WINSUN 3D Printing

New Era of Green Building

Print a High-Tech City, Recycle a Green Planet

Yihe Ma
Introduction

Intellectual Property: 129 National Patents

Achievements: 400+ Opera and other large scale projects

Factories: Shanghai, Suzhou, Xiangyang

Main Business: For 15 years, we focused on the development, design, manufacturing and sales of 3D printed construction and new building materials. The 5 main product categories are:

- **2002**: first in China to develop **GRG** (Glass Fiber Reinforced Gypsum)
- **2006**: first in China to develop **SRC** (Special Reinforced Cement)
- **2006**: first in China to develop **FRP** (Fiber Reinforced Plastic)
- **2007**: first in the world to develop **CMS** (Crazy Magic Stone, Yingheng Shi)
- **2008-2014**: first in the world to **3D print construction**
The world’s first to achieve practical 3D construction printing technology.

Five new kinds of printed buildings were released worldwide, including underground infrastructure, steel structure building and Chinese Ancient Houses.

WINSUN printed 6-storey residential building, the highest construction in the world, and the 1100m² fully decorated villa.

WINSUN -- The Global Leader of Construction 3D Printing

2014-3-29

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2015-1-18

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2016-3-27

WINSUN’s global strategic cooperation model conference

2017-5-18

www.winsun3D.com
What is 3D printing?

Upload design drawing  →  Start printing  →  Wall printing process  →  Finished wall parts

Foundation  →  Transportation  →  Hoisting  →  Regional perfusion

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Core benefits: 3D Construction Printing integrates the traditional construction process, making it much easier, it improves efficiency

Save on material, time, labor and improve quality…

- saves the overall cost by at least 50%,
- saves the construction materials by 30% to 60%
- shortens construction duration by 50% to 70%
- saves human resources by 50% to 80%.

…a better construction environment

Effectively avoid generating dust and noise
WINSUN was the first to realize integrated 3D construction printing technology

Exclusive Ink + Giant 3D Printer + Customized Decoration of exterior wall/insulation, etc.

Retain original beam column and steel bar system + reserve space for pipelines, windows, and doors in walls

Integrated 3D printing (Structures, Insulation, building components, exterior wall decoration, interior wall printing all at once)
3D – printed Architecture Applications

The world’s first 3D Printed Offices at Dubai

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The printed components were then assembled in Dubai within only a couple of weeks.
3D – printed Architecture Applications

WINSUN Printed 1100m² villa
1 floor per day printing speed
3D – printed Architecture Applications

5 stories tall
Tallest 3D printed structure in the world

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3D – printed Architecture Applications

The Exterior of the 3D-printed Chinese Ancient Courtyard (130㎡)
3D – printed Architecture Applications
3D – printed Architecture Applications
Parts of Underground Facilities
3D Printed Underground Infrastructure – Sewage Wells

WINSUN’s First Generation 3D printed Double-Layers Sewage Wells

Conventional Building Style

WINSUN’s Second Generation 3D printed Single-Layer Sewage Wells
Upgrade the sewage wells and septic tanks with the use of slag and waste residue.

Conventional Way

3D Printed

Installation of 3D Printed Tank

Building printed with steel slag

Mining and tailings

3D Printed Underground Infrastructure – Septic Tank

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ECO-SHORELINE – Solve Coastline problem
Details of 3D-printed parts and components
Energy Saving and Environmental Protection

3D Construction Printing integrates the traditional construction processes, making it much easier, improving efficiency, shortening construction duration and saving cost. It will revolutionize the traditional construction industry.

Save Materials 30%-60%, Duration 50%-70%, Labour 50%-80%, Weight 30%-50%

Reduce Cost

Dry Construction System to create a better construction environment

Effectively avoid generating dust and noise

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Analysis on the Cost difference of 3D Printed Buildings and Traditional Buildings (1/3)

Toilet by Integrated Printing

Guard house

Landscape Wall

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Analysis on the Cost difference of 3D Printed Buildings and Traditional Buildings (2/3)

The printed wall with interior and exterior decorations
Analysis on the Cost difference of 3D Printed Buildings and Traditional Buildings (3/3)
WINSUN Launches Global Standards for 3D Printed Building

1. Standards of Printing Materials (Ink)

2. Standards of 3D Printed Building

3. Standards of 3D Printed Non-Load Bering Wall

4. Standards of Free Demolition Template

5. Standards of 3D Printed Reinforced Load-Bearing Wall

6. Standards of 3D Printed Frame

7. Standards of CMS

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Outlook

3D printing tech development

Design, Idea
Client

Cloud Platform

Real estate companies

3D Industry Alliance

Mine Owner

Preemption and Preferable Price

Mining residual to raw material

Dream factory (Building, CMS, GRG, SRC, FRP)
Urban mine (Waste Recycling)

Offline exhibition
3D Printing factory

Real estate companies

Equity

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Success Stories of WINSUN's Global Strategic Partnership

Dubai (Green Building)  USA (Hyperloop)  Iraq (Reconstruction)  Saudi Arab (Construction)

German (Precision Manufacturing)  Investment Corporation of Heze City government  Northwest Survey and Design Institute  AECOM

www.winsun3D.com
Print a Hi-tech City, Recycle a Green Planet
VALUE: Quality   Innovation   Share

MISSION: Make Sky Brighter, Water Cleaner, Mountain Greener

VISION: To Be Pioneer on 3D Printing Construction

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