PRECAST: A COMPETITIVE ADVANTAGE

PRESENTATION BY SHRIDHAR RAO - ELEMATIC

SMART EVOLUTION
Precast Construction is Efficient and fast

Precast concrete is produced by casting concrete in reusable molds or by using highly advanced machinery, then cured in a controlled environment, transported to the construction site and lifted into place.
Precast Buildings

- Residential
- Industry
- Mid/High Rise
- Sports
- Offices
- Public Works
Precast System for Housing

Wall-Frame System:

- Hollow-core Slab floor
- Gravity + Lateral Load-bearing Wall
- Exterior façade (Non-load-bearing/Lateral load resist)
- Non-load bearing Internal Walls
- Stairs and Lift Core
Precast The smart way to build

Precast products can be used to build virtually any type of building.

- Sandwich panels
- Cladding panels
- Solid panels
- Solid slabs
- Acotec panels
- Extruder: Hollow-core slabs
- Slipformer: Hollow-core slabs
- Slipformer: Ribbed slabs, Half slabs
- Slipformer: T-beams

SMART EVOLUTION
Advantages of Precast Concrete Construction

- **Speed (2x)**
- **Low Manpower**
- **Economical**
- **No Plastering**
- **Durable Buildings**
- **Better Design**
- **No wastage**
- **Eco Friendly**

Alternative Way of Construction
Precast in Numbers

2 Times Faster than conventional construction.

3 Times Less labour than conventional construction.

5 Years Payback Period for machinery and mould CAPEX

25% Up to 25% less consumption of raw material

100+ Years is the effective building life as precast concrete gains strength with time.

5,000+ Over 5,000 repetitions with precast casting moulds.
Hanwha: Bismayah New City, Iraq
The 1st and the largest city development project ever in Iraq

<table>
<thead>
<tr>
<th>Project</th>
<th>Bismayah New City</th>
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</thead>
<tbody>
<tr>
<td>Developer</td>
<td>National Investment Commission of Iraq (NIC)</td>
</tr>
<tr>
<td>Design and Construction</td>
<td>Hanwha Engineering and Construction Co.</td>
</tr>
<tr>
<td>Contract Amount</td>
<td>USD 7.75 Billion</td>
</tr>
<tr>
<td>Location</td>
<td>10 km from Baghdad</td>
</tr>
<tr>
<td>Project Detail</td>
<td>Land development works</td>
</tr>
<tr>
<td></td>
<td>Housing construction work</td>
</tr>
<tr>
<td>Work Period</td>
<td>7 years: 2 design, 5 execution</td>
</tr>
<tr>
<td>Total No. of Population</td>
<td>600 000</td>
</tr>
<tr>
<td>Target No. of Households</td>
<td>100 000</td>
</tr>
<tr>
<td>Area Size</td>
<td>1, 830 ha</td>
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</tbody>
</table>
EXAMPLES IN INDIA
PRECAST BUILDINGS
DDA Housing Project – 50,000 houses in Delhi
Housing Project - Architectural Views

1.7 M sq.ft
development
2 basement
10 storied Building

Alternative Way of Construction

SMART EVOLUTION
Wall Frame – Execution
Jindal Student Housing

Student Housing
6 storey building of
500 student housing
capacity 85,000 sq. ft
structure built in 2
months
Project Examples - Wall Frame structure with Hollow core slabs

Student Housing

Alternative Way of Construction
NESTLE Process R&D Center-Construction phase

Building Area of 15,000 sq.mt.
Large Solid Slab Spans of 12.0m
Loading = 15.0 kN/ sq.m.
3 Storey Column = 14.20 m Tall
Process R&D Center
Novotel Ibis Como Hotel - Chennai

- Project size: 300,000 sq. ft. BUA
- 14 Storeyed building with 2 basement and 60 mtr height
- Precast columns and beams, precast hollow core slabs, precast lift core shaft, precast staircase, precast retaining wall
- Project finished in 11 months
Novotel Ibis Como Hotel-Project Site snapshot
TVS Motors Factory - Hosur, TN

- Project size: 110,000 sq.ft - BUA
- Duration: 90 days
- 10mtr span, 200 mm HCS, Precast columns and prestressed beams
TVS Motors Factory Project Site
Agricultural College Indoor sports hall
Bapatla AP

Total precast sports hall.

PROJECT SIZE – 16,000 sq.ft
Structure completed in 60 days
Construction of Agriculture College - Indoor sports hall - Bapatla AP

Alternative way of Construction

SMART EVOLUTION
ITC Cigarette Factory- Bangalore

Alternative way of Construction

SMART EVOLUTION
Video – Precast Building construction

CONSOLIS PRESENTATION
ARCHITECTURAL APPLICATIONS- PRECAST IS BEAUTIFUL
Precast is Beautiful

Alternative Way of Construction
Precast is Beautiful

Alternative Way of Construction

SMART EVOLUTION
Precast is Beautiful

Alternative Way of Construction
OUR COMPANY
Elematic - World’s Leading Supplier of Precast Technology

Elematic, a Consolis Group company, is the world’s leading supplier of know-how, machinery, equipment, production lines and complete production plants for the precast concrete industry. Elematic’s production technology is already in use in more than 100 countries on five continents.
The only one-stop-supplier in the precast concrete industry

- Delivering anything from a single machine or production line to a complete plant for any precast product
- World-leading technology, knowhow, process excellence and software
- The most extensive customer services in the market
- Setting up World’s largest precast plant at Iraq for 7500 sq.m. BUA per day.

Global market share

- Hollow-core slab technology 60%
  - Elematic
  - Others

- All precast concrete production technologies 40%
  - Elematic
  - Others
Elematic – Precast Plant (SEMI)

- 2 bays of 18 x 150 m +
  Storage space
- Total Land requirement = 6-8 Acres
Elematic – Precast Plant

Production of Pre-Stressed Floors: Extruder
Elematic – Precast Plant

Production of Wall Panels : KVT Line

[Diagram showing process of wall panel production]

- Mold
- Casting machine
- Track
- KVT-wagon
Elematic – Precast Plant

Production of Precast Wall Panels
Elematic – Precast Plant

Fastening Method

- Magnets
- Aluminum side forms
- Moulds
- Beds
Three technology levels Your choice
Complete precast plants for walls and floors

**SEMI**
Simple and easy start up level production with low initial investment

**PRO**
Large capacity production for a broad product range

**EDGE**
Advanced and highly automated plant for high volume production
Market Areas

Elematic’s production technology is already in use in more than 100 countries on five continents.
Some of our key customers

Reference of some of the key customers having our machinery setup
Altimate India Services

ELEMATIC SERVICES

Concept Design / Project Feasibility Study
Supply Precast Machinery
Precast Plant Design
Plant Setup & Maintenance
Production Training / Supervision
Structural Engineering Services
Execution Training / Supervision
Rebar Automation / Precast Accessories
Architectural / MEP Services*

* Services provided through our partners

Alternative Way of Construction

SMART EVOLUTION
Thank You!

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