



Drycotec **Diaries**



Veendam, Netherlands
innovation by nature
since 1919

AVEBE STARCH ETHERS

Helping you make
better dry mortars.

STARCH ETHERS FOR DRY MORTARS

Take the **LEAD** with AVEBE's state of the art, performance enhancing *potato starch ethers* for cement and gypsum dry mortars. Explore how our products can lift your dry mortars to the **next level** in performance and cost efficiency.

Sustainable & Responsible Innovation



seed potato for starch ethers

OPAGEL®

SOLVITOSE®

CASUCOL®

ADDILOSE®

SKIM COAT

TILE ADHESIVE

RENDER

PUTTY

JOINT FILLER

SPRAY MORTARS

Applications : Cement

Skim Coat & Putty
Tile Adhesive
Manual Renders
Spray Renders
Repair Mortar
Self Levelling Mortar

Benefits : Cement

Workability
Anti slip / Anti-Sag
Thickening
Open time
Adjustment time
Reduce chalking
Cost reduction
Bounce back reduction

Applications : Gypsum

Manual Plaster
Finishing plaster
Spray plaster
Joint filler
EIFS
Spot Glue


Benefits : Gypsum

Anti-sag
Thickening
Workability
Working time
Smoothness
Surface hardness
Reduce chalking
Time saving



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* Benefits are also dependent on quality of ingredients, formulation and optimisation of blend.

Editor's Page : Getting a PhD....



10 Simple Steps towards getting your PhD...

First Qualifier : To begin, you must have a Masters Degree with min first class, 60% score. This is a mandatory requirement. So, if you have it, let us proceed. If not, get your Masters done.

Second Qualifier : Is the entrance exam, which has 2 papers, one is on your subject (Masters) & other is general knowledge. You have to pass both these exams with 50% passing marks.

Third Qualifier : After both papers, you will have to face a panel interview. They will ask on the subject, probable topic and reasons to do a PhD. You need to pass & convince the panel that you can do it.

Fourth Qualifier : Transfer Certificate & Migration Certificate from your Master's Degree has to be submitted. These documents will be issued by your last college only if you have completed all exit formalities (including returning that library book etc.) No TC & MC, No admission.

Fifth Qualifier : Now that you have paid the fees, the first task begins. They will conduct classes on the Research Methodology & Quantitative Analysis for 3 months (70% attendance compulsory), followed by an examination. Again, you will have to pass it with 50% marks.

Sixth Qualifier : The next part is to publish min two research papers. The college helps you with a Guide till the final stage. The papers have to be in your subject or related. Published by a journal, local or international. Without publishing two papers, it is not possible to move ahead.

Seventh Qualifier : With 2 papers published, it is now time to declare the subject of your final thesis. Has to be approved by your guide. Once the title is done, you need to prepare a Synopsis. The synopsis is a detailed plan with concept and research methodology. It has to be approved by your guide.

Eighth Qualifier : Synopsis will be presented to a panel of judges, internal and external. The panel will ask difficult questions, sometime strange questions, and also ask you to make changes if required. You must make those changes and re-submit the synopsis in hard and soft copies for final approval.

Ninth Qualifier : Once the synopsis is approved, the university will issue a number & authorizing you to conduct thesis for final submission. You will now have to interview people, take primary and secondary data to analyse and prepare the final thesis (150-200 pages), for final submission.

Tenth Qualifier : Now you will face 2 exams, internal & external. They will call you for a final presentation and oral examination. This can happen in 2 or 3 seatings depending on the panel. Keep doing their changes & coming back for re-exam. But once you are done, the PhD is yours.

Don't think too much, just go for it, you can do it.

Dr. Mandar Chitre
Editor & Founder – Drycotec Diaries

DRY MIX MORTAR PLANT

Mortar | Grout | Tile Adhesive | Black Box | Putty | Green Sand



INTENSIVE MIXER



PLOUGH SHEAR MIXER



Walplast
Ek Naya Bhaav Ki

UltraTech
CEMENT

ACC

VURA
Time To Build Better



ROKPLAST

sl

MIRAJ
DRYCHEM

Dalmia
Bharat Cement

SUD-CHEMIE
S

SAINT-GOBAIN

सेल SAIL

calderys

NEPTUNE PROTECH LLP.

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DDA News : GOOD NEWS FOR MEMBERS !!!

DDA signs an affiliation membership with Builders Association of India.



Team DDA hands over lifetime fee cheque to BAI President Shri S. Narsimha Reddy, Hon. Gen. Treasurer Shri Mohinder H. Rijhwani & Hon. Gen. Secretary Shri Gyanchand Madhani. From team DDA, Dr. Mandar Chitre, Dr. B.L. Maheshwari, Dr. Rachna Pandey & Charles A.J. along with Rishab Maheshwari during their Annual Satyanarayan Puja at Mumbai office.



HIGHLIGHTS : Members of DDA will get invites to all events of BAI across India & Their members will attend our event.



BAI was founded in 1941 & has 20,000 plus direct members spread over about 200 plus Centres across India. Various regional associations affiliated to BAI, add another 1,50,000 indirect members. A joint affiliation will help members of DDA to generate business & solve common issues in products, compliances, standards & services.



DRYCOTEC DRYMORTAR ASSOCIATION : NEWS

**Our Team of Managing Committee & Technical Committee
have formed the following structure.**

Position	Name	Company
President	Dr. Prem Sherin	Adani Cement
Vice President	Rajesh Joshi	STP Berger
Chief Technical Officer	Dr. Arjunan	MYK Laticrete
Jt. Chief Technical Office	Dr. Parag Solanki	Sika India
Conference Convener	Nandan Pradhan	Mcon Rasayan
Vice President – Research	Dr. Satyanarayana D	HIL
Vice President – Training	Anupam Shil	STP Berger
Vice President - Projects	Dr. Rachna Pandey	Mcon Rasayan
Secretary	Dr. Mandar Chitre	Baton Consultants

INVITING MANUFACTURERS OF DRY MORTARS TO TAKE UP THE FOLLOWING POSITIONS

OPEN POSITIONS

VP - Media	Regional President - North	Regional President – East
Regional President - West	Regional President - South	Regional President – Central
VP - Standards	Jt. Secretary	Jt. Conference Convener

We invite you to please nominate yourself to take up these open positions. Please contact me to take up these roles and contribute towards growing our association.

Write to me on my email - mandar.chitre@batonconsultants.com



DRYCOTEC

DRYCOTEC DRYMORTAR ASSOCIATION

INDIA'S FIRST DRYMORTAR ASSOCIATION

OBJECTIVES

SCIENCE

PROMOTE LATEST
TECHNOLOGIES

EDUCATION

TRAINING &
SKILL DEV

RESEARCH

IMPROVEMENT OF
PRODUCT / SERVICES

SOCIAL
WELFARE

HEALTH & SAFETY

EXHIBITIONS
SEMINARS & EVENTS
LEARNING
MENTORING

CHARITY

MASONS
PAINTERS

ENVIRONMENT

WORKING ON
NET ZERO

INVITATION FOR MEMBERSHIP

MESSAGE FROM THE PRESIDENT

“We invite you all to come and join the largest knowledge sharing and learning platform of building materials products and solutions. The main objective of this association would be to bring in advance business ideas, introduce cutting edge technologies, learn latest trends and help industry to grow and adapt best practices. Our Association has lot of professionals from varied discipline and industry veterans who had spent decades in different verticals of the building materials business . To make this association more richer in knowledge and pollinate the best practices we invite entrepreneur's and professionals to join us”

– **Dr. Prem Sherin, President Drycotec Drymortar Association**
(Head Sales & Market Dev at Adani cement (Ambuja + ACC))

MESSAGE FROM CHIEF TECHNICAL OFFICER

“We shall work with the government organizations and national and international standards, institutions to upgrade our standards and promote the quality and uniformity of the dry mix products sold in the market”

– **Dr. Arjunan P.**
Vice President (Research and Development) MYK Laticrete

MEMBER BENEFITS

Science	Collaborate with end-users to promote new technologies. Special programs available for Builders, Architects, Engineers, and Masons.
Education	Participate in the DDA Certificate Leadership Program, a comprehensive program led by top professionals for individuals new to the Drymortars field.
Research	DDA will establish its own journal and welcome research papers from members, providing valuable resources.
Social Welfare	Engage in regional projects with committee members to contribute to the betterment of communities.
Charity	Support initiatives aimed at improving the lives of laborers and preventing child labor at construction sites.
Environment	Attend conferences in Mumbai and Bangalore to gain knowledge and address environmental issues.

TO BENEFIT:

- **Become a Member** : Join DDA to access various advantages.
- **Attend Trainings** : Participate in training sessions to enhance skills and knowledge.
- **Participate in Conference** : Engage in conferences to gain insights and networking opportunities.
- **Gain benefits** : Enjoy the privileges and advantages of being a DDA member.
- **Become United** : Showcase affiliation by incorporating our logo in your branding.
- **Give back to Community** : Contribute to charity projects and make a positive impact on communities.



DRYCOTEC DRYMORTAR ASSOCIATION

ORG STRUCTURE

GENERAL MEMBER			ASSOCIATE MEMBER	
Manufacturers of Dry Mortar Products			All other business related to Dry Mortars	
MSME	Non-MSME	Students	MSME	Non-MSME

BENEFITS

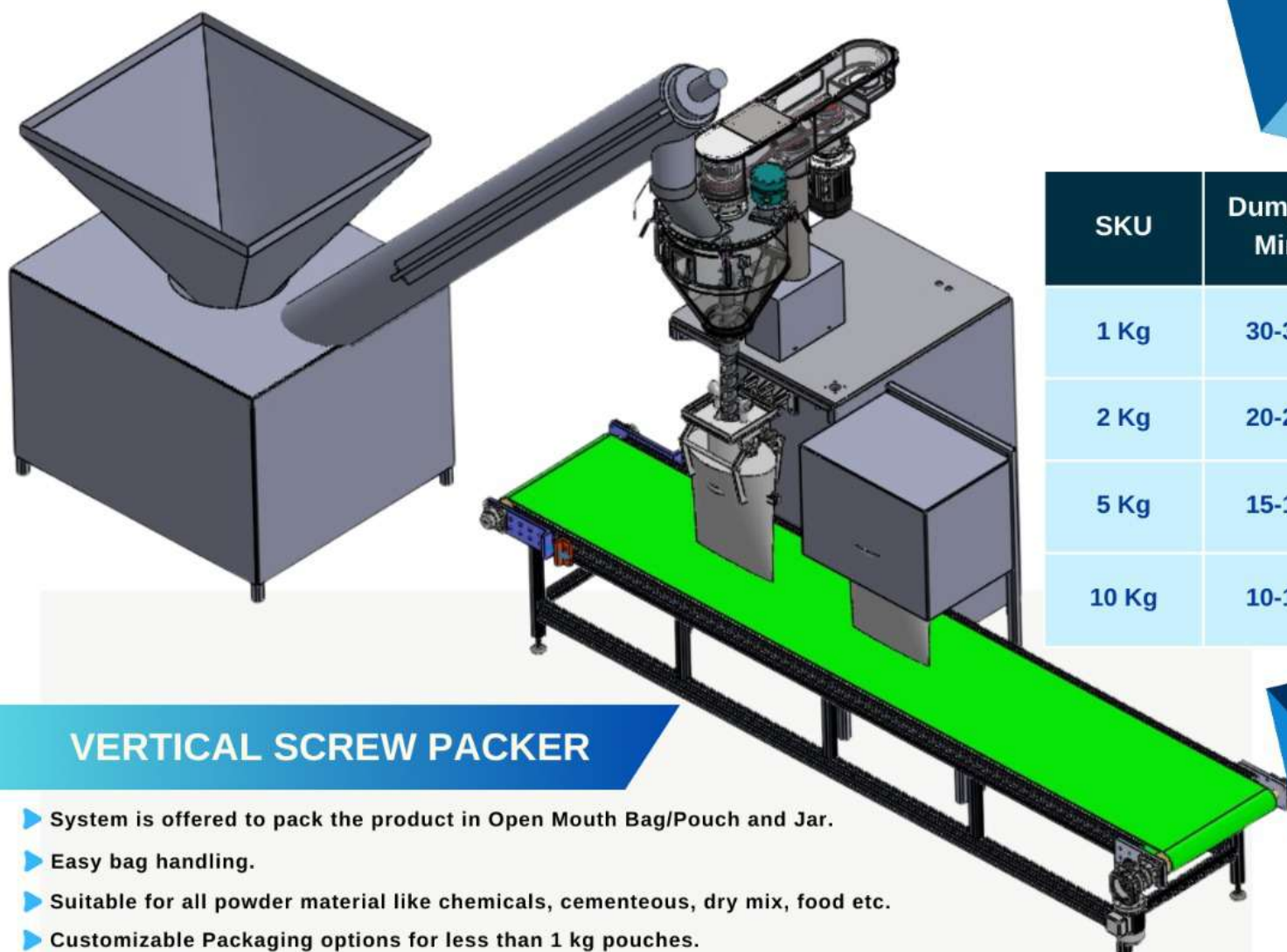
BUSINESS	INFORMATION	NETWORKING	SUPPORT
Tax Standards Common Issues	Technical Innovations Legal	Benchmarking Resourcing Bad Debt Control	Skill Development Audits Org Development

BECOMING A MEMBER

TYPE OF MEMBER	TENURE	MEMBERSHIP FEE
General Members	5 YEARS	Rs.1,00,000 + GST
General Members (MSME)		Rs.50,000 + GST
Associate Members		Rs.50,000 + GST
Associate Members (MSME)		Rs.25,000 + GST
Student Members		Rs.5,000 + GST



PACK YOUR POWDER MATERIAL IN 1 KG TO 10 KG POUCHES



SKU	Dumps/ Min
1 Kg	30-35
2 Kg	20-25
5 Kg	15-18
10 Kg	10-12

VERTICAL SCREW PACKER

- ▶ System is offered to pack the product in Open Mouth Bag/Pouch and Jar.
- ▶ Easy bag handling.
- ▶ Suitable for all powder material like chemicals, cementeous, dry mix, food etc.
- ▶ Customizable Packaging options for less than 1 kg pouches.
- ▶ Stitching & Sealing Machines can be offered depending upon the Retail Packing Materials

**Ideally Suitable to Re-Pack Materials received in
Jumbo Bags to Retail Pouches/Bags & Jars**



My Global Diaries : Ready Plaster Reaches Zambia – A Baton Consultants Review



Zambia, a centrally located country in Africa with a population of approximately 20 Million is one of the most highly urbanised countries in sub-Saharan Africa. The capital city is Lusaka & language spoke is English. Travel time is between 8 to 16 hours, you can travel via Dubai, Adis Ababa or Dar-e-slam. Getting visa is very easy and take about a week. freely available and is of excellent quality.

No specific vaccine such as yellow fever etc. are required to enter the country. Readers to specially note that it is a very safe country and has a comfortable weather conditions. The two main revenue sources are Copper & Tourism, which helps generate employment for all. Other minerals are also present in Zambia, most importantly River Sand is freely available and is of excellent quality.

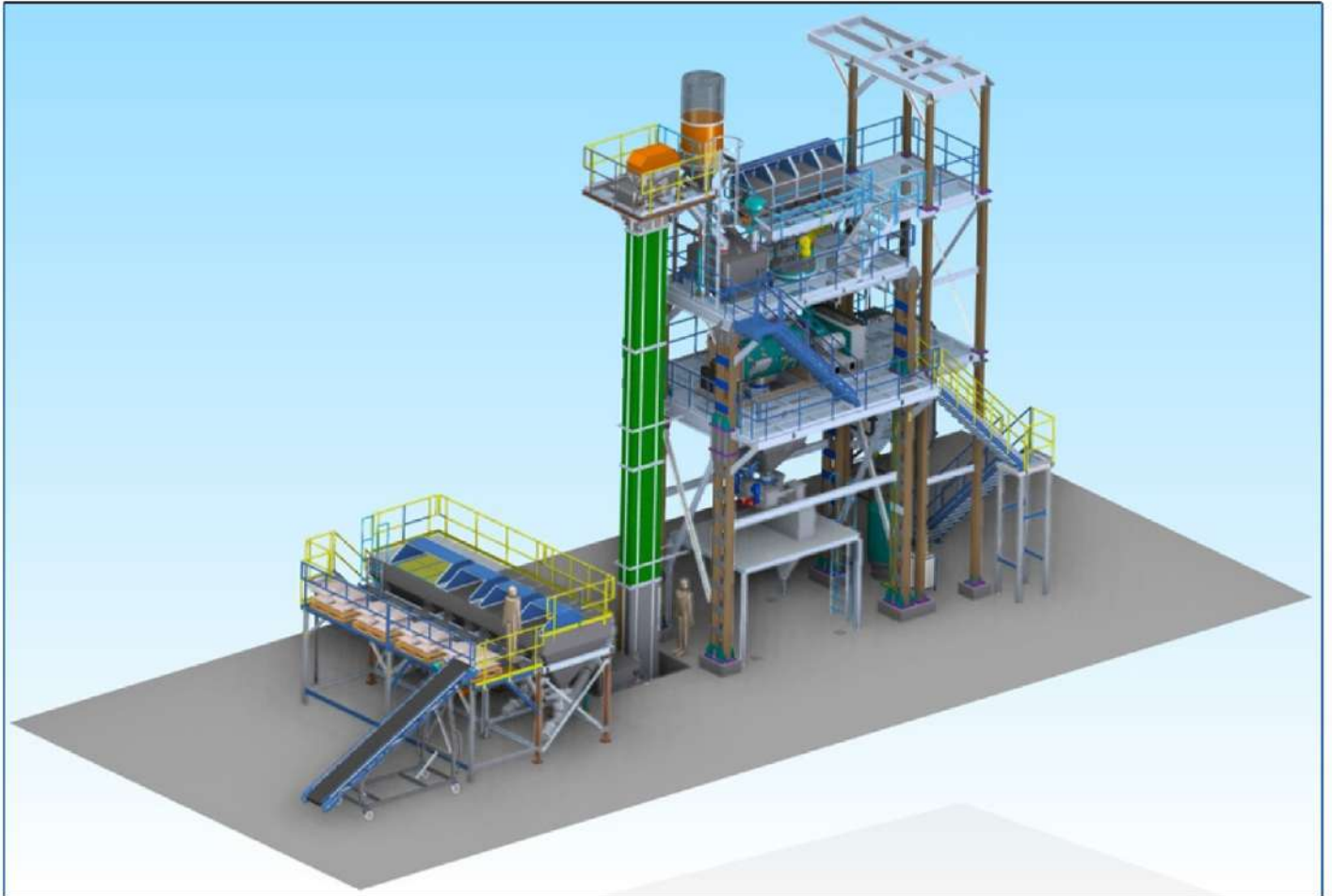


Bimbe Trading is a well established company in Zambia doing business in paints, chemicals & multiple other products under the leadership of Zaki Nadal & Hussein Nadal. Recently the company established their fully automated Dry Mortar Plant introducing Ready Plaster for the first time in Zambia. They are the first company to introduce Ready Plaster.

Zambia has a few companies which sell other dry mortar products.



For more information & doing business in Zambia, please contact
mandar.chitre@batonconsultants.com

**RMX LAUNCHED AUTOMATIC THERMOPLASTIC ROAD MARKING PAINT
MANUFACTURING PLANT****What We are?**

RMX is in the powder processing and material handling business for more than 14 years & proudly the leader in manufacturing of Dry Mortar Plants, Wall Putty plants & M. Sand Plants.

Our expertise lies in delivering creative turnkey solutions that demonstrate our commitment to fulfilling our client's changing requirements. We continuously launch new products that represent cutting-edge efficiency and technology in our effort to stay on the cutting edge of industry trends.

As a demonstration of our continued efforts to lead the industry with innovative solutions, we are pleased to announce the range thermoplastic paint manufacturing plants.

Readymix Construction Machinery Pvt. Ltd.

Corporate office: Survey No.96/2B, Plot No.209, Fourth Floor, Near Pandit Bhimsen Joshi Park, Right Bhusari Colony, Paud Road, Kothrud, Pune - 411 038. India.

Contact us - 9764448561/64, 8956166579 | info@rcmpl.co.in | www.rcmpl.co.in

Which are Key factors & trends of Thermo Plastic Paint Industry?

- Growth in construction and road-highway maintenance activities
- Rising urbanization and smart city projects
- Government regulations and increasing road safety concerns
- Growing demand for eco-friendly and sustainable materials
- Advanced formulations that offer improved durability, abrasion resistance, and weather ability
- Reflective thermoplastic paints to enhance visibility in low-light conditions

Why RMX?

- Fully Automatic PLC Based design
- Compact Design of plant
- High Accuracy Mixer With Liquid Injection System
- Handling 10-12 various types of Raw materials with precise weighment (+/- 0.5 % Accuracy Factor)
- Handling of Low Density(0.3) to High Density(1.5) Raw Materials
- IOT Facility
- Maximum Packing Accuracy
- Plant capacity range of 5 to 20 TPH
- Plant Min. Operational Area: 3000 to 8000 Sq.ft

What Are Advantages of RMX?

- Single Point Convenience- Our Scope Includes Everything-conceptualization, design, manufacturing, Erection & Commissioning.
- Centre For Excellence- Expert Design team always focused on client's requirements & provides best customized solution
- Service Support: We have capacity to offer Pan India on site support to clients installation and after sales services.

INVITATION



22-24 February, 2024
Venue : Bombay Exhibition Centre,
Goregaon.
Hall No. 3, stall No : W7-W8

OTHER PRODUCTS:

- | | | |
|---------------------------|----------------------------|---|
| • Dry Mortar Plant | • 50 TPH Wall putty plant | • High Capacity Silos |
| • Wall Putty Plant | • Dry Concrete Plant | • Power Grout Plant |
| • Advanced Sand Plant | • Epoxy Grout Plant | • Black Box Plant |
| • Dry Sand Washing System | • Acrylic Wall putty plant | • Ultra High Performance Concrete Plant |



The new dosing unit ROTO-LOCK



The new designed filling box even for high blaine cements

The new long-life filling tube for standard valve dimensions

The patented high-performance ROTO-LOCK dosing unit for clean filling of valve bags

YOUR ADVANTAGES

- Maximize performance even with higher blain
- Less wear and tear
- Maintenance-free dosing unit
- No adjustments or readjustments necessary
- Fully closed filling channel
- Clean filling process
- Long operating lifetime of the filling spout due to improved material selection

The existing pneumatic operation cylinder can be used

YOUR BENEFITS

- Higher performance, higher output, higher profit
- Profit increase due to clean filling and reduced product loss
- Higher production due to less downtime
- Cost reduction due to less cleaning and lower spare part costs

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Pradeep Maheshwari is an entrepreneur & a passionate strategist who is intensely toiling for the upliftment of his province. In this article he describes the potential in detail.

HIGHLIGHTS OF DOLOMITE & ITS MINING

LIMESTONE IN YAVATMAL HAVING DIFFERENT PROPERTIES As after Calcination with nearby Coal Yavatmal black limestone gives Super Quality White Lime very famous in whole state. In Wani Taluka Rajur village having many small lime manufacturing units working. 50 Such units working here since Decades.

SUPER WHITE LIME PRODUCED IN YAVATMAL DIST Earlier used for White Wash of houses in Villages used for its bleaching properties. Such properties prevent walls from insects, mosquitoes also brightness helping such homes to keep shining round the year.

WITH TIME CHANGES NOW THIS WHITE LIME USED For making different types of Wall Care Products like Cement Paint, Lime Plaster, Marking in Play Ground etc. Many such Micro and Small units now working in Wani Taluka of Yavatmal Dist. Many decades old units now doing modernisation with Capacity Expansion.

WANI TALUKA MOST PROSPEROUS BECAUSE OF LIMESTONE AND COAL NEARBY Such location only at Wani in whole country where in 50 km Vicinity Limestone & Coal both mined in bulk quantities. Earlier most of Lime was used for domestic household usage but with time passing now Industrial Usage also increased manifold.

MANY SMALL AND MICRO UNITS BASED ON LIME WORKING NEAR WANI* Still having lots of potential for new units to come and flourish, Huge deposits of limestone & nearby Coal, Central Location create most attractive business opportunities for new entrepreneurs. Minerals Policy under preparation must include this.

LIME WITH WHITENESS USED IN MANY INDUSTRIES Steel, Water Treatment, Sugar Mills, Colours & Pigments, Insecticides like many things. MSMC State PSU also having large limestone deposits must be given as assured input for units want to come.

LIME WITH WHITENESS AVAILABLE IN FEW STATES ONLY Like Rajasthan, MP, TS and Maharashtra only. India still imports bulk quantities of Lime from Middle East, Vietnam, Thailand. Here with specific Chemistry large MSMEs can plan investments as follow,

MOST OF DETERGENT BRANDS USING WHITE DOLOMITE. In bulk quantities as filler. Many famous companies buying White Dolomite from Nagpur & Surrounding areas. Many small local brands also frequent buyers of this *MIRACLE MINERAL*

WHITE AND COLOURED RANGOLI ALMOST USED IN ALL FESTIVALS Made near Nagpur by ladies in Villages. Now grinding units installed making large quantities sold in many states.

MANY WHITE DOLOMITE AREAS STUCK UP IN FORESTS NEEDS TO BE CLEARED AS MANY LADIES SELF HELP GROUPS CAN ENGAGE FOR LIVELIHOOD

My Interview Diaries :

“ **Mr. Mukesh Kanani of Eazy Buildcon** ”



R.S. ENTERPRISES

“R.S. Enterprises is a “One Call Company”, it takes only One call to solve a problem or meet our demand” – Mukesh Kanani, M.D. Easy Buildcon

Q. Tell us about your business & company

Mukesh Kanani : EAZY BUILDCON was founded in 2014, with its flagship manufacturing unit at Kim Surat, Gujarat. The company aims to provide a range of ready-mix plaster variants for multiple construction requirements. Over the years, EAZY Buildcon has earned trust & goodwill through its valued product portfolio & by maintaining the finest quality in their products. With the support and trust of our valued partners, EAZY Buildcon has rapidly grown and scaled up operations by setting up our largest plant in 2019 spread over 4 acres at Bharuch, Gujrat. Today we have reached a manufacturing capacity of more than 18,000 tonnes per month. With a team of qualified laboratory technicians and state-of-the-art cutting-edge technology, we strive to fulfil the need for durable, reliable and sustainable infrastructure development in India.

Q. What makes R.S. Enterprises the first choice for your company ?

Mukesh Kanani : I think R.S. Enterprises are more focused on providing all types of solutions to the Drymortar industry. They always focus is on New Product Development and Re-engineering of any existing system as per customer requirements. All designing and manufacturing are taken under the supervision of experts. Their team of experienced industrial technocrats work on an economical and quality solution which helps in improving our production efficiency.

Q. Who are your customers ?

Mukesh Kanani : We have been successfully doing business with companies like, Godrej Properties, Piramal Realty, BRIZEAL, AVIGHNA, LOKHANDWALA CONSTRUCTIONS, WEST BEST BUILDCON, KOTHARIS – Kothari M Developers Pvt Ltd, CRYSTAL – A Mukesh Group Venture, SAHAKAR DEVELOPERS, SEJAL REALTY, KONARK SHAKTI DEVELOPERS, YAMUNA INNOVATIVE SPACES, RNA BUILDERS & More.

My Tech Diaries : Fundamentals of Factory Flooring



Sanjay Chitnis, Retired Sr. Vice President (Technical Services), JK Lakshmi cement Ltd has almost four decades of experience in the field of cement. He is an engineer from the COEP college in Pune, has done his MDI program from Indian Institute of Management, Calcutta, Indian Institute of Management, Lucknow & Indian Institute of Management Ahmedabad. He has also done his MBA from Annamalai University. Mr. Chitnis is very punctual, down to earth, smart with Sound civil engineering knowledge coupled with administration & managerial capabilities. He loves writing short articles on Sundays on LinkedIn. We have taken one such very interesting article from him for the benefit of our readers.

With growing functional requirements, increasing focus on sustainability & increasing awareness, the concrete floor coatings market is witnessing growth. People need durable, aesthetically pleasing, eco-friendly, low-VOC (volatile organic compounds) and easy-to-maintain flooring solutions across industries. Epoxy coatings dominate the concrete floor coatings market, because of their durability, chemical resistance, and widespread applications across industries.

Epoxy involves the application of two liquid components— a resin and a hardener -- curative — that chemically bond together. When mixed and applied properly, the resulting chemical reaction creates a very hard surface and very strong bond. Epoxy resins are formed by epichlorohydrin and phenolic reactions. It's crucial to choose the right product for your surface and properly prepare it before applying the epoxy.

For industrial flooring application, following types of epoxy are used

- Self-Dispersing Epoxy Coatings
- Self-Levelling Epoxy Coatings
- Mortar Epoxy Coatings for Floors
- Gravelled Epoxy Coatings for Floors
- Epoxy Terrazzo Floor Coatings
- Epoxy Antistatic Floor Coatings
- Vapour Barrier Epoxy Coatings
- Epoxy Flaked Floor Coatings

The thickness of the epoxy coating depends on the application. The condition of the concrete floor is a major factor in determining the thickness of the epoxy coating. Thinner epoxy coatings are used for new concrete or concrete surface having good condition. Epoxy coatings for industrial flooring can range from 300 microns to 5 mm thick. Manufacturer's claim that Epoxy flooring with a thickness of 2 to 4 mm is tougher and can withstand the pressure of forklifts regularly.

Following the manufacturer's instructions, using the right tools and equipment is essential for proper application. Surface must be dry for application. Epoxy floor coatings come in virtually any colour. Textures like metallic and quartz creates a surface that's also slip resistant. Epoxy's impermeability to liquids makes it impossible for mold and bacteria to grow in the porous concrete below the epoxy coating. In warehouses with forklifts or other moving machinery, floor striping is a popular safety feature.

During the installation phase, one of the most important things a contractor can do is maintain a consistent temperature and humidity level. This helps the floor to cure properly after the installation. Epoxies are vulnerable to extreme temperatures, and to certain substances, like lactic acid, or UV radiation, which can both degrade the appearance of an epoxy floor coating.



Drymix Mortar Plant DMM 5/10/15/20/25/30 TPH

A dry mortar plant basically consists of a drying systems, loading system, conveying & weighing system, highly accurate weighing system to mix sand, cement and additives in required proportion where it finally gets the exact composition of the required mortar. Once it is prepared, dry mortar is available for bagging & ready to be transported to market. Apollo manufactures 5 TPH, 10 TPH, 15 TPH, 20 TPH, 25 TPH, & 30 TPH capacity plants.

Standard Supply

- Single bin Feeding Hopper 3 CM with conveyor
- Screen
- Bucket Elevator
- Storage Silo for Sand with Accessories-1 No.
- Screw Conveyor for sand
- Storage Silo for Cement with Accessories-1 No.
- Screw Conveyor for cement
- Weigh Hopper for Sand
- Weigh Hopper for Cement/Flyash
- Plough Shear Mixer with Structure
- Control Panel PLC, SCADA, Computer and printer with Cabin

On Request

- Dryer with dust extracting system – According to Plant capacity
- Storage Silo for Flyash with Accessories– 1Nos.
- Screw Conveyor for Flyash
- Stationary Bag Packer Machine
- Storage Hopper for dry mixed Mortar
- Chopper in Plough shear Mixer
- Pneumatic Sampling unit in Plough shear Mixer
- Lobe compressor
- Gyro Screen



Apollo Infratech Private Limited

Ahmedabad-Mehsana State Highway, Village: Rajpur 382715,

Taluka: Kadi, Dist: Mehsana, Gujarat, INDIA

Cell: +91 90990 71618, 90991 44644

E-mail: info@apolloinfratech.com

www.apolloinfratech.com

Terex Solutions for Wet and Dry Sand



AUTOSAND RANGE

- Handles clean all-in feed for continuous crushing
- All-roller bearing design delivers enhanced crushing efficiency
- Can take feed size upto -63mm

FM200DF

- Self regulating cyclone tank complete with built in float system
- Removes silt, silts and clays below 75 m (200 mesh)
- Removes water following dewatering operation to 12% of residual water content

Contact us for more information:

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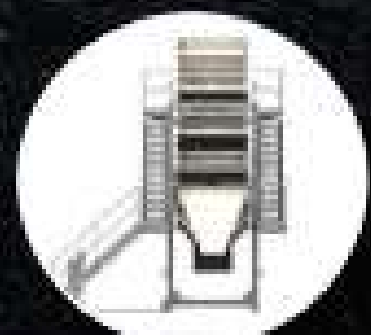
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Kleenair
Systems P. Ltd.
Delivering Quality Products is our Habit

Reliable Customized and Versatile DryMortar Plants



**Vertical Plants
Horizontal Plants
Skid mounted
Portable Plants**



**RMC/RMP Plant
Putty Plant
Tile Adhesive Plant**

Kleenair House , Gat No.120-122, Pirangut, Tal : Mulshi , Dist. Pune : 412115 , Maharashtra, India
Tel : 91 20 6675 0380/81/82/84 | Fax: 91 20 6675 0394

Web: www.kleenairsystems.net

We Build for your Success

Home Sales Surge to a New Record in '23

Demand for premium, luxury and high-to-mid-income properties stay strong despite high prices and financing cost

Kailash Babar

Mumbai: Home sales across India's top eight cities surged to a record last year, with demand for premium, luxury and high-to-mid-income properties remaining undiminished despite high prices and financing costs.

Growth momentum in these markets, which include Mumbai and Delhi, will likely sustain through 2024, when the central bank is likely to ease rates and help boost demand for affordable housing that has remained a relative straggler.

Knight Frank data showed annual sales at more than 329,000 units in the top eight cities last year. Mumbai region registered the highest sales of 86,871 units, demonstrating a 2% growth, while Kolkata witnessed the highest home sales growth, in terms of percentage, at 16%. Ahmedabad expanded at 15% while Pune grew at 13%.

"Real estate in India has grown steadily over the last few years, driven by factors such as rapid urbanization, infrastructure improvements, favorable demographics, and government policies geared towards growth. With economic growth projected at 7%, India has a solid foundation for the upcoming fiscal year," said Niranjan Hiranandani, Chairman, NAREDCO National.

In terms of 12-month residential price change, Hyderabad saw the highest price movement of 11% in 2023. Mumbai, Bengaluru, and Kolkata registered 7% rise each. NCR and Pune witnessed 6% and 5% growth, respectively, while Chennai and Ahmedabad witnessed 4% increase.

"Characterised by a shift towards more expensive properties, the residential market continues its onward march to achieve another watershed year in 2023. Without a doubt, this growth is led by the strong economic fundamentals of

The Growth Mix

Property demand soared in 2023 across India's top 8 cities, driven by mid to luxury segments

Despite higher rates, sales grew 5% to **3.29 lakh apts**, with Mumbai leading in volume

Hyderabad led with an 11% price increase in 2023, followed closely by Mumbai, Bengaluru, and Kolkata

Surge in demand expected to drive a 10-12% property price increase in 2024, with growth in commercial and retail spaces



BHAVIN G

the country that gives buyers financial confidence to make long-term investments," said Shishir Baijal, CMD, Knight Frank India.

AFFORDABILITY QUOTIENT

According to him, dramatic improvement in home affordability over the last decade has helped home buyers despite a steady rise in prices. However, higher interest rates have resulted in reduced sales volumes in the affordable

segment which may see an improvement if the rates are reduced later this year.

The renewed demand has led to an accelerated pace in residential development, with both half-yearly and annual volume of units launched reaching their highest levels in a decade. Notably, the launch volumes in 2022 and 2023 have surpassed the sales figures for the corresponding periods. Interestingly, this has occurred on-

ly thrice in the past ten years.

A total of 350,746 units were launched across the eight markets registering a rise of 7% on year. Mumbai recorded the highest residential launches in the country with supply of 93,051 units during the year. Kolkata witnessed the highest growth (in terms of percentage growth) at 28% followed by Bengaluru at 18%. NCR was the only market to record a marginal slowdown in launches.

"A dynamic market shift and buoyant consumer demand characterize the current Indian real estate market. Several compelling factors combine to make the Indian real estate sector a standout. These factors include rapid urbanization, political stability, infrastructure development, buoyant capital markets, institutional investment, favorable demographics, and rising incomes," said Hiranandani.

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3D Printing Helps Cos Come up with Intricate and Customised Designs

ET EXPLAINER

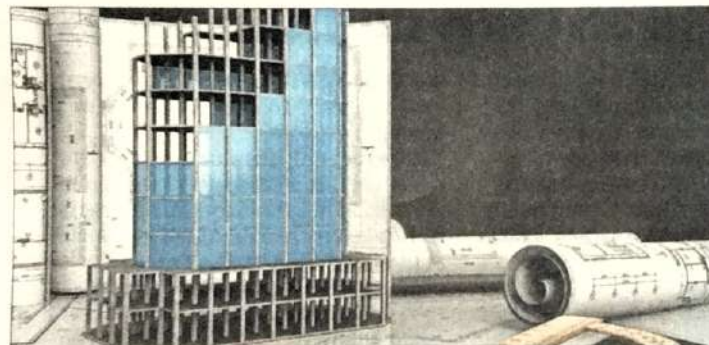
Three-dimensional (3D) printing, also known as additive manufacturing, is making remarkable strides across global industries such as manufacturing, aerospace, healthcare, and more. In real estate and construction, this technology is gaining traction, with recent projects including India's first 3D-printed post office in Bengaluru and a 40-hour construction of an office near Mumbai by Godrej Constructions. **Kailash Babar** finds out more:

UNDERSTANDING 3D PRINTING, APPLICATION IN REAL ESTATE AND CONSTRUCTION:

3D printing, or additive manufacturing, revolutionises traditional processes by creating objects layer by layer from digital models. This precise method allows for the production of intricate and customised designs. In the real estate and construction sector, 3D printing transforms the conventional approach by enabling the construction of buildings and components layer by layer. This approach offers unprecedented advantages, including efficient creation of complex designs with minimal material waste.

KEY BENEFITS:

3D printing enhances construc-



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tion timelines by automating the building process, resulting in increased speed and improved efficiency. It minimises material waste, promotes sustainable practices, and offers flexibility for highly customised structures.

Despite potential initial investment costs, 3D printing yields long-term savings through decreased labour and material expenses. The technology's efficiency is highlighted by rapid construction times, contributing to overall project efficiency. Durability depends on materials, with ongoing advancements in materials science enhancing robustness.

LARGE-SCALE AND TALL SUPERSTRUCTURES:

3D printing is scalable and has been applied to large-scale projects like houses and bridges. While successful for expansive

structures, challenges arise in extremely tall buildings due to technical complexities. Researchers are actively addressing these challenges for more ambitious projects.

LIMITATIONS:

3D printing is scalable and successful in constructing large-scale projects like houses and bridges, using a layer-by-layer approach for flexibility. Challenges emerge in applying this technology to very tall buildings, such as skyscrapers, due to structural, material, and precision complexities. Researchers are actively addressing these challenges to extend its applicability to ambitious and vertically challenging projects in the future.

MARQUEE GLOBAL PROJECTS:

Dubai's "Office of the Future": A

groundbreaking office building constructed using advanced 3D printing. Nantes, France: A noteworthy 3D-printed house showcasing innovation in residential construction. China: Various construction initiatives employing 3D printing methods, demonstrating efficiency and sustainability.

JOB LOSS CONCERNS:

As 3D printing technology revolutionizes traditional roles, the impact is more likely to result in a shift in job requirements than widespread loss of blue-collar jobs. This transformation creates opportunities in roles dedicated to operating, maintaining, and advancing 3D printing technologies, fostering growth in specialised skill sets and expertise.

REGULATORY CHANGES:

Regulatory frameworks require adaptation to accommodate unique aspects and standards of 3D printing in construction. Establishing clear safety guidelines is key to ensuring structural integrity of 3D-printed buildings. Regulatory frameworks for 3D printing in construction are evolving. Different countries are developing standards based on their experiences, tech advancements, and evolving nature of 3D printing in construction sector.

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PHOTO: SHANTANU SARKAR/GETTY IMAGES

PHOTO: THE PRADEEP KUMAR AND MANI KUMAR FOR THE TIMES GROUP OF COMPANIES AND BOLL. A NOT - AND SHOULD NOT BE DEEMED TO BE - ASSERTING ANY RIGHT OR INTEREST IN THE SAME

Realty Sector Gets a 'Prefab' Boost

New tech helps quicken delivery, but design inflexibility, high logistic costs hurdles for now

Kailash Babar

Mumbai: The Indian real estate and construction sector is undergoing a transformation with growing adoption of prefabrication and precast technology led by industry giants such as Larsen & Toubro and Tata Realty & Infrastructure who are championing faster, more efficient, and sustainable building methods.

However, the industry needs to overcome challenges including design inflexibility, high logistic costs and damages in transit to ensure widespread acceptance of prefab technology and exploit its potential, industry experts said.

"Our clients have widely accepted prefab construction technology due to the quickened pace of construction and project delivery using off-site modular construction methods, further aided by a keener awareness of the dearth of skilled manpower," said M V Satish, whole-time director and senior executive vice president (buildings) at L&T. "This is indeed good news for both the private and public sectors," he added.

Recently, the company executed a seven-storey state-of-the-art flight control system (FCS) integration facility for the Defence Research and Development Organisation (DRDO) in just 45 days, using integrated hybrid modular construction technology (IHMCT).

L&T also delivered 96 apartments in 96 days, built with precast, for City

Tech-Driven Shift

L&T and Tata lead prefab tech surge in real estate

Gradual acceptance for prefab homes amid industry challenges

Prefabricated buildings constitute 1-2% of India's \$100B real estate market

Quick project delivery boosts client acceptance of Prefab tech

Momentum Builds: Prefabrication tech thrives in Indian real estate



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ment Corporation of Maharashtra (Cidco) recently.

"Encouragingly, there is a gradual acceptance, but hurdles persist due to sector-wide hesitancy to invest in modular approaches," said Harleen Oberoi, senior vice president and head, project management, at Tata Realty & Infrastructure. "We employed 2D and 3D precast technology more than a decade ago in residential projects at Boisar and Bengaluru," he said.

Vipul Gupta, national operations director, project & development services, at real estate services firm JLL India, said a few government projects, such as 'Housing for All' under the Pradhan Mantri Awas Yojana (PMAY), use precast technology to build residential housing units. Many commercial buildings and infrastructure projects are also utilising precast systems for expedited construction.

dited construction.

However, there is still a long way to go before prefabricated buildings are widely used, Gupta said.

The growing demand for faster, cost-effective, and sustainable construction solutions is fuelling an increased interest in prefabrication tech in India

sitation due to unfamiliarity with this construction method. However, this has been gradually changing as people become more aware of the

advantages and advancements in prefab technology," Gupta said.

In terms of homebuyer acceptance, according to Oberoi, an emerging interest exists, emphasising the need to bridge the information gap and dispel misconceptions. Educating homebuyers about the benefits, including cost savings and faster construction timelines, is crucial for fostering wider acceptance, he said.

Homebuyers, recognising the advantages of this modern construction approach, are expected to play a pivotal role in driving its widespread acceptance across the country.

This method offers advantages such as reduced construction time, minimised waste, enhanced quality control, and improved environmental sustainability. Consequently, many construction and real estate developers are keen on incorporating prefabricated elements into their projects.

While the adoption of prefabrication technology is on the rise, challenges such as the initial investment in setting up facilities and the need for skilled labour persist.

These challenges are expected to diminish as the industry gains experience.

The future of prefabrication in Indian real estate looks promising, with the government emphasis on affordable housing and sustainable development, aligning with the benefits offered by this technology.

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Vinnapas 7220E	Semi Flexible RDP for excellent tensile strength
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Vinnapas 5111 L	Levelling Agent, Defoaming Properties, Binder
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Thixotropic RDP

Vinnapas 5012 T	Thickening effect with adhesion Property
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	Starch Ether	OPAGEL CMT	Workability, Dosage should be 10 % MHEC Increase open time, Sag Resistance
		Solvitose H 2060	Increase open time, Sag Resistance, Workability, Dosage should be 10 % MHEC
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