

# ENGINEERING IS OUR BUSINESS



Engineering. Manufacturing. System Integration

**HBL**<sup>®</sup>

HBL Power Systems Limited, India

# 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. Hollow Core Slabs
3. Spun Concrete Pole:



## How Pre-Cast Spun Concrete Products are better?

Produced in fully quality controlled automated environment

Concreting: With Controlled efficient Conveyor distribution system.

Pre-stressing:

- Increases Bending resistance.
- Provides internal compressive forces and increases pole stiffness.
- Permits longer lengths and more static / dynamic loads

Spinning

- Uniform formation of concrete & hollowness thro centrifugal spinning.
- Extracts extra water from concrete & maintain proper cement water ratio.

Steam Curing.

- Achieves required strengths quickly and thus allows immediate shipment

# Pre cast Spun Concrete Piles

## Product Specifications

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



# Pre cast Spun Concrete Piles

## Benefits with spun concrete Piles

- Speed in manufacturing and driving-Early return on investment .
- Every pile driven is factory tested-Product Quality
- Higher Strengths for given diameter of pile- Permits more loads
- Site cleanliness- Green Environment
- Cheaper- 25% Cost and 30% time savings



# 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



# Pre cast Spun Concrete Piles

## Manufacturing Process - Water curing



# Pre cast Spun Concrete Piles

## Shipping / Transportation



# Pre cast Spun Concrete Piles

Driving the Initial pile segment



# Pre cast Spun Concrete Piles

## Driving the Initial pile segment





# 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



# Pre cast Spun Concrete Piles



# Spun Pre-Cast Driven and Bored Cast-in-situ piles at Amaravati



# Pre-Cast Driven and Bored Cast-in-situ piles



# Pre-Cast Driven and Bored Cast-in-situ piles





# 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 400m – 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**

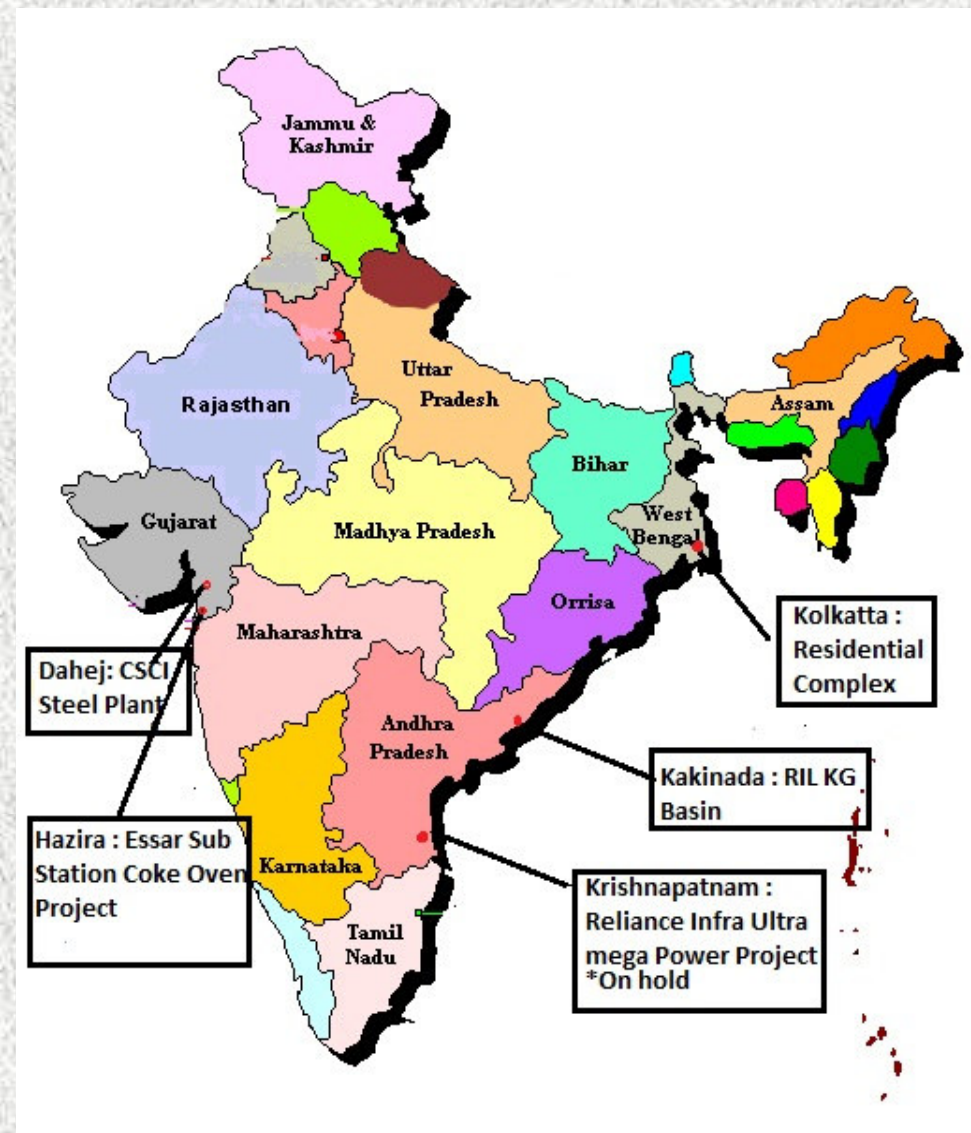
Pile Size and Quantity:

**Φ 600mm – 3, 400Nos (39, 000 RM)**

Year of execution - **2015**

# Client List – Spun Concrete Piles

- Dahej ( Gujarat): CSC India ACL Mill Project thru Cinda Engg supplied test and working piles of 400mm and 600mm dia.
- Hazira(Gujarat) : Essar substation coke Oven plant . test piles of 350mm and 400mm dia.
- Kolkatta : Batanagar residential complex, test piles of 400mm dia.
- Krishnatapam (AP): Reliance Infra, supplied 400mm dia piles. ( project on hold).
- Kakinada(AP) : RIL KG-Basin, working piles of 400mm & 600mm dia.
- Dahej (Gujarat): Reliance Ethane Gas Plant



# 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



# 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

# Advantages of Hollow Core Slabs **HBL**

**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.

# Spun Concrete Monopole

- Sleek & Elegant
- Withstand 300 Kmph
- IIT –Chennai Approved Design



# Advantages of Spun Concrete Monopole

Extremely slender and sleek design.

Cost Effective & Pilferage Proof

Occupies much less ground space (Bottom dia 1.2Mtr)

Easy to erect & Install in a very short span of time

Extremely durable with a very long life (No corrosion, No Chemical reaction,

No deterioration). There is virtually no degradation even in the most severe weather conditions & long lasting

Completely maintenance free (No anodizing, 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



# Spun Concrete Pole

- Transmission & Distribution
- Smart City Poles
- Comply IS 13158: 1991



## Superior Feature of Spun Concrete Pole

**HBL**<sup>®</sup>

Cost Saving.

Easy Availability.

Pilferage proof.

Maintenance free.

Easy to Handle & Transportation.

Stronger & uniform.

Better Aesthetic.

Equal strength in all directions.

Stay anchors are considerably reduced



# Spun Pole Applications

## Solar Lights



## OHT Power



## Smart City Pole



# Spun Pole Applications



THANK YOU