

# ENGINEERING IS OUR BUSINESS



Engineering. Manufacturing. System Integration

# Precast Concrete Products





# About Us

- HBL Power Systems Ltd is a company serving in the Power domain since 1977 and fundamentally believes in introducing Engineering solutions with innovative products.
- HBL's Vision is to organize India's engineering talent into a globally competitive business, whether in manufacturing or in services.

**HBL** is the first company in India to adopt and bridge the gap with the latest state-of-the-art concrete technology and established adequate set-ups to manufacture these Pre-stressed Spun Concrete Products in India.





# HBL Precast Concrete Products

1. Spun Concrete Precast Piles:
2. Spun Concrete Monopole / Tower
3. Spun Concrete Pole
4. Hollow Core Slabs.



# How Spun Concrete Products are better?

**Produced** in fully quality controlled automated factory environment

**High grade concrete** either M80 or M60

**Concreting** with Controlled efficient Conveyor distribution system.

**Pre-stressing** increases bending resistance.

**Pre-Stressing** permits longer segments and eases transportation

**Spinning**, the unique manufacturing process results in highly compacted and porous free concrete which more durable than any other

**Accelerated Curing** in steam chambers will result in achieving required strengths quickly and thus allows immediate shipment





## Why Pre-cast Spun Concrete Piles ?

- Made of M80 grade concrete which results in higher structural capacity.
- Factory made, certainly meets designed parameters, more durable as they are porous free due to spinning process.
- Pre-cast driven piles are displacement piles. Compacts surrounding soil and results in much better capacities in sandy soils. The net result is reduction in either depth of the pile or total number of the piles depends on the structural requirements.
- Driving pre-cast piles is faster than any other piling process. Productivity will be more than 3 times compared to bored cast-in-situ piling.
- Almost every driven pile is a tested pile as we can easily estimate the pile capacity by correlating impact energy and displacement.
- Environmental friendly as there is no excavation and use of bentonite
- As a whole, by looking at the product quality, minimal site activities, productivity, reduction in quantity, reduction in time lines, Spun Concrete piles are cost effective compared to other piling systems.



# Pre cast Spun Concrete Piles

## Product Specifications

- Dia. 400/600 & 800MM
- Standard Segment Length -12M
- Segment lengths can be customized to 10M / 8M / 6M

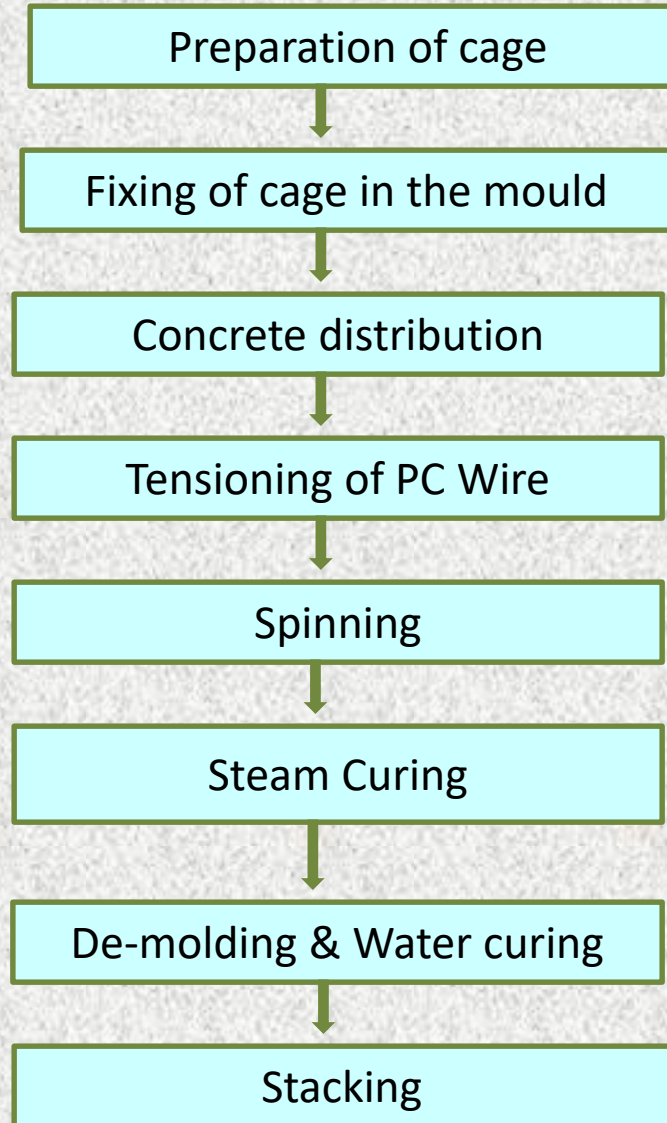
## Structural Capacity of Piles

- 400mm: 145 Tons
- 600mm : 285 Tons
- 800mm : 480 Tons





# Manufacturing Process





# Pre cast Spun Concrete Piles

## Manufacturing Process - Cage Preparation





# Pre cast Spun Concrete Piles

## Manufacturing Process - Concrete Filling





# Pre cast Spun Concrete Piles

## Manufacturing Process - Pre-stressing





# Pre cast Spun Concrete Piles

## Manufacturing Process - Spinning





# Pre cast Spun Concrete Piles

Manufacturing Process - Steam curing



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# Pre cast Spun Concrete Piles

## Manufacturing Process - Water curing





# In-house set up for bending test





# Pre cast Spun Concrete Piles

## Shipping / Transportation





# Pre cast Spun Concrete Piles

Lifting the Initial pile segment



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# Pre cast Spun Concrete Piles

Driving the Initial pile segment



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# Pre cast Spun Concrete Piles

## Splicing between two segments



# Pre cast Spun Concrete Piles

Driving of piles up to the required depth





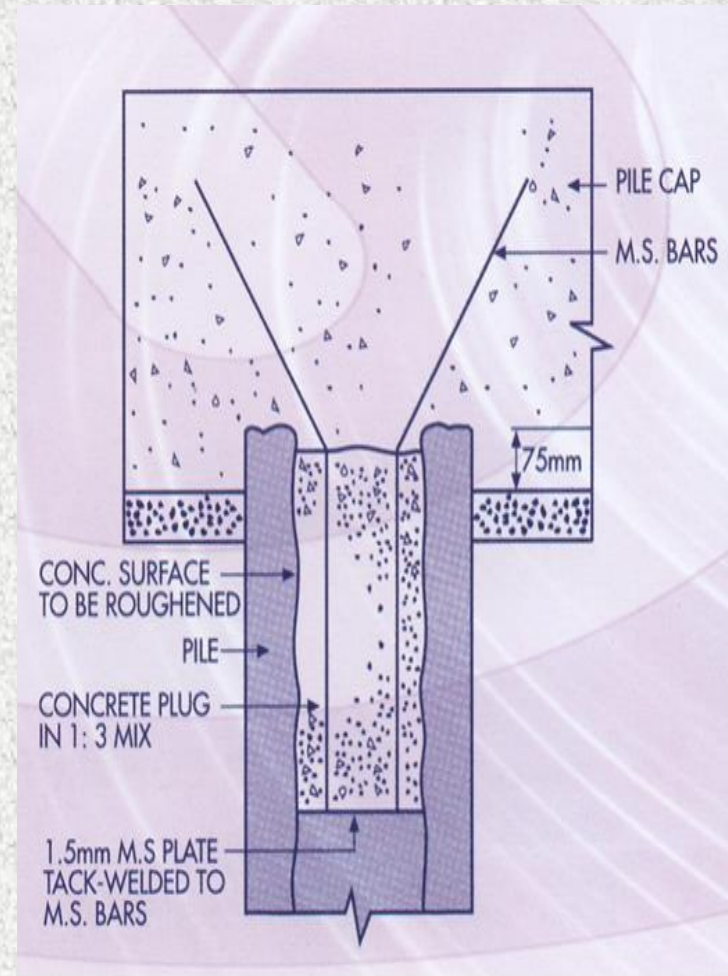
# Pre cast Spun Concrete Piles

## Preparation of pile cap





# Pile Capping Procedure







# Pre cast Spun Concrete Piles

## Projects executed

### Project – 1

Customer Name: **China Steel Corporation India**

Industry: **Steel**

Project Location: **Dahej, Gujarat**

Supplied from: **Shamirpet, Hyderabad**

Pile Size and Quantity:

**Φ 400mm – 2, 500Nos (30, 000 RM)**

**Φ 600mm – 700Nos (8, 400 RM)**

Year of execution - **2013**



# **Pre cast Spun Concrete Piles**

## **Projects executed**

### **Project – 2**

**Customer Name: Reliance Industries Limited**

**Industry: Oil & Gas**

**Project Location: KG Basin, Kakinada**

**Supplied from: Shamirpet, Hyderabad**

**Pile Size and Quantity:**

**Φ 400m – 1, 300Nos (15, 600 RM)**

**Φ 600mm – 650Nos**

**Year of execution - 2014**





# **Pre cast Spun Concrete Piles**

## **Projects executed**

### **Project – 3**

**Customer Name: Reliance Industries Limited**

**Industry: Oil & Gas**

**Project Location: Dahej, Gujarat**

**Supplied from: Shamirpet, Hyderabad**

**Pile Size and Quantity:**

**Φ 600mm – 3, 400Nos (40,000 RM)**

**Year of execution - 2015**



# **Pre cast Spun Concrete Piles**

## **Projects executed**

### **Project – 4**

**Customer Name: Ravi Priya Mall**

**Industry: Commercial**

**Project Location: Ongole, AP.**

**Supplied from: Shamirpet, Hyderabad**

**Pile Size and Quantity:**

**Φ 600mm –120 Nos (2000 RM)**

**Year of execution - 2017**





# **Pre cast Spun Concrete Piles**

## **Projects in execution**

### **Project – 5**

**Customer Name: Samsung Electronics**

**Industry: Electronics-Mobile**

**Project Location: Noida, UP**

**Supplied from: Shamirpet, Hyderabad**

**Pile Size and Quantity:**

**Φ 600mm – 1600 Nos (15, 000 RM)**

**Year of execution - 2017**



# SAMSUNG - Noida





# SAMSUNG - Noida





# Spun Concrete Monopole

- Sleek & Elegant
- Withstand 300 Kmph plus wind speed
- IIT –Chennai Approved Design
- Occupies less foot print
- Suitable for 220kv Transmission also





# Advantages of Spun Concrete Monopole

Slender and sleek design.

Cost Effective in urban spaces & Pilferage Proof

Occupies much less ground space (Bottom dia. 1.2Mtr)

Erection & Installation can be done in very short time

More durable with a very long life (No corrosion)

Maintenance free (No anodizing, No frequent painting etc. ).



# Advantages of Spun Concrete Monopole

Much better wind withstand capacity.

Suitable for Cyclone Prone Areas (withstand high gale and wind loads)

Eco Friendly, Aesthetic and can be tailored to meet the specific application.

Solar panels can also be installed on tower to generate renewable energy.

Meets all safety Standards/ requirements

For FM Radio application it offer better Omni Radiation pattern for antenna due to lesser diameter as compared to conventional towers.

Camouflaging best suited.

Proven Technology world over





# Various Applications of Spun Concrete Monopole



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# Spun Concrete Pole





# Superior Feature of Spun Concrete Pole

Looks elegant

Pilferage proof.

Maintenance free.

Stronger & uniform.

Better Aesthetic.

Equal strength in all directions.



# Spun Pole Applications

## Solar Lights



## OHT Power



## Smart City Pole





# Spun Pole Applications





# Pre Cast Hollow Core Slabs

- State of Art Technology with advance extrusion technique
- Panel size Thickness : 6 inches & 10 inches.
- Strength of Concrete : M-60





# Advantages of Hollow Core Slabs

**Less Weight** : 40% lesser than conventional Concrete and this leads to lesser structural loads in design.

**Quick Processing & Erection** : Can be manufactured and erected quickly there by savings on quick completion and early availability of Infrastructure.

**Longer Span & Greater Loads** : Allow less Beams & Columns and thereby more free and unobstructed Space.

**Multipurpose Utilization** : Slabs can be used for compound walls by sliding in the panels horizontally in MS/ Concrete Columns.

**Economical** : 20% cheaper than conventional slabs.

**Hassle Free** : Due to limited manpower for handling and erection.

# Precast Hollow Core Slabs

## - Product Range & Technical Specs

Sl No	Description/Parameter	150mm/ 6inch	250mm/ 10 inch
1.	Thickness of each Panel (mm)	150	250
2.	Width of Each Panel (mm/feet)	1200/4	1200/4
3.	Length of Each Panel allowed span height with out support	6	9
4.	Strength of Concrete	M-60	M-60
5.	Strand type (LRPC)	9.53/12.57	9.53/12.57
6.	Self Weight (Kgs/Sq.m)	232	320





# Pre cast Spun Concrete Piles

## Manufacturing Units Located at:

- In the vicinity of Amaravathi At Narsaraopeta
- Vijayanagaram
- Shamirpet (out skirts of Sec.bad).

**Capacity: Each plant can produce 100 Piles per day (1200 running meters)**

### Manufacturing Process

THANK YOU