

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**



WINSUN -- The Global Leader of Construction 3D Printing



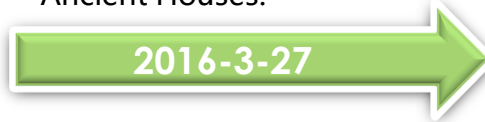
The world's first to achieve practical 3D construction printing technology.



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's global strategic cooperation model conference

What is 3D printing?

Upload design drawing



Start printing



Wall printing process



Finished wall parts



Foundation



Transportation



Hoisting



Regional perfusion



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

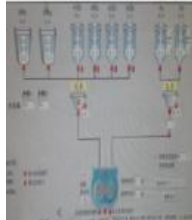


Integrated 3D printing
(Structures, Insulation, building components, exterior wall decoration, interior wall printing all at once)

Large and continuous 3D printer



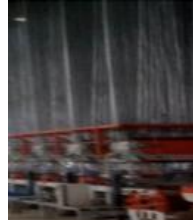
Material collecting



Data Analyzing



Printing output system



Continuously producing



3D – printed Architecture Applications

The world's first 3D Printed Offices at Dubai



3D – printed Architecture Applications

Remote Printing & Fabrication



Installation



Final product



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

3D – printed Architecture Applications

3D Printed Villa at Wujiang, China

The Exterior of the 3D-printed Chinese Ancient Courtyard (130㎡)

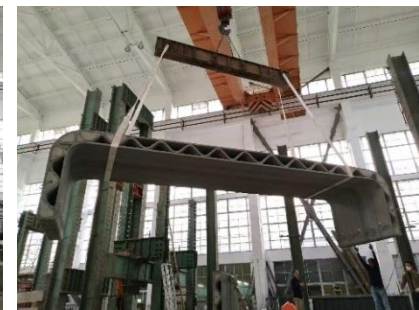
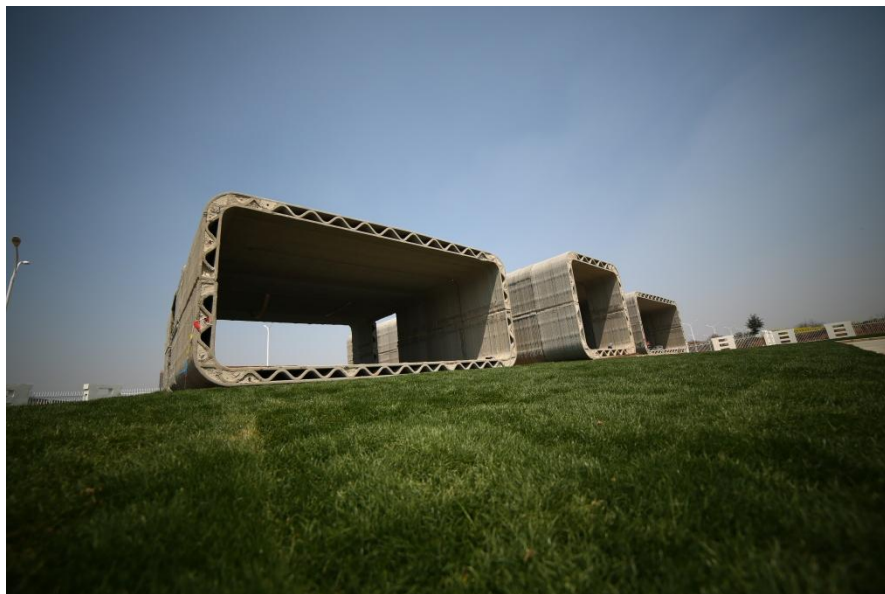


3D – printed Architecture Applications



3D-printed undulated building

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

3D Printed Underground Infrastructure – Septic Tank



Conventional Way



3D Printed



Installation of 3D Printed Tank



Building printed with steel slag



Mining and tailings

Upgrade the sewage wells and septic tanks with the use of slag and waste residue.

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.

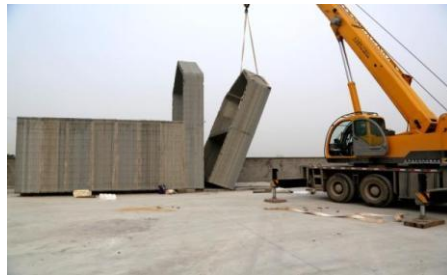


Save Materials 30%-60%, Duration 50%-70%, Labour 50%-80%, Weight 30%-50%

?

Reduce Cost

Dry Construction System to create a better construction



Effectively avoid generating dust and noise

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



Toilet by Integrated Printing

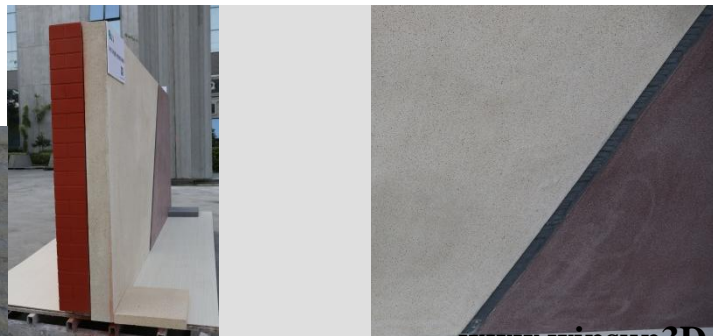


Guard house



Landscape Wall

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)



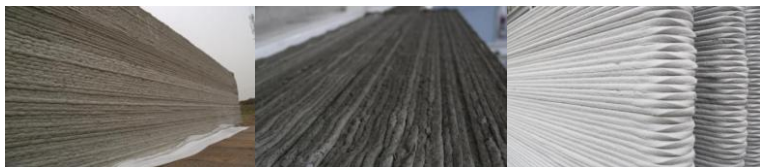
Printed Wall
Integrated with
Door and
Window



Hollow Wall
Save Cost
Place Pipes
Thermal Insulation

WINSUN Launches Global Standards for 3D Printed Building

1、Standards of Printing Materials (Ink)



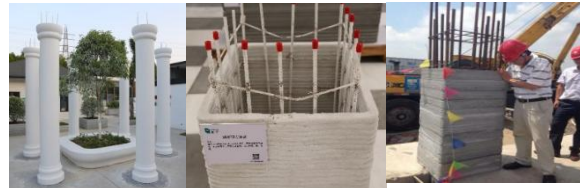
2、Standards of 3D Printed Building



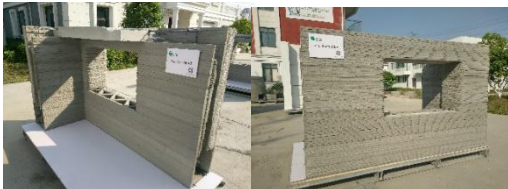
3、Standards of 3D Printed Non-Load Bearing Wall



4、Standards of Free Demolition Template



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



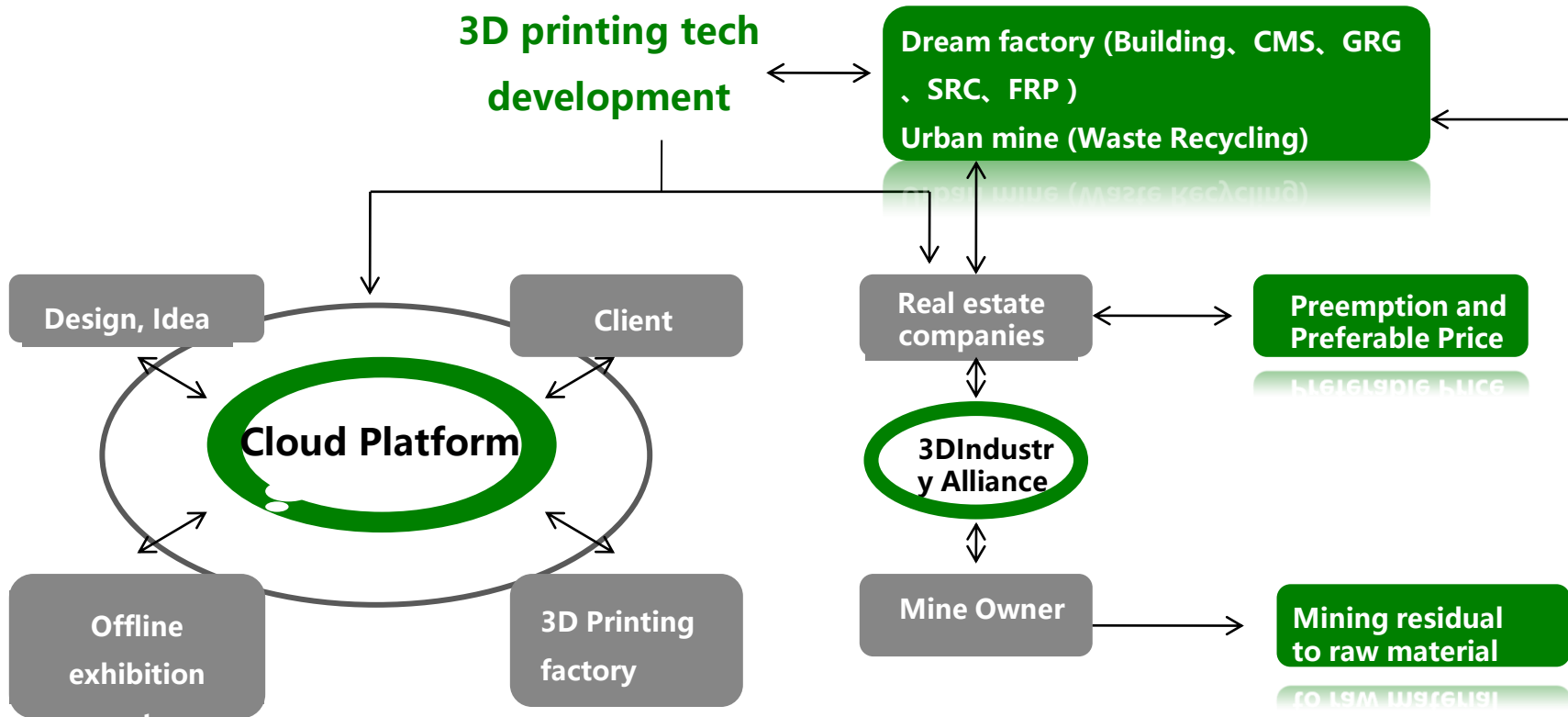
6、Standards of 3D Printed Frame



7、Standards of CMS



Outlook



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

打印一座科技城市，回收一个绿色地球

Print a Hi-tech City, Recycle a Green Planet



3D Printing Architecture's Future

VALUE : Quality Innovation Share

MISSION : Make Sky Brighter, Water Cleaner, Mountain Greener

VISION : To Be Pioneer on 3D Printing Construction

Follow us on



Yingchuang New Material



Yingchuang Building Technique (WinSun)

Website: www.winsun3D.com

Tel: +86-21-52378515

Email: yhbm@yhbnm.com

Chairman Yihe Ma: +86-13818755999

Yingchuang Building Tech (Shanghai) Co.,Ltd(WINSUN)

