



Southern Builder

Bulletin of Builders Association of India - Southern Centre

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February 2021



19.02.2021 அன்று கோவையில் நடைபெற்ற அகில இந்திய மகா சபைக்கூட்டத்தில் 2019-20ம் ஆண்டின் சிறந்த மய்யத்திற்கான விருது தென்னக மய்யத்திற்கு வழங்கப்பட்டது.



தொடர்ந்து ஆறாவது ஆண்டாக அகில இந்திய அளவில் 2019-20ம் ஆண்டின் BEST PUBLICATION விருது நமது சதர்ன் பில்டர் மாத இதழுக்கு வழங்கப்பட்டது

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❖ ஆசிரியர் மடல்

அன்புடையீர் வணக்கம்,

1941ல் துவங்கப்பட்ட பாரம்பரியமிக்க அகில இந்திய கட்டுநர் வல்லுநர் சங்கத்தின் 80வது ஆண்டு என்பதை எண்ணி பெருமை கொள்கிறோம்.



கட்டுநர்களின் வாழ்வாதாரம் உயர்வதற்கு அகில இந்திய கட்டுநர் வல்லுநர் சங்கம் பல போராட்டங்களை நடத்தியுள்ளது. கட்டுமான பொருட்களின் அநியாய விலை உயர்வாக இருந்தாலும், நியாயமற்ற வரிவிதிப்புகளானாலும் தொடர்ந்து போராடி வெற்றி கண்டிருக்கிறது. சில ஆண்டுகளுக்கு முன்பே தன்னிச்சையாக அநியாய சிமெண்ட் விலையேற்றத்தை கட்டுப்படுத்த வேண்டி Competition Commission முன்பாக வழக்கு பதிவு செய்து தொடர்ந்து வாதாடி சிமெண்ட் உற்பத்தியாளர்களின் கூட்டு கொள்ளையை நிரூபித்து 6307 கோடி அபராதம் இட்டு தீர்ப்பளிக்க வழி வகை செய்தது.

எதற்கும் கட்டுப்படாத சிமெண்ட் உற்பத்தியாளர்களின் அராஜகப் போக்கை கண்டித்து நமது அகில இந்திய தலைவர் திரு. Mu. மோகன் அவர்கள் நாடு தழுவிய மிகப் பிரமாண்டமான போராட்டத்தை அறிவித்து ஒழுங்கு முறை ஆணையம் அவசியம் என்பதை வலியுறுத்தியிருந்தார். போராட்டத்தின் தீவிரத்தை உணர்ந்து தங்களின் தன்னிச்சையான செயல்பாட்டிற்கு கட்டுப்பாடு வந்துவிடுமோ என அஞ்சி பொது மக்கள் மீது அக்கறை கொண்டது போல் நடித்து கட்டுநர்களின் மீது தவறான புகார்களை கூறி ஒரு புகார் கடிதத்தை தென்னிந்திய சிமெண்ட் உற்பத்தியாளர் சங்கத் தலைவர் திரு. சீனிவாசன் அவர்கள் பிரதமருக்கு கடிதம் எழுதினார். இதற்கெல்லாம் பதிலடி கொடுக்கும் விதமாகவும் மக்களுக்கு நியாயம் புரியும் வகையிலும் மத்திய மாநில அரசுகளின் கவனத்தை ஈர்க்கும் வகையிலும் நாடு தழுவிய போராட்டம் சிறப்பாக நடந்தது.

இத்தருணத்தில் மரியாதைக்குரிய தலைவர் பீஷ்மா திரு. R. இராதாகிருட்டிணன் அவர்கள் மற்றும் அகில இந்திய தலைவர் திரு. Mu. மோகன் அவர்களுக்கு நமது நன்றியையும் பாராட்டுதலையும் தெரிவித்துக் கொள்ள கடமைப்பட்டுள்ளோம்.

மத்திய அரசு நமது சங்கத்தின் நியாயமான கோரிக்கை மற்றும் நாட்டு மக்களின் நலன் கருதி சிமெண்ட் ஒழுங்குமுறைஆணையத்தை அமைத்திடும் என நம்புகிறோம்.

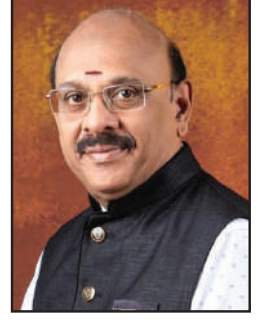
என்றும் அன்புடன்

S. அய்யநாதன்



அன்பார்ந்த நண்பர்களே வணக்கம்,

மாநில அளவிலான நான்காவது மேலாண்மை மற்றும் பொதுக்குழுக்கூட்டம் முதல் முறையாக நேரடியாக 07.02.2021 அன்று செங்கல்பட்டு மய்யத்தின் உபசரிப்பில் காஞ்சிபுரத்தில் நடைபெற்றது. அகில இந்தியத் தலைவரோடு தென்னக மய்யத்தின் சார்பில் உறுப்பினர்கள் அனைவரும் கலந்து கொண்டு சிறப்பித்தனர்



அகில இந்திய கட்டுநர் சங்கம் மத்திய மாநில அரசுகள் தலையிட்டு சிமெண்ட், ஸ்டீல் மற்றும் இதர கட்டுமானப் பொருட்களின் விலை உயர்வை கட்டுப்படுத்தவும், சிமெண்ட் மற்றும் ஸ்டீல் ஆகியவற்றின் வானளாவிய விலை உயர்வினை கட்டுப்படுத்த ஒழுங்குமுறை ஆணையம் அமைக்க வலியுறுத்தியும் 12.02.2021 அன்று ஒரு நாள் வேலை நிறுத்தம் மற்றும் தர்ணா போராட்டமும் நடத்த வேண்டும் என அகில இந்திய தலைவர் திரு. Mu.மோகன் அவர்கள் விடுத்த அழைப்பினை ஏற்று நாடு முழுவதும் நடைபெற்ற போராட்டத்தில் தென்னக மய்யமும் அதனோடு இணைந்த 13 உறுப்பு சங்கங்கள் மற்றும் CREDAI மற்றும் சென்னை மாநகராட்சி ஒப்பந்ததாரர் சங்கம், CRIC ஆகியவற்றோடு இணைந்து அன்றைய நாள் முழுப்பணி நிறுத்தம் செய்ததோடு சென்னை வள்ளுவர் கோட்டம் அருகில் தர்ணா போராட்டமும் நடத்தியது. அகில இந்திய தலைவர் திரு. Mu. மோகன் மற்றும் அகில இந்திய முன்னாள் தலைவர் திரு. R. இராதாகிருட்டிணன் ஆகியோரின் தலைமையில் நடைபெற்ற இப்போராட்டத்தில் நமது நிர்வாகிகளோடு திரளான உறுப்பினர்கள் தங்களது பணியாளர்களோடு சுமார் 5000 பேர் கலந்து கொண்டு போராட்டத்தை வெற்றி பெறச் செய்தனர். அனைத்து பத்திரிக்கைகள் மற்றும் ஊடகங்கள் பதிவு செய்து கொண்ட நமது போராட்ட களத்தில் அகில இந்திய தலைவர் மற்றும் முன்னாள் அகில இந்தியத் தலைவர் ஆகியோர் தங்களது கருத்துக்களை பதிவு செய்தனர். தர்ணா போராட்டத்தில் கலந்து கொண்ட அனைவருக்கும் தென்னக மய்யத்தின் சார்பில் தொப்பி மற்றும் முகக்கவசம் வழங்கப்பட்டது. நமது இப்போராட்டத்தின் எதிரொலியாக அடுத்த ஓரிறு தினங்களிலேயே ஸ்டீலின் விலை கணிசமான அளவிற்கு குறைந்தது.

அகில இந்திய மேலாண்மை மற்றும் பொதுக்குழு கூட்டமும், தலைமையகத்தின் வருடாந்திர மகாசபைக்கூட்டம் கோவையில் நடைபெற்றது. இதில் நமது தென்னக மய்யத்திற்கு அகில இந்திய அளவில் 2019-20ம் ஆண்டின் “OVERALL BEST CENTRE” மற்றும் ஆறாவது முறையாக BEST PUBLICATION AWARD நமது SOUTHERN BUILDER மாத இதழுக்கும் வழங்கப்பட்டது என்பதை பெருமையுடன் தெரிவித்துக் கொள்கிறேன்.

Joint Development Agreement குறித்த கருத்தரங்கமும், GST பற்றிய கருத்தாய்வுக்கூட்டமும் 23.02.2021 அன்று நமது மய்ய அலுவலகத்தில் உள்ள அரங்கத்தில் நடைபெற்றது. GST குறித்து CA திரு. R. சுப்பிரமணியன் அவர்களும், சட்ட நுணுக்கங்கள் பற்றி வழக்கறிஞர்கள் திரு. PV.R. நம்பியார் அவர்களும், திரு. P.E.D. நம்பியார் அவர்களும் உரையாற்றி உறுப்பினர்களின் சந்தேகங்களுக்கு விளக்கம் அளித்தனர்.

Hari Narayana Structural Pvt Ltd நிறுவனத்தின் பணித்தளம் Olympia Cyber Space IT Park -ல் இரண்டாவது மருத்துவ முகாம் 27.02.2021 அன்று நடைபெற்றது. Apollo Hospitals, Savitha Dental College, மற்றும் அரசு கண் மருத்துவமனை ஆகியவற்றிலிருந்து மருத்துவர்களும், செவிலியர்களும் பங்கேற்று சுமார் 400க்கும் மேற்பட்ட தொழிலாளர்களுக்கு மருத்துவ பரிசோதனை மேற்கொண்டு தேவைப்படவர்களுக்கு இலவசமாக மருந்துகள் வழங்கப்பட்டன.

கொரோனா கட்டுப்பாடுகள் வெகுவாக தளர்த்தப்பட்டுக் கொண்டிருக்கும் இந்நிலையில் நமது செயல்பாடுகள் இன்னும் அதிக அளவில் தொடர்ந்து உங்கள் அனைவரது ஒத்துழைப்போடு நடைபெறும்.

என்றும் அன்புடன்
L. சாந்தகுமார்



BAI Southern Centre organized a seminar by inviting senior auditor/advocate CA R. Subramaniam for clarity on Joint Development Agreement and GST rates pertaining to builders/promoters on 23-02-2021

We bring forth salient features of the seminar as per the following brief note.

Joint Development Agreement under GST

Section 2(119)

1. “workscontract” means a contract for building, construction, fabrication, completion, erection, installation, fitting out, improvement, modification, repair, maintenance, renovation, alteration or commissioning of any immovable property where in transfer of property in goods (whether as goods or in some other form) is involved in the execution of such contract.

b. construction of a complex, building, civil structure or a part thereof, including a complex or building intended for sale to a buyer, wholly or partly, except where the entire consideration has been received after issuance of completion certificate, where required, by the competent authority or after its first occupation, whichever is earlier.

b. construction of a complex, building, civil structure or a part thereof, including a complex or building intended for sale to a buyer, wholly or partly, except where the entire consideration has been received after issuance of completion certificate, where required, by the competent authority or after its first occupation, whichever is earlier

(b) by way of lodging accommodation by a hotel, inn, guesthouse, home stay, club or campsite, by whatever name called, and including a house boat or any other vessel; or

(c) by way of accommodation in any immovable property for organizing any marriage or reception or matters related thereto, official, social, cultural, religious or business function including services provided in relation to such function at such property; or

(d) any services ancillary to the services referred to in clauses (a),(b)and(c), Shall be the location at which the immovable property or boat or vessel, as the case may be, is located or intended to be located:

Provided that if the location of the immovable property or boat or vessel is located or intended to be located outside India, the place of supply shall be the location of the recipient.



5. Sale of Land and subject to clause (b) of paragraph 5 of schedule II, sale of Building.

Place of Supply of Services

SEC 12(3) OF IGST ACT:

- (a)** Directly in relation to an immovable property, including services provided by architects, interior decorators, surveyors, engineers and other related experts or estate agents, any services provided by way of grant of rights to use immovable property or for carrying out or co-ordination of construction work; or

(4) The place of supply of services supplied directly in relation to an immovable property, including services supplied in this regard by experts and estate agents, supply of accommodation by a hotel, inn, guest house, club or campsite, by whatever name called, grant of rights to use immovable property, services for carrying out or co-ordination of construction work, including that of architects or interior decorators, shall be the place where the immovable property is located or intended to be located.

1. Real Estate Regulation and Development (RERA)

2. Apartments sec. (2e) of Real Estate

“Apartment” whether called block, chamber, dwelling, unit, flat, office, showroom, shop, godown, premises, suit, tenement, unit or by any other name, means a separate and self – contained part of any immovable property, including one or more rooms, or enclosed spaces, located on one or more floors or any part thereof,-

3. Affordable Residential Apartment (APA)

A residential apartment in a project which commences on or after 1st April, 2019, or in an ongoing project in respect of which the promoter has not exercised option in the prescribed form to pay central tax on construction of apartments at the rates as specified for item (ie) or (if) against serial number 3, as the case may be, having carpet area not exceeding 60 square meter in metropolitan cities or 90 square meter in cities or towns other than metropolitan cities and for which the gross amount charged is not more than forty five lakhs rupees.

4. Residential Real Estate Project (RREP)

Means a REP in which the carpet area of the commercial apartments is not more than 15 percent. Of the total carpet area of all the apartments in the REP.

5. Real Estate Project (REP)

“Real Estate Project” means the development of a building or a building consisting of apartments, or converting an existing building or apart there of into apartments. Or the development of land into plots or apartment, as the case may be, for the purpose of selling all or some of the said apartments or plots or building, as the case may be, and includes the common areas, the development works, all improvements and structures thereon, and all easement, rights and appurtenances belonging thereto.

6. Transfer of Development Right (TDR)

The liability to pay GST on development rights shall arise on the date of completion or first occupation of the project, whichever is earlier. In case of supply of FSI wherein consideration is in the form of commercial or residential apartments, the liability to pay tax shall arise on the date of issuance of completion certificate. In case of supply of FSI wherein monetary consideration is paid by the promoter, liability to pay tax shall arise on the date of issuance of completion certificate only if such FSI is relatable to the construction of residential apartments. However, liability to pay tax in case of a commercial apartment shall arise immediately on the date of the agreement. If the developer sells the apartment to the third parties before completion certificate then Supply of TDR of FSI which is proportionate to the construction of the residential property that remains un-booked on the date of issue of completion certificate or first occupation would attract GST at the rate of 18% but the amount of tax shall be limited to 1% or 5% of the value of apartments are affordable or non-affordable residential projects. For the flats sold by the developer before completion certificate then the developer will charge GST at the rate of 1%, 5%, 12% for the affordable, non-affordable, commercial projects. For the flats sold by the developer after issuance of completion certificate then the developer will not charge GST as it is exempt.

Condition to be followed

For availing the above-mentioned rates the developer has to purchase 80% of the inward supplies from a registered supplier, if there is a shortfall of the purchase from the registered supplier then the developer has to pay GST on reverse charge supplies at the rate of 18%, for cement purchased the applicable rate will be 28% and for the capital goods applicable rates. While calculating 80% of supplies which is exempted goods or supplies shall also be considered, the value of electricity, high-speed diesel, motor spirit, and natural gas used in the construction of residential apartments shall be excluded. For flats to be considered as Real Estate Residential Projects a maximum of 15% of the carpet area can be commercial to avail the rate of 1% or 5%.

Valuation

The value of TDR shall be equal to the amount charged by the developer for similar apartments from the independent buyers booked on the date nearest to the date on which such development rights of FSI are transferred by the landowner to the developer.

Input Tax Credit

The new rates of tax that are 1% on affordable and 5% on non-affordable housing shall be applicable without the claim for input tax credit. If the developer is making a commercial property that is more than 15% of the total carpet area then the developer can avail input tax credit. However, where the entire consideration is received after completion certificate then the sale value will be exempt and the developer will not be able to avail input tax credit.

Works Contract

Sometimes the developers give the projects on works contract, in such a case the works contractor shall charge GST at the rate of 12% provided the carpet area of affordable residential apartments should not be less than 50% of the total carpet area of all the apartments in the projects.

7. Reverse Charge Mechanism (RCM)

Relevant Provisions As per Entry 41 A of the Notification exempting TDR :

The promoter shall be liable to pay tax at the applicable rate, on reverse charge basis, on such proportion of value of development rights as is attributable to the residential apartments, which remain un-booked on the date of issuance of completion certificate, or first occupation of the project, as the case may be.

[Exempted GST payable on TDR or FSI (including additional FSI) or both for construction of the residential apartments in the project as calculated in above manner] x (carpet area of the residential apartments in the project which remain un- booked on the date of issuance of completion certificate or first occupation / Total Carpet Area of the Residential Apartments in the project)

Provided further that said tax payable under reverse charge shall not exceed 1% of the value in case of affordable residential apartments and 5% of the value in case of residential apartments other than affordable residential apartments remaining un- booked on the date of issuance of completion certificate or first occupation

The provision has been drafted in a very clumsily manner and the calculation involved is confusing. An attempt has been made to simplify the calculation with the help of an illustration.

Illustration:-

A builder named as Mr. B (promoter) entered into agreement with Mr. L (land owner) for transfer of development rights on 21 May 2019. Detail of the agreement & project involved is as tabulated below:-

Sl	Description	Facts
(a)	Agreement date for transfer of development rights	21 May 2019
(b)	Development Plan	100 Apartment of 100 Sq M .each
(c)	Consideration for granting development rights to builder	40% (40 Apartments)
(d)	No. of Residential / Commercial Apartments in the project	Residential – 70 Commercial – 30
(e)	Date of Booking commenced (by the Builder)	01 June 2019
(f)	Rate at the time of booking	Rs 75 Lakhs each Apartment
(g)	Project completion date	31st May 2022
(h)	Rate at the time of Completion	Rs 102 Lakhs
(i)	No. of Apartments Booked by 31st May 2022	Residential – 40 Commercial – 20
(j)	No. of Apartments Un booked o 31 May 2022	Residential – 30 Commercial -10

6. Steps in calculation

Step 1 ;

GST on transfer of development rights attributable residential apartments = GST payable on TDR for construction of the project] × (carpet area of the residential apartments in the project) ÷ (Total carpet area of the residential and commercial apartments in the project).

The development rights were transferred in 21 May, 2019. (a above)

The booking rate at that time was Rs 75 lakhs. (f above)

Hence, value of supply of service is Rs 50 lakhs (two-third of Rs 75 lakhs).

Since 40 apartments were to be given to land owner, the total value of transfer of development rights – $40 \times 50 = \text{Rs } 2,000 \text{ lakhs}$.

(i) GST payable on transfer of development rights = 18% of Rs 2,000 lakhs = Rs 360 Lakhs

(ii) Carpet Area of residential Apartment in the project (d*b)= $70 \times 100 = 7000 \text{ Sq M}$

(iii) Total Carpet Area of the residential and commercial Apartments in the project (b above) = $100 \times 100 = 10000 \text{ Sq M}$

GST on transfer of development rights attributable residential apartments

∴

GST payable*Residential Area/ Total Area $360 \times 7000 / 10000 = \text{Rs } 252 \text{ Lakhs}$

Step 2 :

GST payable on residential apartments remain un-booked on date of completion = [GST payable on development rights] × (carpet area of the residential apartments in the project which remain un-booked on the date of issuance of completion certificate or first occupation ÷ Total carpet area of the residential apartments in the project) – first proviso to Sr. Nos. 41A and 41B of Notification No. 12/2019-CT (Rate) dated 28-6-2017 inserted w.e.f. 1-4-2019.

(i) GST payable on development rights (residential Appt) Rs 252 Lakhs

(ii) Unbooked carpet area of the residential apartments on the date of issuance of completion certificate (30*100) 3000 Sq M

(iii) Total carpet area of the residential apartments (70*100) 7000 Sq M

GST payable on residential apartments remain un-booked on date of completion:

GST on TDR (Residential)* Unbooked Residential Area / Total Residential Area = $252 \times 3000 / 7000$ = Rs 108 Lakhs

Step 3

Maximum limit of GST payable on un-booked residential apartments:

The tax payable under reverse charge shall not exceed 1% of the value in case of affordable residential apartments and 5% of the value in case of residential apartments other than affordable residential apartments remaining un- booked on the date of issuance of completion certificate or first occupation

Since area of each residential apartment is 100 Sq M, these are residential apartments (other than affordable residential apartments)

The value of un-booked apartments is to be considered on basis of value of similar apartments booked nearest to date of completion. The apartments were booked by promoter for Rs 102 lakhs in May 2022.

Hence, value of the apartment nearest to date of completion is Rs 68 lakhs (two-third of Rs 102 lakhs).

Since 30 residential apartments remained un-booked on date of completion certificate, the value of un-booked apartments = 68×30 = Rs 2,040 lakhs

The value nearest to date of completion is Rs 2,040 lakhs (as in above example)

Hence, 5% of Rs 2,040 lakhs is Rs 102 Lakhs

Thus, Maximum amount of GST payable on un-booked residential apartments is Rs 102 lakhs.

Exemption available on development rights pertaining to residential apartments which were booked prior to date of completion:-

Exemption available on development rights pertaining to residential apartments which were booked prior to date of completion is $A - B = (252 - 102) = \text{Rs } 150 \text{ lakhs}$

where $A = \text{GST on transfer of development rights attributable residential apartments \&}$

$B = \text{Maximum limit of exemption}$

GST payable by Builder (Promoter) on transfer of development rights under reverse charge ;

GST payable by Builder (Promoter) on transfer of development rights under reverse charge = (Total GST payable on TDR) – (Exemption available on TDR pertaining to residential apartments transferred prior to completion certificate)

= (Rs 360 Lakhs – 150 lakhs)

= Rs 210 lakhs

Thus, the developer is liable to pay Rs 210 lakhs under reverse charge as GST on transfer of development rights.

8. PROMOTER–

(i) a person who constructs or causes to be constructed an independent building or a building consisting of apartments, or converts an existing building or apart thereof into apartments, for the purpose of selling all or some of the apartments to other persons and includes his assignees;

(ii) A person who develops land into a project, whether or not the person also constructs structures on any of the plots, for the purpose of selling to other persons all or some of the plots in the said project, whether with or without structures thereon; or

(iii) Any development authority or any other public body in respect of allottees of–

(a) buildings or apartments, as the case may be, constructed by such authority or body on land owned by them or placed at their disposal by the Government; or

(b) plots owned by such authority or body or placed at their disposal by the Government, for the purpose of selling all or some of the apartments or plots; or

(iv) An apex state level co-operative housing finance society and a primary co-operative housing society which constructs apartments or buildings for its Members or in respect of the allottees of such apartments or buildings; or

(v) Any other person who acts himself as a builder, colonizer, contractor, developer, or by any other name or claims to be acting as the holder of a power of attorney from the owner of the land on which the building or apartment is constructed or plot is developed for sale; or

(vi) Such other person who constructs any building or apartment is sale to the general public.

MANUFACTURING OF NANO-CONCRETE USING NANO-MATERIALS: A FUTURE CONCRETE FOR CONSTRUCTION

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Introduction.

High-Performance Concrete (HPC) is much-needed concrete to meet the challenges of fast, speedy and durable constructions. The properties of HPC are high strength, high early strength, high modulus of elasticity, high abrasion resistance, high durability and long life in severe environments, low permeability and diffusion, resistance to chemical attack, high resistance to frost and deicer scaling damage, toughness and impact resistance, volume stability, ease of placement, compaction without segregation, inhibition of bacterial and mould growth.

When 28-day cube compressive strength of concrete is less than 40 MPa is called Normal Concrete. Concretes are classified as High-Strength Concrete (40-100 MPa), Ultra-High Strength Concrete (100- 150 MPa) and Special Concrete (>150 MPa). Special concrete can be achieved by adopting reduced water-cement ratio of 0.23 to 0.40, Extensive use of plasticizers, Higher binder content (Portland Cement, Fly ash, GGBS and Silica fumes) of about 450 - 500Kgs/ cum of concrete, Fine aggregate - Sand with round shape particle having higher fineness modulus (around 3.0). Coarse aggregate- the smaller size of 10- 12mm, angular crushed with a minimum flat and elongated particles are considered for special concrete. Overall basic considerations are optimum dosage, Quality materials, Improved quality of cement paste as well as aggregates, Denser packing of aggregates and cement paste, Improved bond between aggregate surface and cement paste and minimum numbers of smaller sizes of voids in the paste are adopted for achieving compressive strengths of 120 to 240 MPa. **What is further?. Research on concrete is continuing even now to get still better HPC and HSC in many ways. Nano-concrete using nano-material is one of the approaches to achieve better high strength and high-performance concrete in future.**

Nanotechnology is adopted in the number of disciplines including Civil Engineering and construction materials. Nanotechnology is the understanding, control, and restructuring of matter in nanometers (less than 100 nm) to create materials with fundamentally new properties and functions. Nanotechnology encompasses “**top-down**” approach, in which larger structures are reduced in size to the nano-scale or deconstructed from larger structures into their smaller parts and “**bottom-up**” approach, in which materials are engineered from atoms or molecular components through a process of assembly. Traditionally nanotechnology has been concerned with developments in the fields of microelectronics, medicine and material sciences. However, the potential for applications of many developments in the nanotechnology field in the area of construction engineering is growing.

Nanotechnology products can be used in design and construction processes in many areas of civil engineering to get benefits such as nano-concrete, structural composites, coating materials and nano-sensors, etc. Concrete is the most usable material and it is required to improve its quality frequently. Addition of Nano-particles in concrete has been shown significant improvement in concrete. Concrete made with Portland cement particles is about 500nm cementing agent. **When the matter is controlled at the Nano-scale, the fundamental properties such as mechanical, thermal, electrical, magnetic, chemical reactivity are changed.** Nano-concrete cement particle sizes are less than 100 microns can improve the materials' bulk properties and has the ability to control or manipulate at the atomic scale. **Nano-concrete technology is used to obtain thinner final products and faster setting time, reduced alkaline silica reaction, cost-effectiveness and minimize the environmental contamination.**

Concrete, the most ubiquitous material in the world, is a nano-structured, multi-phase, composite material that ages over time. It is composed of an amorphous phase, nanometer to micrometre size crystals, and bound water. The amorphous phase, calcium-silicate-hydrate (C-S-H) is the “glue” that holds concrete together and is itself a nano-material. Concrete at the nano-scale is a composite of molecular assemblages, surfaces (aggregates, fibres), and chemical bonds that interact through local chemical reactions, intermolecular forces, and intra-phase diffusion. Properties characterizing this scale are the molecular structure, surface functional groups, and bond length, strength, and density. The structure of the amorphous and crystalline phases and the inter-phase boundaries originates from this scale.

Nano-Materials for Construction.

The size of the particles is a critical factor, the material properties significant differ at the nano-scale from that at larger scales. **Physical phenomena begin to occur differently below the boundary limit: gravity becomes unimportant, electrostatic forces and quantum effects start to prevail.** At the same time, the proportion of atoms on the surface increases relative to those insides, creating so-called “**Nano-effect**”. All these nano-properties affect the behaviour of the material at macro-scale and, from this point, the power of nanotechnology is emphasized.

Nano-engineering of concrete can take place in the solid phases, in the liquid phases and at the interfaces between liquid-solid and solid-solid. Nano-engineering encompasses the techniques of manipulation of the structure at the nanometer scale to develop a new generation of tailored, multifunctional, cementitious composites with superior mechanical performance and durability. Potentially having a range of novel properties such as: low electrical resistivity, self-sensing capabilities, self-cleaning, self-healing, high ductility, and self-control of cracks. *Concrete can be nano-engineered to control material behaviour and add novel properties, or by the grafting of molecules onto cement particles, cement phases, aggregates, and additives to provide surface functionality, which can be adjusted to promote specific interfacial interactions.* Modifying the cement and cement paste properties through admixtures, or concrete mixture using Nano-Porous Thin Film (NPTF) coatings for the aggregates themselves. Nano-modified cement or nano additives mixed with the paste can enhance the durability of concretes by reducing permeability and improving shrinkage properties. Nano-scale mechanical properties are characterized by a high surface area-to volume ratio and its reactive performance.

Nano-concrete made with High-Energy Mixing (HEM) is indeed real Nano concrete because this method builds up C-S-H gel starting from Nano-particles and spreading them over full volume of concrete for 3-5 minutes of HEM. Thus it is the “Bottom-up” approach in nanotechnology of concrete. Where HEM is a kind of reactor designed to give a functional design to dry particles using a mechanochemical process. These particles are brought into contact with each other in such that stable coatings, compound particles or changes to the particle shape come into being. Much analysis of concrete is being done at the Nano-level to understand its structure. Such *analysis uses various techniques such as Atomic Force Microscopy (AFM), Scanning Electron Microscopy (SEM) and Focused Ion Beam (FIB).* Concrete ills such as alkali-silica reactivity (ASR) and delayed stringier formation, the bane of concrete highways and bridges, are being explored at the molecular level using neutron-scattering technology and other processes.

Nano-Technologies for Concrete. Concrete is a macro-material strongly influenced by its nano-properties. Carbon nanotubes increase the compressive strength of cement mortar specimens and change their electrical properties which can be used for health monitoring and damage detection. The addition of small amounts (1%) of carbon nanotubes can improve the mechanical properties of mixture samples of Portland cement and water. Oxidized multi-walled nano-tubes show the best improvements both in compressive strength and flexural strength compared to the regular concrete. Addition of nano-silica (SiO_2) to cement-based materials can control the degradation of the calcium-silicate hydrate reaction caused by calcium leaching in water, blocking water penetration and leading to improvements in durability. Nano-sensors have great potential to be used in concrete structures for quality control and durability monitoring. (to measure concrete density and viscosity, to monitor concrete curing and to measure shrinkage or temperature, moisture, chlorine concentration, pH, carbon dioxide, stresses, reinforcement corrosion or vibration).

Addition of Nano-Sized and Nano-Structured Materials.

The addition of nano-fine particles can improve the properties of concrete due to the effect increased surface area has on reactivity and through filling the nano-pores of the cement paste. **Types of materials used in Nano-Concrete are Nano- cement Particles, Carbon Nano-tubes, Nano-Silica (nano- SiO_2), Polycarboxylates and Nano-Titanium oxide (Nano- TiO_2).** Nano-sized particles have a high surface area to volume ratio, providing the potential for tremendous chemical reactivity. Much of the work done with nano-particles of Carbon Nano-tubes, nano-silica (nano- SiO_2) and nano-titanium oxide (nano- TiO_2). Nano-silica and nano-titanium dioxide are probably the most reported additives used in Nano-modified concrete. Nano-materials can improve the compressive strength and ductility of concrete. Carbon nanotubes or nano-fibres (CNT/ CNF) have also been used to modify strength, modulus and ductility of concretes. CNFs can act as bridges across voids and cracks that ensure load transfer in tension. Ultra high-performance

concretes (UHPC) used in current practice and has mainly been developed using nano-modification or the use of an admixture using nanotechnology methods.

There are a few studies on nano-iron (nano-Fe₂O₃), nano-alumina (nano-Al₂O₃), and nano-clay particles. However, a limited number of investigations on the manufacture of nano-sized cement particles and the development of nano-binders. Nano-particles can act as nuclei for cement phases, further promoting cement hydration due to their high reactivity, nano-reinforcement, as filler, densifying the microstructure and the Interfacial Transition Zone (ITZ), thereby, leading to a reduced porosity. The most significant issue for all nano-particles is that of effective dispersion.

Nano-Cement Particles.

When a small quantity of nano-particles is uniformly dispersed in a cement paste, the hydrated products have higher surface energy. Nano-cement particles promote and accelerate cement hydration by nucleation (the initial process that occurs during the formation of a crystal). Nano-Al₂O₃ have shown to significantly increase the modulus of elasticity (up to 143% at a dosage of 5%) but to have a limited effect on the compressive strength. Nano-sized cement particles and nano-binders have been proposed as a way to improve cement performance while reducing carbon emissions. Cement pastes made with nano-sized cement particles have shown faster setting times and an increase in early compressive strength compared to pastes prepared with common. The concept of a nano-binder involves mechano-chemical activation that is obtained by inter-grinding cement with dry mineral additives in a ball mill. Mechano-chemical modification of cement with high volumes of blast furnace slag has shown to increase the compressive strength by up to 62%.

Nano-clay particles have shown promise in enhancing the mechanical performance, resistance to chloride penetration, self-compacting properties of concrete, reducing permeability and shrinkage. Natural clay particles are micron and sub-micron in size, and the base structure of clay is composed of crystalline layers of aluminium phyllosilicates with thicknesses on the order of 1nm. Chemical binding of Poly Vinyl Alcohol (PVA) to exfoliated clay particles, has been proposed to create linked clay particle chains, when incorporated in cement, shown improvement in the post-failure properties of the material. Nano-Al₂O₃ was found to be very effective in increasing the modulus of elasticity of cement mortar. With 5% of nano-Al₂O₃ (approximately 150 nm average particle size), the elastic modulus increased by 143% at 28 days, whereas the increase of compressive strength was not very obvious.

Nano-CaCO₃ significantly accelerated the rate of heat development and shortened the induction period of C₃S hydration. It was proposed that nano-CaCO₃ either broke down the protective layer on C₃S grains during hydration to shorten the induction period or accelerated C-S-H nucleation (i.e., seeding effect). Compressive strength of the concrete increased with increasing the specific surface area of nano-fume.

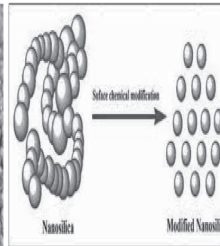
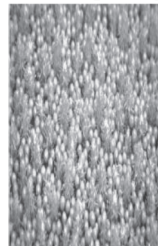
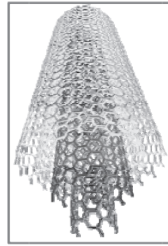
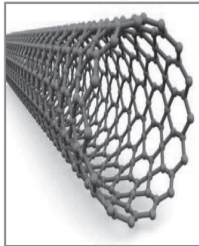
Addition of synthetic nano-ZrO₂ powder in cement has a considerable effect on the strength development, reduction in porosity and permeability, enhancement in compressive strength, and improvement in the microstructure of cement paste. Both pore filling and bridging action were identified as possible mechanisms for improvement.

Silicon Dioxide Nano-particles (SiO₂). It is the first Nano product that has replaced Micro Silica. Silicon dioxide nano-particles, also known as silica nano-particles or nano-silica, are the basis for a great deal of biomedical research due to their stability, low toxicity and ability to be functionalized with a range of molecules and polymers. Nano-silica particles are divided into P-type and S-type according to their structure. The P-type particles are characterized by numerous nano-pores having a pore rate of 0.61 ml/g. The S-type particles have a comparatively smaller surface area. The P-type nano-silica particles exhibit a higher ultraviolet reflectivity when compared to the S-type. Silicon belongs to Block P, Period 3 while oxygen belongs to Block-P, Period-2 of the periodic table. Nano-SiO₂ could significantly increase the compressive strength of concretes containing large fly ash volume at an early age, by filling the pores between large fly ash and cement particles. Nano-silica decreases the setting time of mortar when compared with silica fume (micro-silica) and reduce bleeding water and segregation by the improvement of the cohesiveness.

Nano-silica particles modify the ITZ of cement mortar in four different ways, i.e., (a) acting as a nucleation site, (b) generating more C-S-H through a pozzolanic reaction that is also more dispersed through a nucleation effect, (c) controlling crystallization, and (d) improving the micro-filling effect. The effect of nano-particles at early ages (especially in the first 3 days) is more noticeable than with other curing ages. The ultra-high reactivity of nano-silica particles contributes to the promotion of hydration reaction and also expedites the pozzolanic reaction. A combined effect of the above mechanisms produces a uniform dense microstructure with improvement not only in the cement paste. Nano-silica used for high compressive strengths concretes (15 MPa and 75 MPa at 1 day; 40 MPa and 90 MPa at 28 days and 48 MPa and 120 MPa at 120 days.) High workability with reduced water/cement ratio. It fills up all the micropores and micro spaces, cement saving up to 35-45%, increases the viscosity of fluid phase, reacts with calcium hydroxide in C-S-H, all mechanical properties are controlled by C-S-H and improves hydration process.

The addition of colloidal silica resulted in acceleration of C_3S dissolution and rapid formation of C-S-H phase in cement paste. The other mechanisms of improved performance are: (a) nano-particles fill the nano-size pores of the cement paste, and (b) nano- SiO_2 reacts with $Ca(OH)_2$ (i.e., pozzolanic reaction) and generates additional C-S-H. Both processes are influenced by the particle size and the proper dispersion of the nano-particles within the cement paste, with colloidal dispersions being more effective than the powder. A reduction in $Ca(OH)_2$ content and increase in C-S-H content in cement mortar as a result of nano- SiO_2 addition was noticed through tests. With the addition of 3% (by weight) of nano- SiO_2 , significant improvement of early-age ITZ structure concerning reduction in content, crystal orientation degree, and crystal size of Portlandite crystal.

Nano- SiO_2 has been found to improve concrete workability and strength, to increase resistance to water penetration, and to help control the leaching of calcium, which is closely associated with various types of concrete degradation. Nano- SiO_2 , additionally, shown to accelerate the hydration reactions of both C_3S and an ash-cement mortar as a result of the large and highly reactive surface of the nano-particles. Nano- SiO_2 was found to be more efficient in enhancing strength than silica fume. Addition of 10% nano- SiO_2 with dispersing agents was observed to increase the compressive strength of cement mortars at 28 days by as much as 26%, compared to only a 10% increase with the addition of 15% silica fume. Even the addition of small amounts (0.25%) of nano- SiO_2 was observed to increase the strength, improving the 28-day compressive strength by 10% and flexural strength by 25%.



Nano-Concrete. Single and Double Wall CNT.

Nano- SiO_2

Nano- TiO_2

Carbon Nano-Tubes (CNT) in Concrete.

In modern construction, advanced admixtures are needed to enhance the properties of concrete to avoid the cracks, shrinkage, and creep in the structures. Nano-materials and nano-technologies have the potential use in various fields such as medicine, construction, automobile industry, energy, telecommunications and informatics. This is due to the special characteristics of materials at the nano-scale. Building materials domain is one of the main beneficiaries with applications that will improve the characteristics of concrete, steel, glass and insulating materials. Improving the materials resistances and increasing their durability will reduce environmental pollution by reducing the carbon footprint of the building.

Properties of CNT Carbon Nano-tubes.

Carbon materials are found in various forms such as graphite, diamond, carbon fibers, fullerenes and carbon nano-tubes. *The reason why carbon assumes many structural forms is that a carbon atom can form several distinct types of valence bonds, where the chemical bonds refer to the hybridization of orbitals by physicists. Carbon nano-tubes are seamless, carbon cylinders which have unique mechanical and electronic properties.* Carbon nano-tubes are a form of carbon having a cylindrical shape, the name coming from their nanometre

diameter. They can be several millimetres in length and can have one "layer" or wall (single-walled nano-tube) or more than one wall (multi-walled nano-tube). Nano-tubes are members of the fullerene structural family and exhibit extraordinary strength and unique electrical properties, being efficient thermal conductors. **For example, they have five times Young's modulus and eight times (theoretically 100 times) the strength of steel, whilst being 1/6th the density.**

Physical Properties of Carbon Nano-tubes. When **Sumio Iijima, Japan** discovered carbon nanotubes in **1991**, they were just thin and long cylinders of carbon and it was unknown at the time what the implications of this discovery would be. Carbon nanotubes have been described as being able to exist as a Single-Walled Nano-tube (SWNT) or as a Multiple Walled Nano-tube (MWNT). In the Multiple Walled Nano-tube, one cylinder is inside another cylinder, like nesting dolls. Each of these types of carbon nanotubes has its physical properties in addition to the standard physical property sets for carbon nano-tubes and due to the complex nature. The physical properties of carbon nanotubes, including their size, shape and ability to be manipulated, yet stay strong, have made them a unique find amongst other macromolecules. Essentially, a carbon nano-tube is akin to a sheet of graphite that has been rolled up into a cylindrical shape. This sheet is comprised of a hexagonal latticework, making the physical properties of carbon nano-tubes that much more fascinating and strange to both scientists and physicists. Carbon nanotubes have been known to change depending on the situation they are placed into. They are capable of adapting and changing to meet the needs of electronic, thermal and structural properties. Additionally, the physical properties of carbon nanotubes change based on the type of nano-tube being used. Carbon nano-tubes have elastic properties are most flexible macromolecules in existence, this elasticity have implications for the development of a wide variety of products, including bulletproof vests and other safety devices. Carbon nanotubes have been known for excellent conductors of electricity and bundle of carbon nano-tubes as microscopic tweezers. It has got very good optical and thermal properties which are useful for communications and thermodynamic applications.

Mechanical Properties of Carbon Nano-Tube. Carbon nanotubes are the strongest and stiffest materials yet discovered in terms of tensile strength and elastic modulus respectively. This strength results from the covalent SP² bonds formed between the individual carbon atoms which are stronger than 3D diamond bonds. Young's modulus of 2.8-3.6TPa for SWCNT and 1.7-2.4 TPa for MWCNT. Tensile strength ranges from 320 to 1470 GPa for SWCNT and 270 to 950 GPa for MWCNT.

Integrating Carbon Nano-tube as 0.15% to 2.5% in concrete can modify its strength characteristics and durability. Sonication process is carried out by adding the CNT with surfactants by weight of cement or water. Ultrasonic dispersion techniques are adopted to disperse CNT uniformly. Carbon nanotubes are the potential applicant for the use as nano-reinforcements in cement-based materials. They exhibit extraordinary strength with moduli of elasticity on the order of TPa, a tensile strength in the range of GPa and they have unique electronic and chemical properties. CNT are of two types: 1. Single-wall carbon nanotubes (SWCNTs) 2. Multi-wall carbon nanotubes (MWCNTs).

Need to Mix Nano-Carbon in Concrete.

If Portland cement can be formulated with nano-size cement particles, the cement will not only be more economical than organic polymers but also will be fire resistant and much more effective than carbon fibers. The thickness of the composite can be reduced to microns and hence flexible and smart cement composite can be manufactured. Well dispersed nano-particles in concrete will increase the viscosity of the liquid phase, improves the segregation resistance and workability of the system. It accelerates the hydration, has a better bond between aggregates and cement paste, improves the toughness, shear, tensile strength and flexural strength of concrete. Nano-tubes are used to fill the voids, the addition of small amounts (1% wt) of CNT can improve the mechanical properties of samples consisting of the main Portland cement phase and water. Oxidized Multi-Walled Nano-tubes (MWCNT's) show the best improvements both in compressive strength (+25 N/mm²) and flexural strength (+8N/mm²) compared to the sample without reinforcement.

Application of Nanotechnology in Concrete. Expected benefits of carbon nanotubes are: mechanical durability and crack prevention in concrete enhanced mechanical and thermal properties in ceramics and real-time structural health monitoring capabilities. Properties are CNT are also highly flexible, strongest and stiff. Reduces porosity of the C-S-H phase resulting increase in Young's modulus, flexural strength, compressive strength, durability and autogenously shrinkage. CNTs in concrete increase its tensile strength

The highest tensile strength of an individual multi-walled carbon nanotube has been tested to be 63Gpa. They help in controlling the crack propagation. The addition of CNT to concrete can significantly enhance some mechanical as well as physical properties of the material. Use of carbon nanotubes increases the strength and durability of cementitious composites as well as for pollution reduction.

Poly-Carboxylates. Poly-carboxylates or polymer-based concrete admixtures are High Range Water Reducing admixture (HRWR). Low dosage can reduce water as much as high dosage of conventional admixtures. It can produce high compressive strength concrete (40 to 90MPa in 1 day, 70 and more than 100 MPa in 28 days). Produces high resistance even with low addition (1 to 1.5% of the weight of the cement) and gives self-compacting characteristics with higher proportions (2.5%). It meets the norms of environmental protection, 70% less use of additives compared to traditional silica, superplasticizers or traditional fibres. This admixture type is very suitable for underwater anti-washout concrete.

Titanium Dioxide Nanoparticles (TiO₂).

The titanium dioxide nanoparticles are added to concrete to improve its properties. This white pigment is used as an excellent reflective coating or added to paints, cement and windows for its sterilizing properties. The titanium dioxide breaks down organic pollutants, volatile organic compounds and bacterial membranes through powerful photo-catalytic reactions, reducing air pollutants when it's applied to outdoor surfaces. Being hydrophilic gives self-cleaning properties to surfaces to which it is applied because the rainwater is attracted to the surface and forms sheets which collect the pollutants and dirt particles previously broken down and washes them off. The resulting concrete surface has a white colour that retains its whiteness very effectively.

In addition to imparting self-cleaning properties, Nano-TiO₂ can accelerate the early-age hydration of Portland cement, improve compressive and flexural strengths. TiO₂ nanoparticles decreased the compressive strength after 28 days of curing; however, the permeability of concrete was lowered and enhance the abrasion resistance of concrete. Nano-TiO₂ helping to clean the environment acts by triggering a photocatalytic degradation of pollutants, such as NO_x, carbon monoxide, VOCs, chlorophenols, and aldehydes from the vehicle and industrial emissions. “Self-cleaning” and “de-polluting” concrete products are produced by several companies for use in the facades of buildings.

Benefits of Nano-Concrete. Nano-particles can assist in reducing the use of natural materials by improving the performance of construction materials and decreasing the consumption of energy. The use of nano-particles in construction offers a cheaper, faster, and safer approach to the production of construction materials and concrete with high initial & final compressive, tensile strengths and good workability.

Dis-Advantages of Nano-Concrete. Availability of sources for producing nano-materials is less. For producing nano-materials there is no such equipment's to grain the materials up to nano-size. Usage of nano-materials in concrete is difficult to replace the materials in concrete like cement. Currently, the use of nano-materials in construction is reduced, mainly for the following reasons: the lack of knowledge concerning the suitable nano-materials for construction and their behaviour; the lack of specific standards for design and execution of the construction elements using nano-materials; Nano-materials used for concrete are nano-silica, carbon nano-tube, titanium, carbon fiber are the reduced offer of nano-products; the lack of detailed information regarding the nano-products content; high costs; the unknowns of health risks associated with nanomaterials.

Conclusion.

As on date, nanotechnology applications, advances in the construction and building materials fields have been uneven. The exploitation of nanotechnology in concrete on a commercial scale remains limited with few results successfully converted into marketable products. The main advances have been in the nano-science of cementitious materials with an increase in the knowledge and understanding of basic phenomena in cement at the nano-scale. **It is not far away that the future concretes are going to be nano-concrete using nano-materials.**

(v) Any other person who acts himself as a builder, colonizer, contractor, developer, or by any other name or claims to be acting as the holder of a power of attorney from the owner of the land on which the building or apartment is constructed or plot is developed for sale; or

(vi) Such other person who constructs any building or apartment is sale to the general public.

9. Ongoing project:

(a) A Commencement certificate in respect of the project, where required to be issued by the competent authority, has been issued on or before 31st March, 2019, and it is certified by any of the following that construction of the project has started on or before 31st March, 2019;

- (i) an architect registered with the Council of architecture constituted under the architects Act, 1975 (20 of 1972); or
- (ii) a chartered engineer registered with the Institution of Engineers (India); or
- (iii) a licensed surveyor of the respective local body of the city or town or village or development or planning authority.

(b) where commencement certificate in respect of the project, is not required to be issued by the competent authority, it is certified by any of the authorities specified in sub-clause (a) above that construction of the project has started on or before the 31st march, 2019.

(c) Completion certificate has not been issued or first occupation of the project has not taken place on or before the 31st March, 2019.

(d) Apartments being constructed under the project have been partly, or wholly, booked on or before the 31st March, 2019.

10. Carpet area

As per explanation 4 (xxvi) of notification No.3/2019 ibid, the definition would be as per section 2 (k) of the RERA which defines the term carpet area as:

The net usable floor area of an apartments, **Excluding** the area covered by the external walls, areas under services shafts, exclusive balcony or verandah area and exclusive open terrace area, but

❖ **Includes** the area covered by the internal partition walls of the apartment.

Explanation–

For the purpose of this clause, the expression “exclusive balcony or verandah area” means the area of the balcony or verandah, as the case may be, which is appurtenant to the net usable floor area of an apartment, meant for the exclusive use of the allottee; and “exclusive open terrace area” means the area of open terrace which is appurtenant to the net useable floor area of an apartment, meant for the exclusive use of the allottee;

07.02.2021 அன்று நான்காவது மாநில அளவிலான GC உறுப்பினர்கள்
கூட்டம் காங்கிபுரத்தில் நடைபெற்றது



12.02.2021 அன்று வள்ளுவர் கோட்டத்தில் சிமெண்ட் மற்றும் ஸ்டீல் விலை உயர்வை கண்டித்து வேலை நிறுத்தம் மற்றும் ஆர்ப்பாட்டம் நடைபெற்றது.



**12.02.2021 அன்று வள்ளுவர் கோட்டத்தில் சிமென்ட் மற்றும்
ஸ்டீல் விலை உயர்வை கண்டித்து வேலை நிறுத்தம் மற்றும்
ஆர்ப்பாட்டம் நடைபெற்றது.**



12.02.2021 அன்று வள்ளுவர் கோட்டத்தில் சிமெண்ட் மற்றும்
ஸ்டீல் விலை உயர்வை கண்டித்து வேலை நிறுத்தம் மற்றும்
ஆர்ப்பாட்டம் நடைபெற்றது.



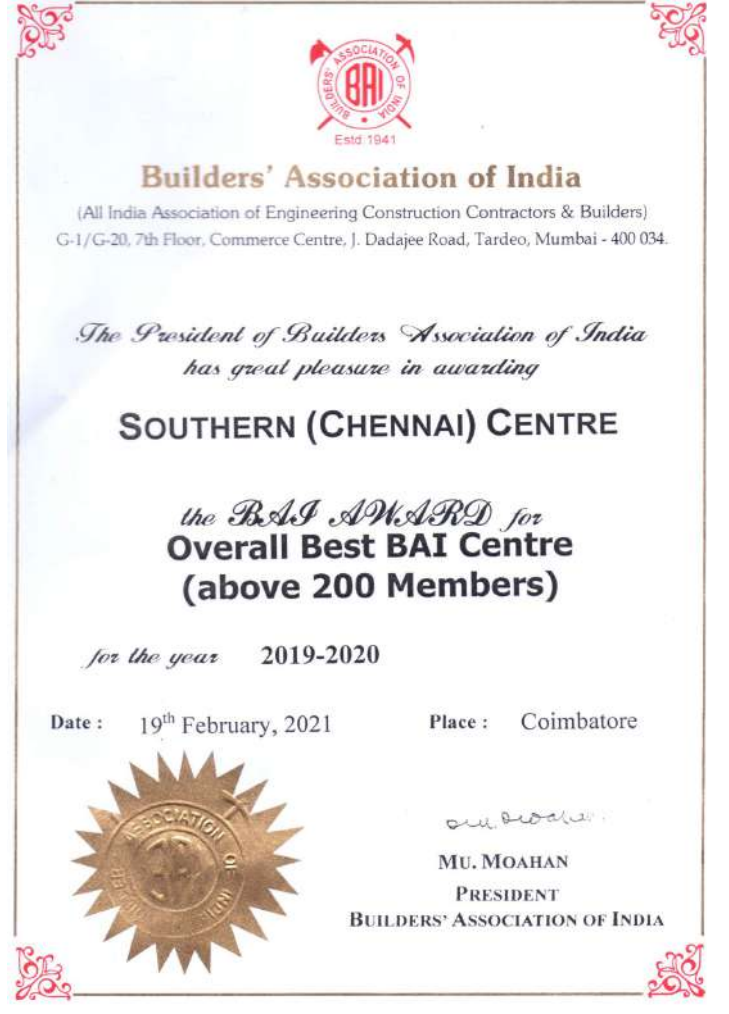
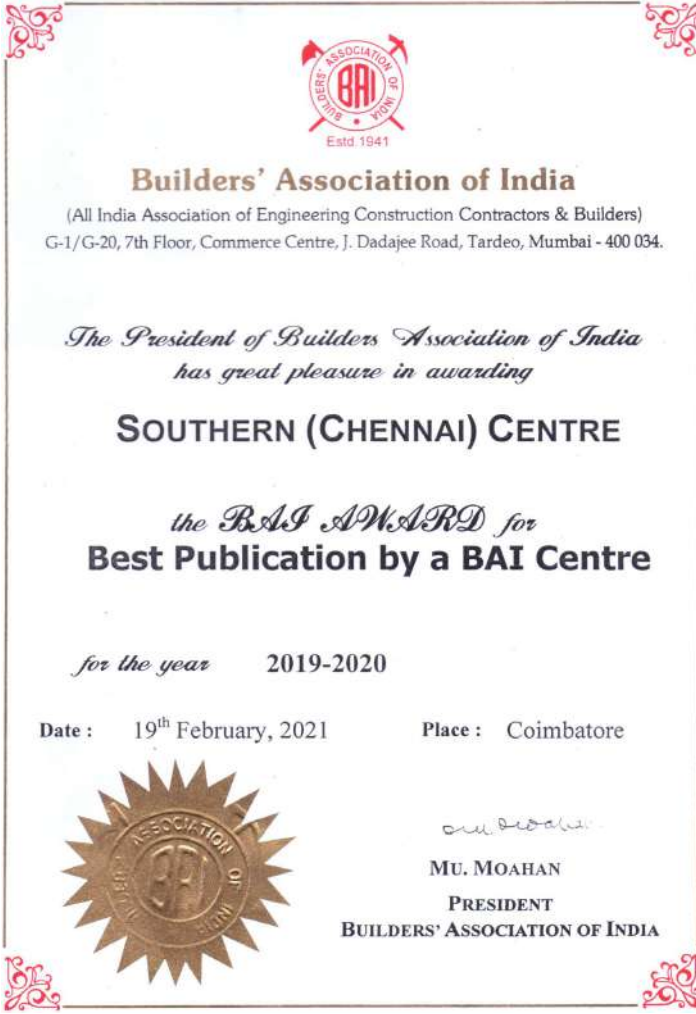
**19.02.2021 அன்று அகில இந்திய மகாசபைக் கூட்டம்
கோவையில் நடைபெற்றது**



**20.02.2021 அன்று நான்காவது அகில இந்திய MC/GC கூட்டம்
கோவையில் நடைபெற்றது**



தென்னக மய்யத்திற்கு வழங்கப்பட்ட விருதுகள்



**13.02.2021 அன்று செய்யார் SIPCOT வளாகத்தில்
SCHWING STETTER நிறுவனத்தின் Global Manufacturing hub
என்கின்ற புதிய தொழிற்சாலை திறப்புவிழா நடைபெற்றது**



27.02.2021 அன்று நாகப்பட்டினம் மய்யத்தின் புதிய சொந்த கட்டிட திறப்பு விழா நடைபெற்றது.



NEW PATRON MEMBERS



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23.02.2021 அன்று தென்னக மய்ய அரங்கத்தில் GST மற்றும் Joint Development Agreement பற்றிய கலந்தாய்வுக்கூட்டம் நடைபெற்றது



அறக்கட்டளை சார்பாக 27.02.2021 அன்று மருத்துவ முகாம்
நடைபெற்றது.



SCORDSS - தொழிலாளர் பயிற்சி முகாம்

கட்டிடக்கலைஞர்களுக்கான திறன் மேம்பாட்டு பயிற்சி முகாம் 15.02.2021 அன்ற காலை 10.30 மணியிலிருந்து 1.45 மணி வரை Ultra tech Cement மற்றும் The Southern Construction Research and Development Service Societyயுடன் இணைந்து குளை மேட்டில் Arunachalla Associate என்ற கட்டுமான நிறுவன கட்டிடத்தில் கொத்தனார்களுக்கான திறன் மேம்பாட்டு பயிற்சி முகாம் நடைபெற்றது. Ultra Tech Cement Technical Engineers கட்டிடத்தின் வலிமைக்கு தேவையான டிப்ஸ் மற்றும் கட்டு வேலை பூச்சு வேலைக்கான மாற்று முறை பற்றிய மாற்று முறை விளக்க உரையை கானொலி வாயிலாகவும், உருவப்படத்தின் வாயிலாகவும் விளக்கி பயிற்சி கொடுத்தார். இறுதியாக கட்டிட கலைஞர்களுக்கு கட்டு வேலை திறன் மேம்பாடு பயிற்சியும் அதற்கான மேம்படுத்தப்பட்ட கலவை கலக்கும் விதம் பற்றியும் செய்முறை பயிற்சியும் கொடுக்கப்பட்டது. 14 கொத்தனார்கள் மற்றும் 12 உதவியாளர்கள் பயிற்சி பெற்றனர். இதில் Ultra Tech Cement Technical Engineers மற்றும் அருணாச்சலா அசோசியேட்ஸ் நிறுவனத்தலைவர் மற்றும் தொழிலாளர் மற்றும் சொசைட்டியின் தலைவர் திரு. K. அண்ணாமலை, செயலாளர் திரு. A. சத்தியநாராயணா, பொருளாளர் திரு. R. ராஜேந்திரன் ஆகியோர் கலந்து கொண்டு சிறப்பித்தனர். Ultra Tech Cement நிறுவனத்தின் மூலம் அனைவருக்கும் மதிய உணவு வழங்கப்பட்டது.



BAMBOO AS CONSTRUCTION MATERIAL

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M.E (Structures), F.I.E., F.I.V.,
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Dean - Civil Engineering



Bamboo is a 'grass' that is woody, hard, hollow-stemmed, perennial, and evergreen in nature. It belongs to the family of the true grass called 'Poaceae.' In fact it has the largest family members of the grass family, with about 91 genera and more than 1000 species. With the popularity of the concept of sustainable development, green buildings have become the main development direction of future architecture. As a kind of eco-friendly material, bamboo is featured by renewable, growing fast, economical, safe, durable, and so on. Bamboo can be utilized as a building material for scaffolding, bridges, houses and buildings. Bamboo, like wood, is a natural composite material with a high strength-to-weight ratio useful for structures. Bamboo's strength-to-weight ratio is similar to timber, and its strength is generally similar to a strong softwood or hardwood timber.

The Properties of bamboo

Bamboo, a highly versatile resource and widely available, is being used as an engineering material for the construction of houses and other buildings. There are some inherent properties of bamboo, that makes it a preferred material for longevity and sustainability, which are discussed below.

- **Tensile strength**

Various tests show that bamboo can resist more tension than compression. This is all possible as its fibers run axially and still has a high elastic vascular bundle. The result is a material with a high tensile strength. It is estimated that the tensile strength is up to 400N/mm². In comparison, some of the strongest wood fibers will have a tensile strength of 50 N/mm².

- **Compressive strength**

The bamboo material generally has a better compressive strength than some other materials. Even for slimmer tubes, you will find them living up to your compressive strength needs. It is why you can apply a lot of weight to the material and it would not easily buckle. That cannot be said for the other types of wood.

- **Elastic modulus**

Bamboo has more accumulation of strong fibers in the outer parts of the tube wall. As a result, you end up with a material with a positive elastic modulus. This makes it good to handle more tension, shear, and bending forces. Any bamboo that has a higher elastic modulus means that it is a high-quality bamboo type. With this elasticity capability, you should find bamboo common in areas that experience a lot of earthquakes.



Tensile strength



Compressive strength



Elastic modulus

- **Anisotropic properties**

Bamboo is an anisotropic material. Properties in the longitudinal direction are completely different from those in the transverse direction. There are cellulose fibers in the longitudinal direction, which is strong and stiff and in the transverse direction there is lignin, which is soft and brittle.

- **Shrinkage**

As much as bamboo is great for construction, you should consider that it shrinks more than wood when it starts to lose water. Bamboo can shrink up to 17% of its original size. You are required to take the necessary measure to prevent water loss whenever you use it as a building material.

- **Fire resistance**

The fire resistance is very good because of the high content of silicate acid. Filled up with water, it can stand a temperature of 400° C while the water cooks inside.

Bamboo Housing

The majority of bamboo construction relates to the rural community needs in developing countries. As such domestic housing predominates and in accordance with their rural origins, these buildings are often simple in design and construction relying on a living tradition of local skills and methods. Other common types of construction include

farm and school buildings and bridges. Further applications of bamboo relevant to construction include its use as scaffolding, water piping and as shuttering and reinforcement for concrete.

Domestic Housing and Small Buildings

There is a long-standing tradition of bamboo construction, dating back to many hundreds of years. Different cultures have found in this material an economical system of building, offering sound yet light and easily replaceable forms of shelter. The methods, activities and tools are often simple, straightforward, accessible even to the young and unskilled. Despite human exploitation and unfavorable treatment, trees maintain its contributively role towards the dwelling of mankind. Man has for centuries enjoyed the benefits of the free gift of nature. Housing is one of the priority items and sensing the current shortage of the dwelling units, the present administrative leaders around the world find tough to hit upon a solution for. Bamboo building construction is characterized by a structural frame approach similar to that applied in traditional timber frame design and construction.

Bamboo based materials are widely used too. In its natural condition as solid culms, halved culms or as longitudinally split strips, bamboo has been used in almost all parts of house construction except for the fireplace and the chimneys. These are described in detail below:

A) Foundation

The use of bamboo for foundation is rather restricted. This is mainly due to the fact that like timber when in contact with damp ground, they deteriorate and decay very quickly unless treated with some very effective preservatives. However, in spite of their short life considerable use of bamboos is made as foundation or supporting posts in case of houses built on raised platforms. The types of bamboo foundations identified are:

a) Bamboo in direct ground contact: Bamboo is placed either on the surface or buried. For strength and stability, large diameter and thick walled sections of bamboo with closely spaced nodes should be used. Where these are not available, smaller sections can be tied together. It can decay within six months to two years, and hence preservative treatment is recommended.

b) Bamboo on rock or preformed concrete footings: where bamboo is being used for bearings, it should be placed out of ground contact on footings of either rock or preformed concrete. The largest and stiffest sections of bamboo should be used.

c) Composite bamboo/concrete columns: a concrete extension is given to a bamboo post using a plastic tube of the same diameter. The result is a bamboo post with an integral durable foundation.

d) Bamboo piles: it is used to stabilize soft soils and reduce building settlement.

The treated split bamboo piles were filled with coconut coir strands wrapped with jute. The sections were then tied with wire. After installation of the piles the area was covered with a sandy material.

B) Flooring

The floors may be at ground level, and therefore consists only of compacted earth, with or without a covering of bamboo matting. The preferred solution is to raise the floor above the ground creating a stilt type of construction. This improves comfort and hygiene and can provide a covered storage area below the floor. The surface of earth floor is sometimes made more stable by paving it with crude bamboo boards made by opening and flattening whole culms. The various types used are:

a) Small bamboo culms: they are directly tied and nailed together.

b) Split bamboo: culms are split along their length into strips, several centimetres wide.

c) Flattened bamboo: formed by splitting green bamboo culms removing the diaphragms, then rolling and flattening them. The resulting board is laid across the joists and fixed by nailing or tying. They are screened with cement mortar for reasons of hygiene and comfort as they are uneven and difficult to clean.

d) Bamboo mats: thin strips varying in size from 5-6mm or 10-15mm and thickness of 0.6-1.2mm. These slivers are then woven into mats of different sizes according to the available hot-press plates and user's demands. After drying the mats to 6-10% moisture content, sufficient glue is applied to ensure enough bonding between the overlapped areas. In construction using bamboo mats, phenolic resins are employed.

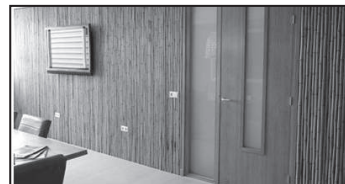
e) Bamboo plastic composites: it is an innovative technology in which bamboo fiber is the raw material and compounded with plastic as the core material of the flooring. This has higher water resistance and dimensional stability properties than those of normal floorings.

C) Walls

The most extensive use of bamboo in construction is for the walls and partitions. The major elements, the posts and beams, generally constitute part or structural framework. They are to carry the self-weight of building and loads imposed by the occupants and the weather. An infill between framing members is required to complete the wall. The purpose of the infill is to protect against rain, wind and animals, to offer privacy and to provide in plane bracing to ensure the overall stability of the overall structure when subjected to horizontal forces.

D) Roofing

The roof offers protection against extremes of weather including rain, sun and wind, and to provide shelter, clear and



usable space beneath the canopy. Above all it must be strong enough to resist the considerable forces generated by wind and roof coverings. In this respect, bamboo is ideal as a roofing material- it is strong, resilient and light weighted. The bamboo structure of a roof can comprise of purlins, rafters and trusses.

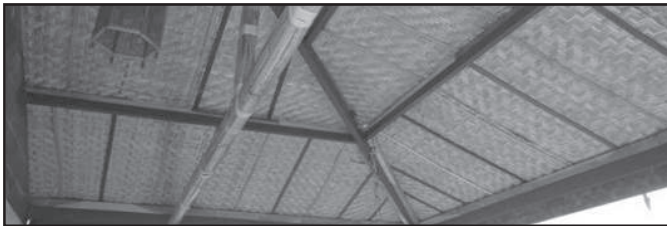
a) The simplest form consists of a bamboo purlin and beams, supported on perimeter posts. Halved culms are then laid convex side down, edge-to-edge, spanning from the ridge to the eaves. A second layer, convex side up, is then laid to cover the joints.

b) Corrugated sheets made out of bamboo are also used commonly as roof covering. The bamboo mats are dipped in resin, dried and heat pressed under pressure in a specially made platen, to give strong, reliable sheets of bamboo, which is lightweight. It has good insulation properties too.

c) A layer of bitumen is sandwiched between two mats of bamboo forming a semi rigid panel. The mats can be fixed to rafters at 200-250mm center to center. A bituminous or rubberized weatherproof coating is then applied to the finished roof.

d) Plastered bamboo: A cement plaster, with or without the addition of organic fibers, is traditionally applied to bamboo roofs, to get stronger roof coverings. Various forms of trusses are also adopted using bamboo culms of diameter ranging from 40mm-100mm. The king post trusses are the most common and the simplest.

E) Scaffolding



Because of the favorable relationship between load-bearing capacity and weight, bamboo can be used for the construction of save scaffoldings even for very tall buildings. Only lashed joints are used. The cane extension is carried out by lashing the cane ends together with several ties. The ties are arranged in such a way that forces acting vertically downwards wedges the nodes in the lashing. The vertical and horizontal canes used for scaffolding are almost exclusively joined using soft lashing. This technique has the great advantage that the joints can be re-tensioned to the right degree without difficulty and also quickly released again.



Advantages of Bamboo

The various advantages of bamboo are mentioned below:

- | | | | |
|--------------------------------|-------------------------|----------------------------|---------------------------|
| 1. Light, strong and versatile | 2. Environment friendly | 3. Accessible to the poor | 4. Self renewing resource |
| 5. Fast growing | 6. Highly productive | 7. Disadvantages of Bamboo | |

The major disadvantages of bamboo are as follows:

Requires preservati

Disadvantages of bamboo:

1. Requires preservation
2. Shaped by nature
3. Durability—bamboo is subjected to attack by fungi, insects; for this reason, untreated bamboo structures are viewed as temporary with an expected life of not more than 5 years.
4. Jointing—although many jointing techniques exist, their structural efficiency is low.
5. Lack of design guidance and codes.
6. Prone to catch fire very fast by the friction among the culms during wind, and is seen to cause forest fires.

CONCLUSION

Since time immemorial, bamboo has played an important role in the development of mankind. It is used for a wide range of day-to-day purposes, both as a woody material and as food. It has been the backbone of much of the world's rural life and will remain so as the population increases. Bamboo will continue to play an important part in the development of enterprises and the transformation of rural environments, in all regions of the developing world where it grows.

On account of the enforcement of our natural forest protection project, wood is becoming increasingly scarce. The realization that bamboo is the most potentially important non-timber resource and fast-growing woody biomass, has evoked keen interest in the processing, preservation, utilization and the promotion of bamboo as an alternative to wood. The properties as top grade building material and increased availability of bamboo in our country makes it possible to use, bamboo in the field of construction extensively. Its high valued utilization not only promotes the economic development, but also saves forest resources to protect our ecological environment as a wood substitute. As an economic building material, bamboo's rate of productivity and cycle of annual harvest outstrips any other naturally growing resource, if today you plant three or four structural bamboo plants, then in four or five years later you will have mature clumps, and in eight years you will have enough mature material to build a comfortable, low cost house.

சுற்றறிக்கை

ந.க.எண். 6445 /சி1/2021 நாள் .18 .02.2021

பொருள்: ஆவணப் பதிவு – நகர் ஊரமைப்புத்துறையினரால் வழங்கப்படும் மனைப்பிரிவு அங்கீகாரம் வழங்கும் நெறிமுறைகள் எளிமையாக்குதல் – அரசுக்கு சாலை மற்றும் திறந்த வெளி இடம் ஒதுக்கீடு (OSR) ஆகியவற்றிற்காக தான ஆவணம் எழுதிக் கொடுக்கப்படும் நிகழ்வுகள் – எழுதிக் கொடுப்பவர் மட்டும் கையொப்பமிட்ட தான ஆவணத்தினை பதிவுக்கு ஏற்றல் – தொடர்பாக.

- பார்வை: 1. பதிவுத்துறைத்தலைவர் சுற்றறிக்கை எண். 48113/இ1/2007 நாள் 12.04.2011
2. பதிவுத்துறைத்தலைவர் சுற்றறிக்கை .எண். 12560/சி1/2013 நாள் 27.04.2013
3. அரசு முதன்மை செயலாளர்., வீட்டுவசதி மற்றும் நகர்புற வளர்ச்சித் துறை நேர்முக கடித எ.1177/UD4(1)2020-1 நாள்.02.02.2021

பொருள் தொடர்பாக பார்வை மூன்றில் காணும் கடித நகல் அறிவுறுதலுக்காகவும் உரிய நடவடிக்கைக்காகவும் இதனுடன் அனுப்பப்படுகிறது.

அதன்படி, நகர் ஊரமைப்புத்துறையினரால் வழங்கப்படும் மனைப்பிரிவு அங்கீகாரம் வழங்கும் நெறிமுறைகள் எளிமையாக்கி, ஒரே காரணத்திற்காக பலமுறை விண்ணப்பதாரர்கள் ஒரே அலுவலகத்தை தொடர்பு கொள்வதில் ஏற்படும் இடர்பாடுகளை களைந்திட நடவடிக்கை மேற்கொள்ளப்படுவதாக தெரிவிக்கப்பட்டு அரசுக்கு சாலை மற்றும் திறந்த வெளி இடம் ஒதுக்கீடு (OSR) ஆகியவற்றிற்காக தான ஆவணம் எழுதிக் கொடுக்கப்படும் நிகழ்வுகளில் தான ஆவணம் எழுதிக் கொடுப்பவர் மட்டும்

மேற்குறிப்பிடும் பரிந்துரையின் அடிப்படையில் பொருளில் குறிப்பிடும் தான ஆவணங்கள் பதிவு குறித்த நிகழ்வுகளில் பதிவு அலுவலர்கள், கீழ்க்காணும் நெறிமுறைகளின்படி செயல்படுமாறு அறிவுறுத்தப்படுகிறார்கள்.

1. மனைப்பிரிவு அங்கீகாரம் கோரும் மனுதாரர்களுக்கு (சொத்தின் உரிமையாளர்கள்) நகர ஊரமைப்புத்துறையால் அரசுக்கு சாலை மற்றும் திறந்த வெளி இடம் ஒதுக்கீடு (OSR) ஆகியவற்றிற்காக தானமாக வழங்கப்படும் நிலம் குறித்த வரைபடத்துடன் தான ஆவணம் பதிவு செய்திடக் கோரும் அறிவுரைக் கடிதம் வழங்கப்படும்.

2. மனுதாரர்களால் (சொத்தின் உரிமையாளர்கள்) மேற்குறிப்பிட்ட வரைபடம் மற்றும் அறிவுரைக் கடிதத்துடன் அரசுக்கு சாலை மற்றும் திறந்த வெளி இடம் ஒதுக்கீடு (OSR) ஆகியவற்றிற்காக தானம் ஆவணம் எழுதப்பட்டு மனுதாரர்கள் மட்டும் கையொப்பம் செய்து பதிவுக்குத் தாக்கல் செய்யப்படும் நிகழ்வுகளில் அவ்வாவணப்படி தானம் வழங்கப்படும் உள்ளாட்சி அமைப்புகளின் சார்பாக அதன் தலைவர்/ ஆணையர் ஆகியோரின் கையொப்பம் ஆவணத்தில் இடம் பெற வேண்டும் என மனுதாரர்களை வலியுறுத்தக் கூடாது எனத் தெரிவிக்கப்படுகிறது.

3. இந்நடைமுறை, நகர ஊரமைப்புத் துறை (District Level Planning Authority or the Directorate of Town and Country Planning, Chennai) ஆல் வழங்கப்படும் அறிவுரைக் கடிதம் மற்றும் வரைபடத்துடன் வரப்பெறும் தான ஆவணங்களுக்கு மட்டுமே பொருந்தும் எனத் தெரிவிக்கப்படுகிறது.

4. இருப்பினும் மேற்கூறிய வகையில் தான ஆவணங்கள் பதிவு செய்யப்பட்ட நிலையில் அதனை தன்னிச்சையாக சொத்தின் தானம் அளித்தவர்களால் (தான ஆவணத்தினை எழுதிக் கொடுத்த நபரால் மட்டும்) ரத்து செய்து அத்தகு ரத்து ஆவணம், பதிவுக்குத் தாக்கல் செய்யப்பட்டின் அவ்வாவணத்தினைப் பொறுத்த மட்டில் பார்வை 1 மற்றும் 2ல் குறிப்பிடும் சுற்றறிக்கைகளில் கண்ட நெறிமுறைகளின்படி பதிவுக்கு ஏற்கக்கூடாது எனவும் தெரிவிக்கப்படுகிறது.

5. பதிவு அலுவலர்கள் எவ்வித குறைபாடுக்கும் இடமின்றி மேற்கூறிய நடைமுறையினைப் பின்பற்றிட அறிவுறுத்தப்படுகிறது.

6. இந்த நடைமுறை உடனடியாக அமலுக்கு வருகிறது.

7. இந்த சுற்றறிக்கை, பதிவுச் சட்டம் 1908-ன் பிரிவு 69(1)(j)-ன் கீழ் வழங்கப்பட்ட அதிகாரங்களைக் கொண்டு பிறப்பிக்கப்படுகிறது எனவும் தெரிவிக்கப்படுகிறது.

ஓம்/18.02.2021

பதிவுத்துறைத் தலைவர்

/ஆணைப்படி/

கூடுதல் பதிவுத்துறைத் தலைவர்

(முத்திரை மற்றும் பதிவு)

Dr.D.Karthikeyan, I.A.S.,
Principal Secretary to
Government



Housing & Urban
Development
Department,
Secretariat, Chennai -9

D.O.Letter No.1177/UD4(1)/2021- 1, dated: 02.02.2021

Dear Dr.P.Sankar,

Sub: Simplification of layout approval procedures - Request to advise the sub-registrars to register gift deeds as per the new Government order Regarding.

Ref: 1. G.O.Ms. No 181, Housing and Urban Development department. dated: 9.12.2020.
2. G.O.Ms.No.18, Municipal Administration and Water Supply department, dated: 4.2.2019 notified in Tamil Nadu Government Gazette extra-ordinary No.43, Part III - Section 1(a) dated: 4.2.2019.

I invite kind attention to the Government order first cited (copy enclosed) and wish to enlighten the simplification of layout approval procedure issued therein as below:-

Tamil Nadu Combined Development and Building Rules (TNCDBR), 2019 have been notified vide the G.O. second cited, in which layout approval process has been prescribed under Rule 47. It is mandatory that the space set apart for roads and the area reserved for recreational purposes shall be transferred to the local body free of cost through a registered gift deed before actual sanction of the layout. The exact mode of conveyance should be consistent with the relevant enactment and regulations

Earlier, the procedure was that after making an application to the Planning Authority of the Town and Country Planning Department, the applicant was given the drawing showing the road and Open Space Reservation (OSR) pattern of the layout. The applicant was required to lay the roads and provide other amenities on his own cost, further to approach the local body to complete the registration of the gift deed and to come back to the Planning Authority again with a certificate of the local body about the gifting, for obtaining sanction for the layout. After sanctioning the layout, the applicant was required to approach the local body again to obtain license for the layout. Thus, the applicant was bound to approach both the Planning Authority and the local body twice to obtain layout approval.

As per the TNCDBR, 2019, the Planning Authority has to ensure that the said public spaces are gifted to local body before actual sanction of the layout and the local body on its part to ensure that the cost of laying improvements to the system in respect of roads, water supply, sewerage, drainage and electricity that may be required shall be borne by the applicant.

Without changing the above rule requirement, considering the difficulty involved for the applicant to come back and forth to the same department twice, the Government vide G.O. first cited above has simplified the procedure in such a way that it would be sufficient enough for the applicant to approach the two departments only once to obtain the layout approval. By this new procedure, the District Level Planning Authority or the Directorate of Town and Country Planning, Chennai, as the case may be, would advise the applicant through a letter along with drawing showing the road and open space reservation(OSR) pattern, to approach the sub-registrar directly to make registration of the gift deed in favour of the concerned local body and to submit the gift deed in original to the District Level Planning Authority or the Directorate of Town and Country Planning, Chennai. Planning permission for the layout would be issued and the final layout drawing would be released to the local body enabling to issue license after ensuring that the cost of laying improvements to the system is borne by the applicant.

In view of the above, I request you to kindly sensitize all the sub-registrars, so that they would appreciate the above simplified procedure ordered by the Government and act accordingly.

Yours sincerely,



ABSTRACT

Urban Development – Tamil Nadu Combined Development and Building Rules (TNCDBR), 2019 – Process of simplification in granting approval for Layout/ Sub-division – Orders issued.

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Housing and Urban Development [UD4(1)] Department

G.O.(Ms).No.181

Dated: 09.12.2020

சார்வரி, கார்த்திகை 24,
திருவள்ளூர் ஆண்டு 2051.

Read:

1. G.O.(Ms).No.18, Municipal Administration and Water Supply Department, dated 04.02.2019.
2. From the Confederation of Real Estate Developers' Associations of India (CREDAI), Letter dated 18.05.2020.
3. From the Member – Secretary, Chennai Metropolitan Development Authority Letter No.L1/4923/2020, dated 27.05.2020.
4. From the Director of Town and Country Planning Letter No.7671/2020-T, dated 18.06.2020.

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ORDER:

In the Government order 1st read above, the Tamil Nadu Combined Development and Building Rules (TNCDBR), 2019 have been framed. The Rule 47 of Tamil Nadu Combined Development and Building Rules (TNCDBR), 2019 provides rules relating to Layout and Sub-division. The Sub-rule 47(7)(a) envisages the space set apart for roads (except those which may remain private) and the 10% area reserved for recreational purposes shall be transferred to the Local Body free of cost through a registered gift deed before the actual sanction of the Layout. Besides the above, one percent of layout area excluding roads, additionally shall be reserved for "Public Purpose" in all layouts in such a way that 0.5% area shall be transferred to the TANGEDCO or to the Local Body free of cost through a registered Gift Deed before the actual sanction of the layout, as per the Sub-rule 47(8).

2. The Confederation of Real Estate Developers' Associations of India in the letter second read above, has among others represented to simplify the layout approval process.

3. In the letter 3rd read above, the Member-Secretary, Chennai Metropolitan Development Authority has stated that the mentioned procedure of processing the layout / sub-division proposals, the Local Body is involved twice in approving the Layout / Sub-division proposals, which causes delay as well as undue hardship to the applicants. In the case of buildings approval (High Rise Building / Non-High Rise Building/ Institutional / Industrial) the gifting of the road and park spaces is taken over by Chennai Metropolitan Development Authority itself and then later transferred to Local Body concerned subsequently. The Member-Secretary, Chennai Metropolitan Development Authority has requested to issue suitable orders for following the procedures of gifting of road area/ park spaces/ public purpose to Chennai Metropolitan Development Authority as in the case of the building developments.

4. In the letter 4th read above, the Director of Town and Country Planning has stated that revamping of entire procedure involved in grant of layout approval is necessary in the wake of implementation of the new Tamil Nadu Combined Development and Building Rules (TNCDBR), 2019. Based on the representations received from Associations like CREDAI, etc., and with a view to reduce the time consumption for granting layout approval, the Director of Town and Country Planning has suggested to consider the following points and requested to issue suitable orders.

- (i) First planning authority/regional officer to issue drawing showing the road and OSR pattern to the applicant.
- (ii) The applicant has to execute a gift deed in favor of the planning authority/regional officer for handing over the space of the roads & OSR, space allotted for TANGEDCO.
- (iii) Upon receipt of the gift deed, the planning authority/regional officer would release the final layout drawing to the local body duly giving approval number. The gifted space for the roads & OSR will be further transferred to the concerned local body, TANGEDCO through an executive order of the planning authority/regional officer.
- (iv) The local body would grant final approval/license to the layout and would release the final layout drawings to the applicant only after ensuring that the applicant lays tar roads, provide other amenities like storm water drains, water supply facilities by constructing required UHI, provide necessary street lights etc., as per the standards specified by the local body. Further, the local body should intimate the fact of release of final layout drawing and the details of the amenities provided for the layout to the planning authority/regional officer.

5. The Government after careful examination of the proposals of the Member-Secretary, Chennai Metropolitan Development Authority and the Director of Town and Country Planning, and based on the remarks offered by the Municipal Administration and Water Supply Department, order to follow

the procedures while granting approval for Layout/Sub-division in the wake of implementation of Tamil Nadu Combined Development and Building Rules (TNCD&BR), 2019, as below:-

- (i) The CMDA/DTCP should finalize the layout by verifying the layout rules in TNCD&BR, 2019 and the lands earmarked for Roads, Open Space Reservation and Public purpose to be gifted by the applicant(s) and gift deed registered in the Name of the concerned Local Body.
- (ii) The planning permit, layout sketch alongwith the original gift deed document to be forwarded to the concerned Local Body.
- (iii) The Greater Chennai Corporation on receipt of the planning permit, layout sketch and original gift deed shall obtain the ratification of the council for taking over the lands for Roads, Open Space Reservation and Public purpose and to take over the physical possession of the road / Open Space Reservation by the concerned Local body.
- (iv) The other local bodies on receipt of the planning permit, layout sketch and original gift deed shall obtain the ratification from the competent authority as per the existing delegation of powers for taking over the lands for Roads, Open Space Reservation and Public purpose and to take over the physical possession of the road / Open Space Reservation by the concerned Local body.
- (v) While approving the layout in the Greater Chennai Corporation, the procedure of collecting the necessary fees including the charges for providing amenities like roads, storm water drains and street lights from the applicants shall be continued. The same procedure shall also be continued in the other Urban Local Bodies within Commissionerate of Municipal Administration. After collecting the necessary fees the final layout sketch, permit of Planning Authority along with approval of Local Body shall be issued to the applicant(s) directly.
- (vi) The other Local Bodies except the Greater Chennai Corporation and Urban Local Bodies in Commissionerate of Municipal Administration shall collect the necessary fees and issue the final layout sketch, permit of planning authority along with the permit of local body to the applicant(s) directly, only after ensuring that the applicant lays tar roads, provide other amenities like storm water drains, water supply facilities by constructing required OHT, provide necessary street lights etc., as per the standards specified by the Local Body.

6. The Member-Secretary, Chennai Metropolitan Development Authority and Director of Town and Country Planning are directed to pursue action accordingly.

(BY ORDER OF THE GOVERNOR)

**D.KARTHIKEYAN,
SECRETARY TO GOVERNMENT.**

ஓட்டு



ஒரு பிச்சைக்காரன் ஒருவன் இருந்தான். அவனுடைய சொத்து என்று பார்த்தால் அழுக்குப் பிடித்த உடை, கரி பிடித்த ஒரு பிச்சை ஓடு என இவ்வளவுதான். இந்த சூழ்நிலையில் தினமும் அவன் அந்த பிச்சை ஓட்டை நீட்டி எல்லோரிடமும் பிச்சை கேட்பது அவன் வழக்கம். எவன் வந்தாலும் பிச்சை கேட்பான்.

ஒரு நாள் ஒரு துறவியிடம் போய் தன் பிச்சை ஓட்டை அவர் முகத்துக்கருகில் நீட்டி பிச்சைக் கேட்டான். முதலில் முகம் சுழித்த அவர் சற்று நிதானத்துக்கு வந்து அவனையும், அந்த ஓட்டையும் மாறி, மாறில பார்க்க தொடங்கினார். சட்டென்று அவனிடமிருந்த அந்த பிச்சை ஓட்டை பிடுங்கினார். பிச்சைக்காரன் பயந்து போனார். துறவி தன் பிச்சை ஓட்டை எடுத்துக் கொள்வாரோ என்று பயந்தான். ஆனால் அந்த துறவியோ அந்த ஓட்டை மேலும் கீழும் ஆராய்ந்தார்.

எவ்வளவு காலமா பிச்சை எடுக்கறே? எனக் கேட்க நெனப்பு தெரிஞ்ச காலத்துல இருந்தே இதை சாமி என்றான் பிச்சைக்காரன். இந்த பிச்சை ஓட்டை எவ்வளவு காலமா வச்சிருக்க என அவர் மறுபடியும் கேட்க. எங்க தாத்தா அப்பான்னு இரண்டு தலைமுறைக்கு முன்னாடி இருந்தே இந்த ஓட்டை வச்சிருக்கோம். யாரோ ஒரு மகான் கிட்ட பிச்சை கேட்டப்போ அவர் இந்த ஓட்டைக் கொடுத்து இதை வச்சப் பொழைச்சிக்கோன்னு குடுத்தாராம் என்றான்.

அந்தத் துறவி அடப்பாவிங்களா மூணு தலைமுறையாக இந்த ஓட்டை வச்ச பிச்சைதான் எடுக்கிறீங்களா? எனக் கோபமாக கேட்க பிச்சைக்காரனுக்கு புரியவில்லை. துறவி அமைதியாக அந்த பிச்சை ஓட்டை ஒரு சிறு கல்லினால் சுரண்டத் தொடங்கினார். பிச்சைக்காரன் துடிதுடித்துப் போனான். சாமி எங்கிட்ட இருக்கற ஒரே சொத்து அந்த ஓடுதான். நீங்க பிச்சை போடாட்டியும் பரவாயில்லை அந்த ஓட்டைக் கொடுத்துடுங்க சாமி என பரிதாபமாக கேட்க, துறவி மேலும் வேகமாக அந்த ஓட்டை சுரண்ட தொடங்கினார். பிச்சைக்காரன் அழுதான், அங்கலாய்த்தான்.

ராசியான ஓடு சாமி மகான் கொடுத்த ஓடு சாமி. அதை சுரண்டி உடைச்சிடாதீங்க சாமி என அலறினார். துறவியோ ஓட்டைச் சுரண்டிக் கொண்டே இருந்தார். சுரண்டச் சுரண்ட அந்த ஓட்டின் மீதிருந்த கரியெல்லாம் உதிர்ந்து மெள் மெள்ள மஞ்சள் நிறத்தில் பளீரிட்டுப் பிரகாசிக்க துவங்கியது தங்கம்.

இத்தனை நாள் தங்கத் திருவோட்டிலா பிச்சையெடுத்து தின்றோம் அடக் கொடுமையே என தன்னையே நொந்து கொண்டான். ஓட்டின் அருமை தெரியாமல் அதை பிச்சையெடுக்க பயன்படுத்திய தன் முன்னோர்களை காரி துப்பினார். பிச்சைக்காரனின் கையில் அந்தத் தங்க ஓட்டைக் கொடுத்த அந்தத் துறவி மிகவும் வேதனையுடன் சொன்னார்

அந்த மகான் கொடுத்த தங்க ஓட்டை வச்சுக்கிட்டு இந்த ஊரிலேயே பெரிய பணக்காரங்களா இருந்திருக்க வேண்டியவங்க நீங்க கடைசியில் அந்த பிச்சை எடுக்க உபயோகப்படுத்திட்டீங்களேடா இனியாவது ஓட்டை வைத்து ஒழுங்காக வாழுங்கடா என்று திட்டிவிட்டு போனார்.

இன்றைய தமிழக மக்களும் அந்த பிச்சைக்காரன் போலதான் தங்களிடம் இருக்கும் தங் திரு “ஓட்டில்” (Vote) பிச்சையெடுத்து வாழ்கிறார்கள். ஓட்டுக்கு காசு வாங்கி பிச்சையெடுக்காதிருப்போம் அனைவரும் வாக்களித்து நம் உரிமையை நிலைநாட்டுவோம் ஓட்டின் மகிமையை என்று உணர்வார்களோ அன்றே தமிழகம் உலகில் உயர்ந்து விளங்கும்.

ஒழுக்கமும் வாய்மையும் காணும்இம் மூன்றும்
இழுக்கார் குடிப் பிறந்தார்.

- திருக்குறள்

அன்புடன்
மு. மோகன்



SOUTHERN CENTRE ACTIVITIES

06.02.2021 மற்றும் 07.02.2021 நான்காவது மாநில அளவிலான பொதுக்குழு கூட்டம்

நான்காவது மாநில அளவிலான பொதுக்குழு கூட்டம் செங்கல்பட்டு மய்யத்தின் உபசரிப்பில் காஞ்சிபுரத்தில் நடைபெற்றது. இக்கூட்டத்தில் தென்னக மய்யத்தின் சார்பில் நமது அகில இந்திய தலைவர் திரு. Mu.மோகன், அகில இந்திய முன்னாள் தலைவர் திரு. R.இராதாகிருட்டிணன், காப்பாளர் திரு. O.K. செல்வராஜ், திரு. R. சிவக்குமார், தென்மண்டல செயலாளர், திரு. K. வெங்கடேசன், மாநிலச் செயலாளர், திரு. R. இராமப்பிரபு, தென்னக மய்யத்தலைவர் திரு. L. சாந்தகுமார், தென்னக மய்ய துணைத்தலைவர் திரு. R.R. ஸ்ரீதர், மய்யச் செயலாளர் திரு. A.N. பாலாஜி, மய்யப் பொருளாளர் திரு. N.G. லோகநாதன், மய்ய இணைச் செயலாளர் திரு. R. நிம்ரோட், உடனடி முன்னாள் மாநிலத்தலைவர் திரு. S. அய்யநாதன், முன்னாள் காப்பாளர் திரு. J.R. சேதுராமலிங்கம், திரு. L. வெங்கடேசன், திரு. K. கோபிநாத், திரு. P.K.P நாராயணன், திரு. K. அண்ணாமலை, திரு. T.V. சந்திரசேகர், திரு. R. ராஜேந்திரன், திரு. A. உதயசங்கர், திரு. V.S. ராமகிருஷ்ணன், திரு. P. ராம்குமார், திரு. G. திலகர், திரு. D. அன்பழகன், திரு. A. சத்தியநாராயணா, திரு. R. ரமேஷ், திரு. B. ரமேஷ், திரு. R. எத்திராஜன், திரு. M.N. பாலசுந்தரம், திரு. A.S. ராஜசேகர், திரு. Y. சீனிவாசன் கலந்து கொண்டு சிறப்பித்தனர்.

11.02.2021 72nd Product Assessment Committee Meeting

72வது PWD Product Assessment Committee Meeting பொதுப்பணித்துறை வளாகத்தில் நடைபெற்றது. இதில் தென் மண்டல செயலாளர் திரு. R. சிவக்குமார் அவர்கள் கலந்து கொண்டு சிறப்பித்தார்.

12.02.2021 சிமெண்ட் மற்றும் கம்பி விலை உயர்வை எதிர்த்து வேலைநிறுத்தம் மற்றும் தர்ணா போராட்டம்

மத்திய மாநில அரசுகள் தலையிட்டு சிமெண்ட், ஸ்டீல் மற்றும் இதர கட்டுமானப் பொருட்களின் விலையுயர்வை கட்டுப்படுத்தக் கோரியும் சிமெண்ட் மற்றும் ஸ்டீல் உற்பத்தியாளர்களது லாபம் ஈட்டும் நோக்குடன் செயல்படும் கூட்டு நடவடிக்கைகளைக் கட்டுப்படுத்தி ஒழுங்குமுறை ஆணையம் அமைக்கக் கோரியும் அகில இந்திய அளவில் 12.02.2021 அன்று ஒரு நாள் வேலை நிறுத்தம் மற்றும் தர்ணா போராட்டமும் நடத்த வேண்டும் என நமது அகில இந்திய தலைவர் திரு. Mu.மோகன் அவர்களின் வேண்டுகோளுக்கிணங்க நாடு முழுவதும் நடைபெற்றது. தென்னக மய்யம் மற்றும் அதனோடு இணைந்த 13 உறுப்பு சங்கங்கள் மற்றும் CREDAI, சென்னை மாநகராட்சி ஒப்பந்ததாரர் சங்கம், CRIC ஆகிய சங்கங்கள் சென்னை நுங்கம்பாக்கம் வள்ளுவர் கோட்டம் அருகே தர்ணா போராட்டம் நடத்தியது. இதில் அகில இந்திய தலைவர்

திரு. Mu. மோகன், அகில இந்திய முன்னாள் தலைவர் திரு. R. இராதாகிருட்டிணன், திரு. L. சாந்தகுமார், மய்யத்தலைவர், திரு. R. சிவக்குமார், தென்மண்டல செயலாளர், திரு. K. வெங்கடேசன், மாநிலச் செயலாளர், திரு. R. இராமப்பிரபு, மாநிலப் பொருளாளர் மற்றும் முன்னோடிகள், செயற்குழு மற்றும் பொதுக்குழு உறுப்பினர்கள் தங்கள் பணியாளர்களுடன் மொத்தம் 5000 பேர்களுக்கும் மேல் திரண்டு வந்து கலந்து கொண்டு போராட்டத்தினை வெற்றியடையச் செய்தனர். அனைத்து பத்திரிக்கைகள் மற்றும் ஊடகத்துறையினர் போராட்டத்தினை பதிவு செய்து கொண்டனர். அப்போது பெரும்பாலான தொலைக்காட்சி நிறுவனங்கள் அகில இந்திய தலைவர் மற்றும் அகில இந்திய முன்னாள் தலைவரின் கருத்துக்களை பதிவு செய்தனர். தர்ணாவில் கலந்து கொண்ட அனைவருக்கும் தொப்பி மற்றும் மாஸ்க் தென்னக மய்யம் சார்பில் வழங்கப்பட்டது.

13.02.2021

Schwing Stetter நிறுவனம் Global Manufacturing hub என்கின்ற புதிய தொழிற்கூடத்தை செய்யூர் SIPCOT வளாகத்தில் துவக்க விழா நடைபெற்றது. அதில அகில இந்திய கட்டுநர் சங்கம் சார்பாக அகில இந்திய தலைவர் திரு. Mu. மோகன், அகில இந்திய முன்னாள் தலைவர் திரு. R. இராதாகிருட்டிணன், மாநிலத்தலைவர் திரு. R. பிரகாஷ், தென் மண்டல செயலாளர் திரு. R. சிவக்குமார், மாநிலச் செயலாளர் திரு. K. வெங்கடேசன், மாநிலப் பொருளாளர் திரு. S. இராமப்பிரபு, தென்னக மய்யச் செயலாளர் திரு. A.N. பாலாஜி ஆகியோர் கலந்து கொண்டு சிறப்பித்தனர்.

17.02.2021

அன்று பத்தாவது செயற்குழு மற்றும் பொதுக்குழு கூட்டம் Hotel Accord-ல் திரு.T.V. சந்திரசேகரன், திரு. V.S.B. சுந்தர், திரு. R. ராஜேந்திரன், திரு. M. செந்தில்குமார், திரு. K. அண்ணாமலை, திரு. A. ஜெயசீலன், திரு. A. ராஜசேகர், திரு. Y. சீனிவாசன், திரு. A. உதயசங்கர், திரு. M. பசுபதி ஆகியோரின் உபசரிப்பில் நடைபெற்றது. இக்கூட்டத்தில் Dr. பிரசாந்த் ராஜகோபலன், Director. MGM Healthcare Pvt Ltd அவர்களுடன் புரிந்துணர்வு ஒப்பந்தம் கையெழுத்திடப்பட்டது. இதனால் தென்னக உறுப்பினர்களின் குடும்பத்தாருக்கு 15 முதல் 20 சதவிகிதம் discount கொடுப்பதற்கு ஒப்பந்தம் போடப்பட்டுள்ளது.





18.02.2021 - 73rd Product Assessment Committee Meeting

73வது PWD Product Assessment Committee Meeting பொதுப்பணித்துறை வளாகத்தில் நடைபெற்றது. இதில் தென் மண்டல செயலாளர் திரு. R. சிவக்குமார் அவர்கள் கலந்து கொண்டார்.

19.02.2021 மற்றும் 20.02.2021

அன்று நான்காவது அகில இந்திய மேலாண்மை மற்றும் பொதுக்குழு கூட்டமும், தலைமையகத்தின் வருடாந்திர மகாசபைக்கூட்டமும் கோவையில் நடைபெற்றது. இதில் தென்னக மய்யத்திற்கு Overall Best Centre மற்றும் சிறந்த மாத இதழுக்கான விருது சதர்ன் பில்டருக்கும் கொடுக்கப்பட்டது. இக்கூட்டத்தில் தென்னக மய்யத்திலிருந்து அனைத்து பொதுக்குழு உறுப்பினர்களும் கலந்து கொண்டனர்.

23.02.2021

காலை 10 மணி அளவில் தென்னக மய்ய டாக்டர் A. ராமகிருஷ்ணா அரங்கில் Joint Development Agreement பற்றிய கருத்தரங்கமும், GST பற்றிய கருத்தாய்வு கூட்டமும் நடைபெற்றது. GST பற்றிய விளக்கத்திற்கு CAR சுப்பிரமணியன் அவர்களும், Advocate P.V.R. நம்பியார், மற்றும் Advocate P.E.D. நம்பியார் அவர்கள் உறுப்பினர்கள் கேள்விக்கு விளக்கமளித்தனர். இக்கூட்டத்தில் 120க்கும் மேற்பட்ட உறுப்பினர்கள் கலந்து கொண்டு பயனடைந்தனர்.

27.02.2021

அன்று இரண்டாவது மருத்துவ முகாம் Olympia Cyber Space IT Park சென்னையில் Hari Narayana Structurals Pvt Ltd நிறுவனத்தின் பணித்தளத்தில் நடைபெற்றது. இதில் அகில இந்தியத் முன்னாள் தலைவர் திரு. R. இராதாகிருட்டினன், மய்யத்தலைவர் திரு. L. சாந்தகுமார் உட்பட மய்ய நிர்வாகிகள் மற்றும் செயற்குழு பொதுக்குழு உறுப்பினர்கள் கலந்து கொண்டனர். Apollo Hospital, Saveetha Dental College and Govt. Eye Hospital, Egmore லிருந்து மருத்துவர்கள் கலந்து கொண்டு சுமார் 400க்கும் மேற்பட்ட தொழிலாளர்களுக்கு மருத்துவ பரிசோதனை செய்தனர். இம்மருத்துவ முகாமினை குழுத்தலைவர் திரு. A. சத்தியநாராயணா அவர்கள் மிகச் சிறப்பாக ஏற்பாடு செய்திருந்தார்.

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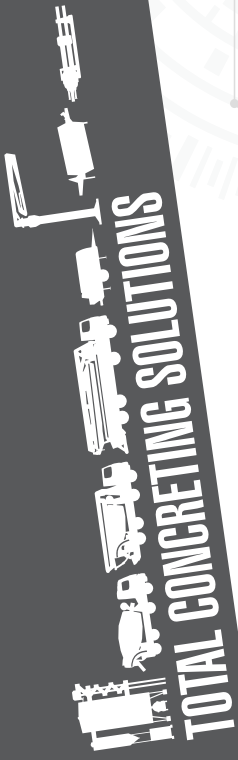
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