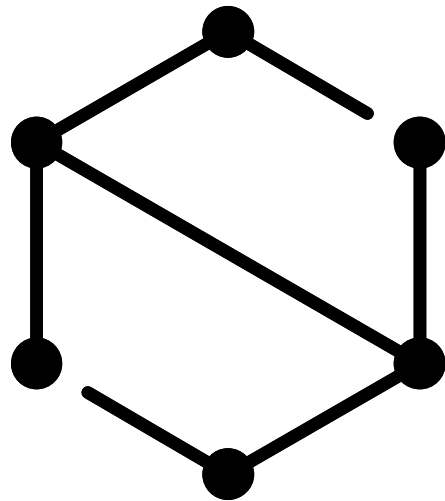


**STRUCTURES BECOME MONUMENTS
WHEN BUILT ONCE**



nanospan

—— Making Small Matter ——

• NANOSPAN INDIA PVT LTD

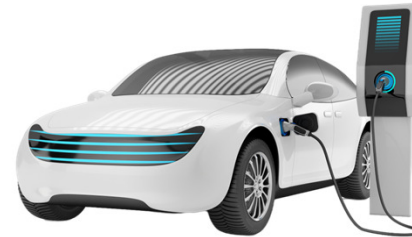


Pioneering Disruptive, Decarbonizing Nano material Technologies for

SMART CONSTRUCTION



ENERGY STORAGE



VIDEO: <https://youtu.be/4p4yCdHbjtk>



• PRECAST CONCRETE **PROBLEM STATEMENT**



Need for

- High Strength Structural Elements
- Requirement of Smooth Finish (Fair Face grade)
- Flexibility for variety of designs and shapes
- Minimise Chloride-induced corrosion
- Lower Cost of Precast Concrete & Project Completion Time
- Improve Sustainability quotient for manufacturer & end user



• SPANOCRETE™ AS SOLUTION



Creating a Special Nano-Engineered Concrete

- Single product
- Ease of Use & Simplified logistics
- Compatible with all cements and grades
- No disruption to field processes



ROI for builders

- High shrinkage crack resistance
- 20% Cost savings
- Carbon Footprint Reduction
- Speeding up of construction
- High mechanical strength
- Superior Finish



Withstand climate disasters

- Waterproof, Hydrophobic structure
- Shield against seepage, acid attacks, carbonization
- High strength
- Make it durable construction

• SPANOCRETE™

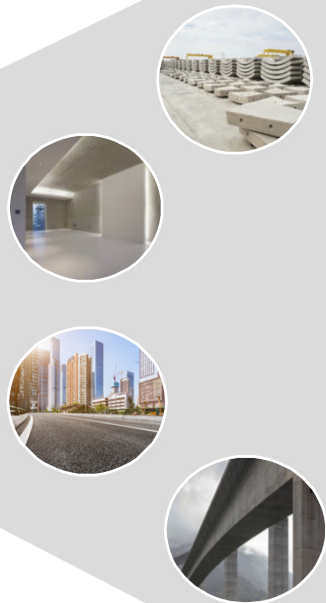
Revolutionizing Civil Construction



SPANOCRETE™



Powered by Nanospan's
graphene & nanocomposites!



BENEFITS

- A Single product. One stop multifunctional durability nano additive.
- Significant reduction of Cost, Time and Dependencies in material selection, mixing logistics for construction projects
- Democratizes the super durability to every construction. Building, home, bridge or road construction
- Compelling choice for concrete constructions that require high crack resistance, corrosion resistance, waterproof, high strength, super durability, impact-resistance and smooth finish.

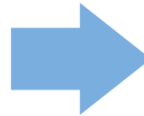
• SPANOCRETE™ APPLICATIONS



Use Case

Spanocrete™

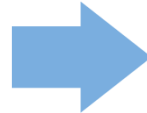
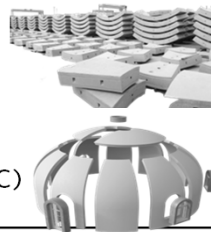
High-rise buildings:
Residential, Commercial



- Phenomenal crack resistance
- Water repellence, workability
- >30% higher compressive strength
- 15% less cement, >20% Project cost savings

6722

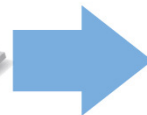
Precast
Fair-face
Self-Consolidating(SCC)



- Smooth finish
- + • High compressive strength
- Denser concrete and panel design flexibility

6733

Roads/Highways
Warehouse Flooring
Extreme Temp climate



- + • Low temperature gradient
- High Impact resistance*

6755

• SALIENT FEATURES

Single Product -Multifunctional properties



Early-stage strength

IS: 10262-2019, ASTM C 39-20

Concrete shall attain 100% compressive strength in 7 days, resulting in 3X faster project execution.



Crack resistance

IS:516 (Part-6) 2020

Spanocrete brings nano engineering and a low thermal gradient to drastically improve crack resistance of concrete and preserve structural integrity.



Water proofing

BS EN 12590 (Part 8) -2006,
ASTM C 1585

Nanomaterials-based pore filling ability brings Low water permeability, It makes concrete waterproof and leak proof..



Corrosion resistance

ASTM C 1202 - 2019

High Corrosion resistance creates durable structural elements to be able to withstand floods and other carbonation / corrosion damages.



• SPANOCRETE™ – FOR PRECAST CONCRETE



20% LOWER PROJECT COST



- LOW CARBON FOOTPRINT
- 10% LESS CEMENT
- 30% LESS WATER

FASTER EXECUTION



- 100 % Early-stage strength (<7 days)
- SIMPLIFIED LOGISTICS

HIGH CRACK RESISTANCE & STRENGTH



- HIGH SHRINKAGE CRACK RESISTANCE
- >30% HIGHER COMPRESSIVE STRENGTH

STOP CORROSION



- HIGH CORROSION RESISTANCE
- WATERPROOF
- LOW WATER PERMEABILITY

OTHER



- PAVES FOR PANEL DESIGN FLEXIBILITY
- SMOOTH FINISH
- MULTI USECASE



Spanocrete brings light weight, durability benefits and ease-of-design to help speed-up construction and improve its sustainability score.

• PROBLEM: CARBON FOOTPRINT OF CEMENT



Cement is source of ~8% Global CO₂ Emissions

1 Tonne of Cement Produced Emits 0.96 Tonnes of Carbon-dioxide



By 2030, cement production is set to increase by another 25%.

There is an essential need to reduce the CO₂ emissions for minimizing the Global warming effect. How Fast Can You Make The World Green ???



Our Spanocrete Range of super durability additives & other product variants

- Reduces Cement consumption by ~10%
- ~Halves Water consumption in concrete making
- Plus many other CO₂ emission reducing properties

COST SAVINGS

Overall Project

MATERIALS

10%

- 5-10 % reduction on cementitious materials
- No admixtures required
- Low maintenance and simplified logistics

High strength

WATER PROOFING

3%

- No waterproofing agents required
- Reduction of waterproofing linings
- Elimination of screed concreting process

Hydrophobic

CRACKS

5%

- No Micro-fibers required
- No grouting process required

Less thermal stresses

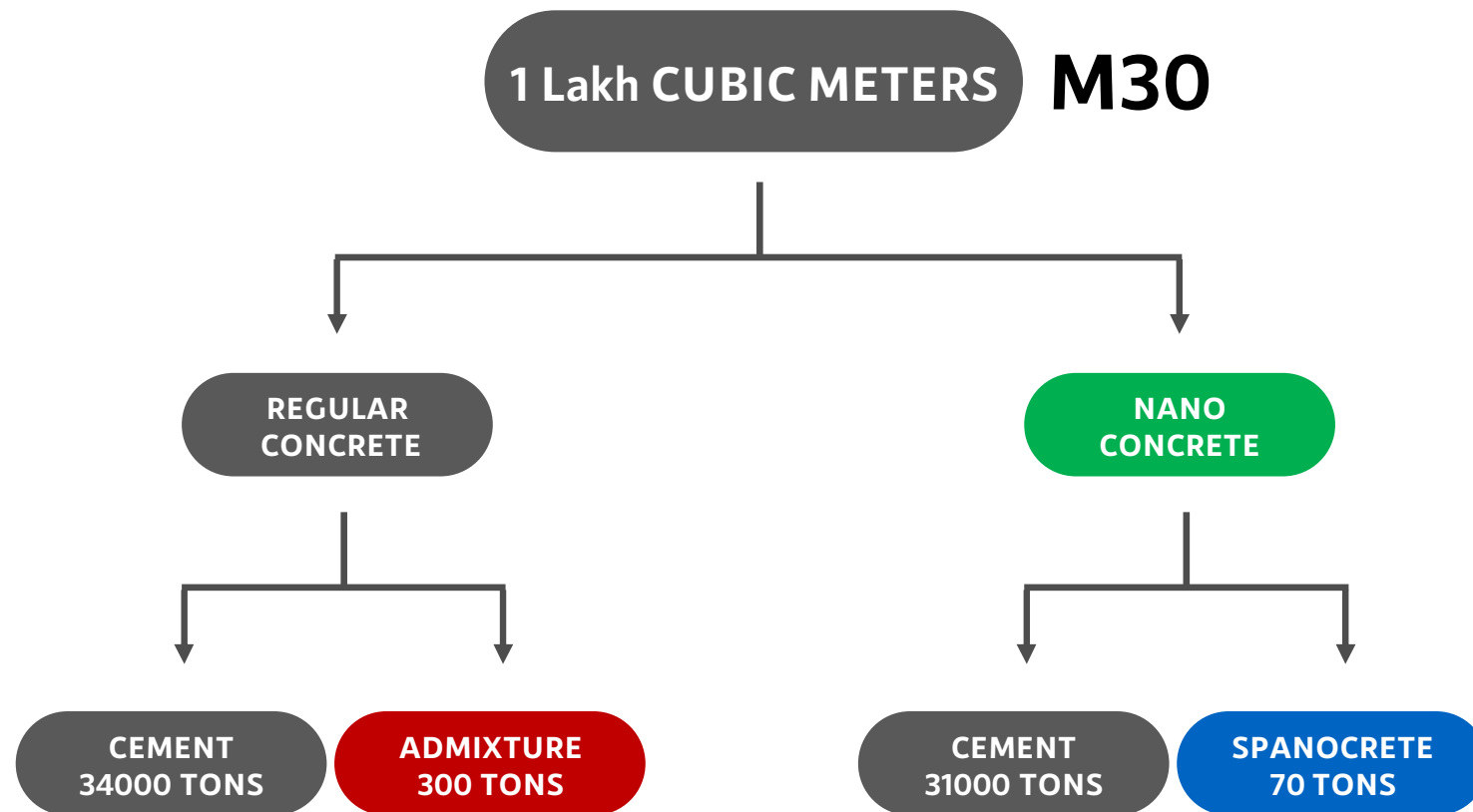
ANTI CORROSION

10%






- No anti-corrosion agents required
- Improved structure life which brings less maintenance over the time period.

Anti-corrosive ingredient

• REGULAR(SPECIAL) Vs NANO CONCRETE



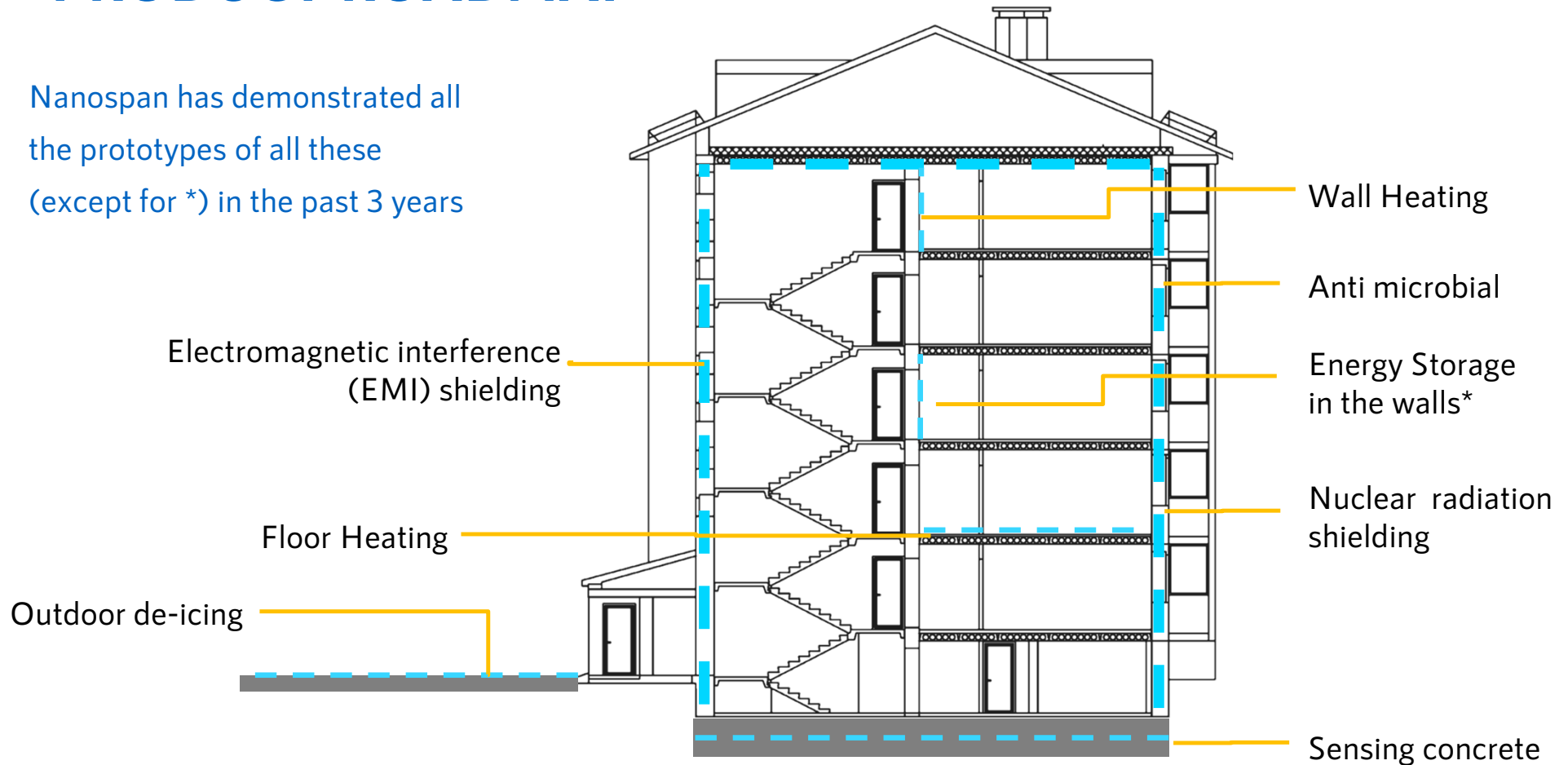
• ROI WITH 1 LAKH m³ of M30 GRADE NANO CONCRETE

	Cementitious materials	₹2 Cr	→	30% extra strength can bring reduction in cementitious materials by 10%.
	Admixtures/ Additives	No admixtures	→	This simplifies the mixing complications, raw materials storage, maintenance, and logistics.
	Water proofing	₹2 Cr	→	One m ³ of regular concrete requires 1% of waterproofing agents. Spanocrete based concrete eliminates the need for a waterproofing agent.
	Crack resistance	₹2.5 Cr	→	To get the crack-free concrete, 1Kg of fibers need to be used. Spanocrete based concrete eliminates the usage of fibers.
	Construction & durability	₹0.5 Cr	→	100% early strength (in 7 days) brings quick project completion. Anti-corrosion ability of spanocrete brings durability.

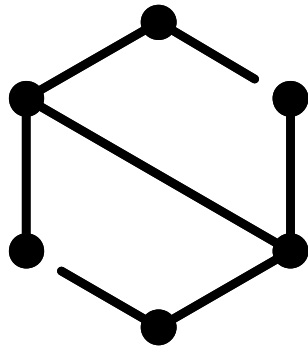
• SPANOCRETE NANO-ADDITIVES PRODUCT ROADMAP



Nanospan has demonstrated all the prototypes of all these (except for *) in the past 3 years



THANK YOU



nanospan

— Making Small Matter —

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