managing Director
VJP Co., Ltd.

Company Profile

Company name	:	VJP Co., Ltd
Company Address	:	Lot No. C-4, Thilawa SEZ A, Yangon, Myanmar
Start Operation	:	September, 2017
Representative	:	Dr. Sone Han, Managing Director
Business	:	【Manufacturing】 Spun Pile (PHC)
		【Construction】 Pre-bored piling method
Shareholder	:	Asia Pile Holdings Corporation (JAPAN)
		Myanmar V-Pile Company Limited (MYANMAR)
		Phan Vu Investment Corporation (VIETNAM)

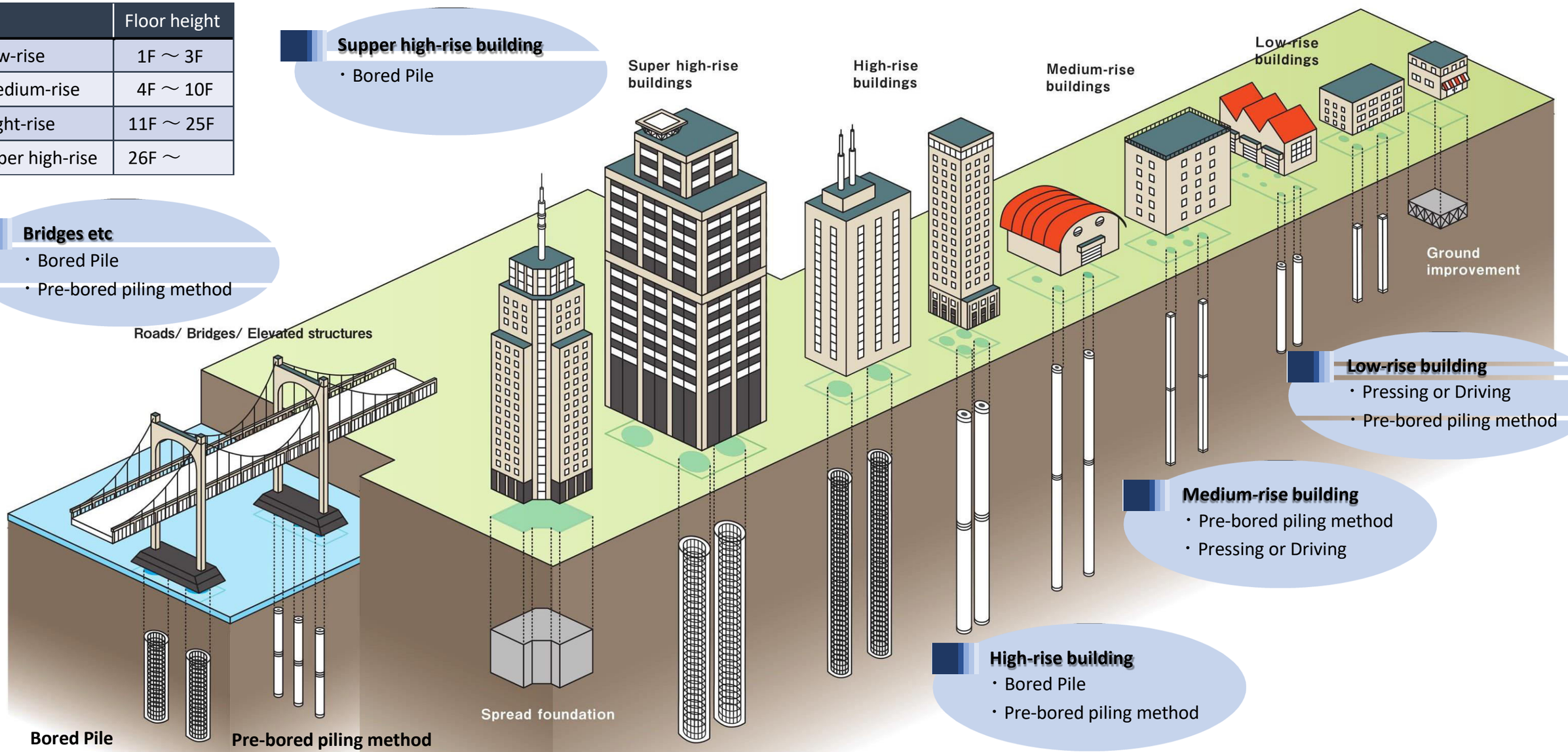
Group Network

Foundation Construction's Coverage

	Floor height
Low-rise	1F ～ 3F
Medium-rise	4F ～ 10F
Hight-rise	11F ～ 25F
Super high-rise	26F ～

Supper high-rise building
- Bored Pile

Bridges etc
- Bored Pile
- Pre-bored piling method

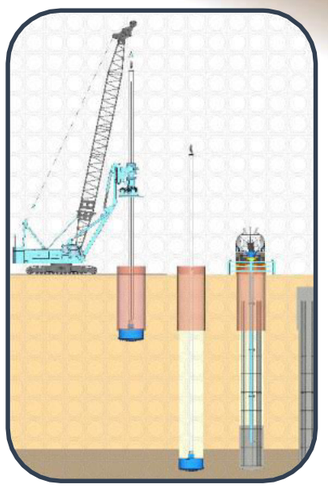


Low-rise building
- Pressing or Driving
- Pre-bored piling method

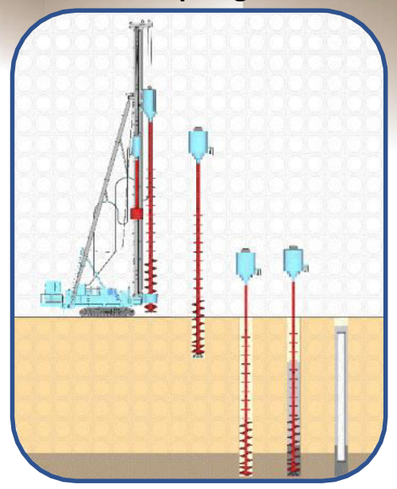
Medium-rise building
- Pre-bored piling method
- Pressing or Driving

High-rise building
- Bored Pile
- Pre-bored piling method

Bored Pile

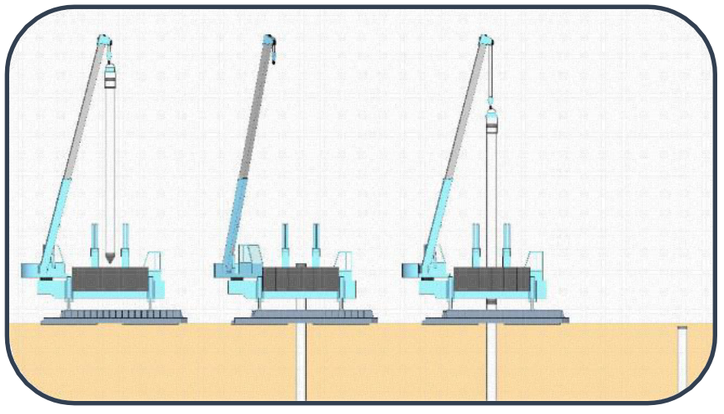


Pre-bored piling method

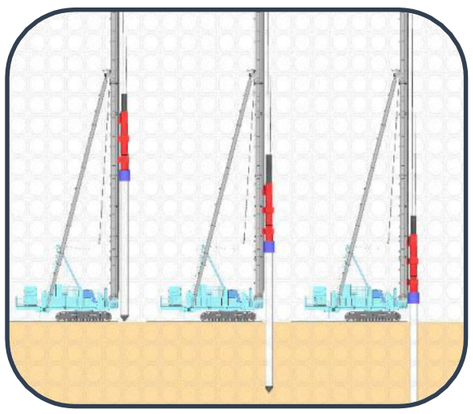


Construction Group Company
【Bored Pile】 **Myanmar Piling Company**
【Pre-bored piling method】 **VJP Co., Ltd.**
【Pressing method】 【Driving method】 **Myanmar V-Pile Company**

Pressing method



Driving method



Factory Summary

Area	:	Land : 41,669 ㎡ Building : 16,890.36 ㎡
Product	:	PHC pile (Prestressed Hight strength Concrete Pile)
Pile Diameter	:	D300, D350, D400, D500, D600
Pile Length	:	L = 6 m ~ 15 m
Production Volume	:	100,000 ton/year
Pile Shape	:	Cylindrical hollow shape
Pile Type	:	Type-A, Type-B, Type-C
Concrete Strength	:	80 Mpa

Standard

Pile Standard

VJP's PHC piles are manufactured with reference to JIS A 5373 standards and also modified to suit ACI 543 R – Recommendation for Design, Manufacture and Installation of Prestressed Concrete Piles.

Materials Standard

Cement	:	Ordinary Portland cement (ASTM C 150)
Coase aggregate	:	Crushed stone Maximum size 25 mm
Fine aggregate	:	Crushed River Sand or Washed Mining Sand
PC steel bar	:	JIS G 3137
Spiral wire	:	Hard Drawn Wire
End plate	:	JIS A 3106

(Definition)
ACI : American Concrete Institute ASTM : American Standard for Testing Material
JIS : Japanese Industrial Standard

Performance Test

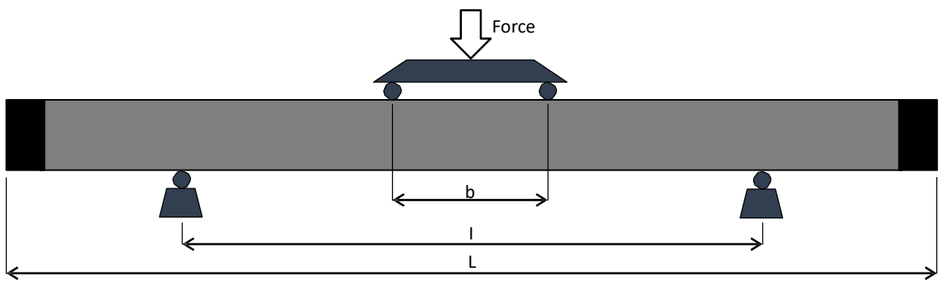
VJP conducts a concrete compressive strength test and a bending test as performance tests of piles.

Concrete Compressive Strength Test

The concrete strength is confirmed by the material age on 1 day, 7 days, 14 days and 28 days.

Bending Test

The piles of the date when the predetermined strength can be confirmed are periodically pull out and tested. In addition, we may conduct tests at the request of the customer.

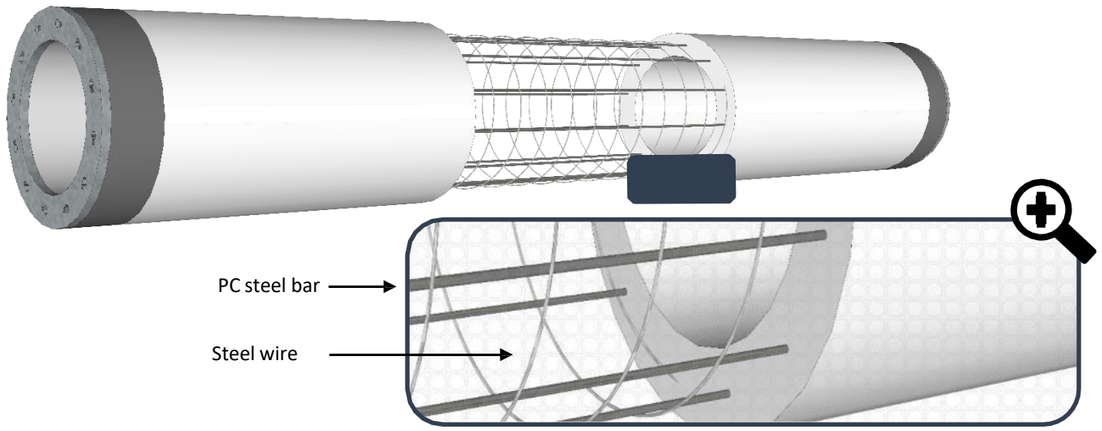


$$F = \frac{8M - mg(2l - L)}{2(l - b)}$$

F : Force (kN)
M : Moment (kN·m)
m : Pile weight (ton)
g : Gravity acceleration (9.81m/s2)

l : Support point (m)
L : Pile length (m)
b : Loading span (1m)

PHC Design



The fixed number to use by a design

Concrete	Concrete Strength		80Mpa		
	Pile type		A	B	C
	Long-term allowable stress	Compression	22		
		Bend tension	σce/4		
		Diagonal tension	1.2		
	Short-term allowable stress	Compression	45		
		Bend tension	σce/2		
		Diagonal tension	1.8		
	Young's modulus		38,000		
PC steel bar	Ultimate tensile stress		1,420		
	Yield tensile stress		1,275		
	Young's modulus		200,000		

Specification of the PHC

	Pile diameter (mm)	Concrete Strength (Mpa)	Type	Thickness (mm)	PC steel bar Diameter (mm)	PC steel bar Number	PC steel bar Diameter of cage (mm)	Pile weight (ton/ m)	Cross sectional area $\times 10^2$ (mm^2)	Conversion cross section area $\times 10^2$ (mm^2)	Geometric moment of inertia $\times 10^4$ (mm^4)	Conversion Geometric moment of inertia $\times 10^4$ (mm^4)	Conversion section coefficient $\times 10^3$ (mm^3)	Amount of prestress (Mpa)	Standard bending moment Cracking (kN·m)	Standard bending moment Breaking (kN·m)	Standard bearing capacity Safety factor : 3.5 Long-term (kN)	Standard bearing capacity Safety factor : 3.5 Short-term (kN)	**Shearing Strength** (kN)	**Tensile Strength** (kN)	Length (m)
	D	**Fc**		**t**			**PCD**		**Ao**	**Ae**	**Io**	**Ie**	**Ze**	**σce**	**Mc**	**Mu**	**N**	**2N**			**L**
Normal	300	80	A	60	7.1	6	240	0.119	452	462	34,607	35,336	2,355	4.0	25.9	39.0	872	1,744	101	231	6 ～ 13
			B		9.0	8				474		36,169	2,411	8.0	36.1	70.4	704	1,408	128	474	6 ～ 15
			C		9.0	10				479		36,560	2,437	10.0	41.4	82.1	616	1,232	139	599	
	350		A	60	7.1	7	290	0.142	546	558	59,925	61,167	3,495	4.0	38.4	55.0	1,053	2,106	121	279	6 ～ 13
			B		9.0	10				573		62,776	3,587	8.0	53.8	105.3	852	1,704	152	573	6 ～ 15
			C		9.0	12				579		63,346	3,619	10.0	61.5	120.2	744	1,488	166	723	
	400		A	65	7.1	10	335	0.179	684	700	99,576	101,944	5,097	4.0	56.0	87.9	1,321	2,642	151	350	6 ～ 15
			B		9.0	12				716		104,142	5,207	8.0	78.1	148.4	1,064	2,128	190	716	
			C		10.7	11				726		105,492	5,274	10.0	89.6	177.7	933	1,866	207	907	
	500		A	80	9.0	9	420	0.274	1,055	1,079	241,198	246,581	9,863	4.0	108.4	161.8	2,036	4,072	232	539	6 ～ 15
			B		10.7	14				1,109		253,032	10,121	8.0	151.8	300.0	1,648	3,296	293	1,109	
			C		10.7	17				1,120		255,568	10,222	10.0	173.7	344.3	1,440	2,880	319	1,400	
	600		A	90	9.0	12	510	0.374	1,441	1,474	483,427	494,008	16,466	4.0	181.1	263.2	2,780	5,560	317	737	6 ～ 15
			B		10.7	18				1,510		505,861	16,862	8.0	252.9	479.2	2,244	4,488	400	1,510	
			C		10.7	23				1,530		512,093	17,069	10.0	290.1	570.1	1,967	3,934	435	1,912	
Special	400	80	A	80	7.1	10	335	0.209	804	821	109,377	111,745	5,587	3.5	58.9	88.2	1,585	3,170	174	364	6 ～ 15
			B		9.0	12				836		113,943	5,697	7.0	79.9	149.1	1,324	2,649	217	735	
			C		10.7	11				846		115,293	5,764	8.8	91.1	180.0	1,189	2,379	235	931	
	500		A	100	9.0	9	420	0324	1,256	1,281	267,035	272,417	10,896	3.4	114.3	162.2	2,480	4,960	270	559	6 ～ 15
			B		10.7	14				1,310		278,869	11,154	6.9	155.8	302.2	2,081	4,163	338	1,141	
			C		10.7	17				1,321		281,405	11,256	8.7	176.9	349.2	1,868	3,736	367	1,441	
	600		A	110	9.0	12	510	0.436	1,693	1,725	533,818	544,399	18,146	3.5	191.2	263.7	3,333	6,667	363	763	6 ～ 15
			B		10.7	18				1,762		556,252	18,541	7.0	260.3	482.3	2,787	5,574	453	1,551	
			C		10.7	23				1,781		562,484	18,749	8.8	296.7	578.2	2,499	4,998	493	1,966	

The Standard of JIS A 5373

Standard bearding capacity (Long-term)

N = {(Fc / S – σce) × Ae} / 100

S : Safety factor (3.5)

Standard bending moment (Cracking)

M = {Ie / ro × (7 + σce)} / 100

ro : D / 2

Manufacturing Process

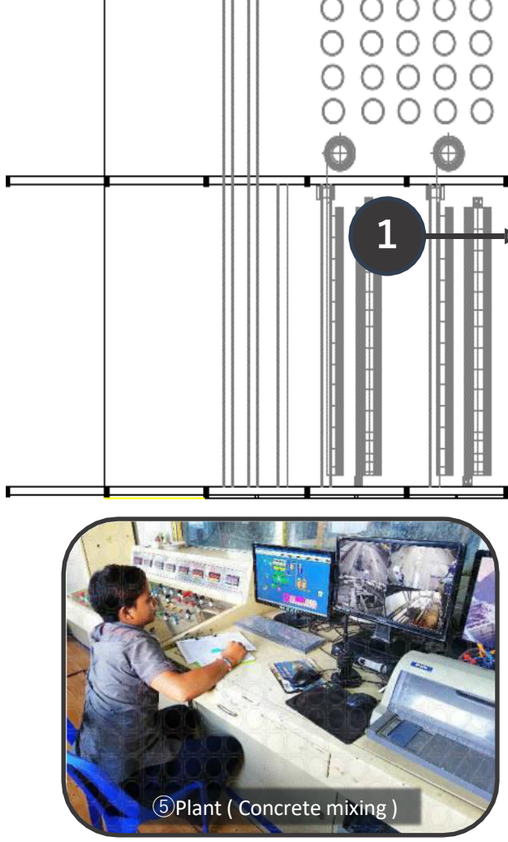

①Cutting & heading of PC steel bar


②Steel bars cage formation


③End plate & Jigs Set


④Setting of mold


⑭Shipment



⑤Plant (Concrete mixing)


⑬Natural curing


⑥Concrete placing


⑫Inspection


⑦Tightening


⑪Demolding


⑩Steam curing


⑨Centrifugal casting


⑧Tensioning

Denko Thilawa Oil Storage Thank Terminal

≪Client≫
Denko Petrochemical Management Co., Ltd.

≪EPC Contractor≫
TTCL Vietnam Corporation Ltd.

≪Foundation Constructor≫
Myanmar V-Pile Co., Ltd.

Pile Size

D300　L = 20m～30 m
D500　L = 28m～46 m

≪Total≫
Number = 4,200 nos, Length = 48,000 m, weight = 11,000 ton

The Photo


【Completion drawing】


【Completion Photo】


【Construction Photo】


【Construction Photo】

Padauk Shwe War Terminal , Petroleum Storage & Handling Facilities At Thilawa

≪Client≫
Padauk Shwe War Port and Petroleum Co., Ltd.

≪EPC Contractor≫
Rotary Engineering Pte. Ltd.

≪Foundation Construction≫
Myanmar V-Pile Co., Ltd.

Pile Size

D300　L=20m～30m
D500　L=28m～36m

Total
Number = 6,600 nos, Length = 66,000 m, weight = 14,500 ton

The Photo


【Panoramic view】


【Transportation】


【Construction Photo】


【Construction Photo】

Myanmar V-Pile Co., Ltd.

Pressing method

Driving method

Myanmar Piling Company., Ltd.

Bored Pile