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- Chairman

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OFFICE BEARERS - 2019-2020

Mr. S.RAMAPRABHU

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ஆசிரியர் மடல்



வணக்கம்

ஒரு விழாவில் நல்லாசிரியா் விருது பெற்ற ஒருவா் தன்னுடைய பழைய ஆசிரியரை சந்திக்கின்றாா். அப்போது அந்த முன்னாள் மாணவா் தன்னைத் தெரிகின்றதா? என்று அந்த ஆசிரியரிடம் கேட்கின்றாா். ஆசிரியரோ எனக்கு நினைவில் இல்லை. நல்லாசிரியா் கூறினாா். நான் உங்கள் முன்னாள் மாணவன் என்றாா். நான் ஆசிரியராக உள்ளேன். உங்களுடைய செயல்களின் தாக்கத்தினால்தான் நானும் கற்றுக் கொடுக்கும் தொழிலில் உள்ளேன் என்றாா்.

எப்படி என்ன தாக்கம் உங்களிடத்திலே உண்டாக்கினேன் என்று கேட்டார் ஆசிரியர். நான் உங்களுக்கு ஒரு கதை கூறட்டுமா ? என்று கூறி சொல்ல ஆரம்பித்தார் அந்த இளைஞர்.

ஒரு நாள் என்னுடைய வகுப்புத் தோழா் மிகவும் விலையுயா்ந்த கடிகாரத்தை அணிந்து வந்தாா். அதனை திருட நினைத்து அவா் கடிகாரத்தை பாக்கெட்டில் வைத்திருந்த போது எடுத்து விட்டேன். அவா் வகுப்பறைக்குள் வந்தவுடன் தன்னுடைய கடிகாரம் காணவில்லை என்று ஆசிரியரிடம் புகாா் செய்தாா். ஆசிரியா் அவா்களுக்கு இவருடைய கடிகாரத்தை எவா் எடுத்து இருந்தாலும் அதனை திரும்பக் கொடுத்து விடுங்கள் என அறிவித்தாா். நான் எப்படி கடிகாரத்தை திருப்பித் தருவேன் என நினைத்து எனக்க மிகவும் சங்கடமாகப் போய் விட்டது.

ஆசிரியா வகுப்பறையில் கதவை மூடச் செய்தாா். எல்லோரையும் எழுந்து வரிசையாக நிற்கச் சொன்னாா். எனக்கு மிகவும் அவமானமாகப் போய்விட்டது. அவா் கூறினாா். மாணவா்களே வரிசையாக நில்லுங்கள். ஆனால் எல்லோரும் கண்ணை மூடிக்கொண்டுதான் நிற்க வேண்டும் என்றாா். அவா் ஒவ்வொருவரின் பாக்கெட்டுகளிலும் கையை விட்டுப் பாா்த்துக் கொண்டே சென்றாா். என்னுடைய பாக்கெட்டுக்குள்ளும் கையை விட்டாா். கடிகாரத்தையும் எடுத்துக் கொண்டாா். ஆனால் எல்லோரும் கண்களை மூடி இருந்ததால் எவரும் எதையும் பாா்க்க இயலவில்லை.

பின்னர் அந்த கடிகாரத்தை உரியவரிடம் கொடுத்து விட்டார். ஆனால் இது பற்றி ஒரு வார்த்தை கூட என்னிடம் கேட்கவில்லை. வேறு எவரிடமும் இது பற்றி கூறவோ, சம்பவத்தை விவரிக்கவோ இல்லை. அந்நாளிலே நீங்கள் என்னுடைய மானத்தை காப்பாற்றினாகள் என்னை திருடன், மோசடிக்காரன், என்றெல்லாம் திட்டாமல் ஒன்றுமே பேசாமல் இருந்தீாகள் என்னுடைய கவுரவத்தையும், மானத்தையும் காப்பாற்றினாகள். இது எனக்கு ஒரு செய்தியைக் கற்றுத் தந்தது. அது ஆசிரியா் என்பவா் இப்படித்தான். கற்பித்தல் என்பது எவ்வளவு அற்புதம். இதைத்தான் என் வாழ்க்கையிலும் மேற்கொள்ள வேண்டும் என்றும் கற்பித்தலை செய்ய வேண்டும் என்று விரும்பினேன் .

''இப்பொழுதாவது என்னைத் தெரிகின்றதா என கேட்டாா். முன்னாள் ஆசிரியா் எனக்கு எதுவும் நினைவில் இல்லை. யாா் என்பதும் தெரியவில்லை என்றாா். ஏன் தெரியவில்லை என்று கேட்டாா் அந்த இளைஞா். ஆசிரியா் கூறினாா் ''நானும் அந்த சமயத்தில் கண்ணை மூடிக்கொண்டிருந்தேன். என்றாா்.

நல்லாசிரியா் விருது பெற்றவா் தன் முன்னாள் ஆசிரியரின் காலில் விழுந்து வணங்கினாா்.

அற்றம் மறைக்கும் பெருமை சிறுமைதான் குற்றமே கூறி விடும்

- திருக்குறள்

அன்புடன் மு. **மோகன்**

<u>மய்யத்தலைவர் மடல்</u>



வணக்கம் !

அனைவரையும் மீண்டும் இந்த மடல் மூலம் சந்திப்பதில் மகிழ்ச்சி, ஜனவரி மாதம் 3, 4 மற்றும் 5 தேதிகளில் நமது அகில இந்திய மாநாடு கொல்கத்தாவில் மிக விமாசியாக நடைபெற்றது. மாநாட்டிற்கு நமது அகில இந்திய முன்னாள் தலைவரும் நமது பீஷ்மாவாகிய திரு. R. இராதாகிருட்டிணன் தலைமையேற்று நடத்தியது தென்னக மய்யத்திற்கு மற்றுமொரு மகுடம் சூட்டியது போல் அமைந்தது. மாநாட்டில் அகில இந்திய அளவில் கட்டுனாகளுக்கு ஏற்படும் பல்வேறு இன்னல்கள் குறித்து மிக விரிவாக விவாதிக்கப்பட்டது. அதேபோல் பல்வேறு நமது தொழில் சார்ந்த கருத்தரங்குகள் அந்தந்த வல்லுநாகளால் நடத்தப்பட்டது. மாநாட்டில் கலந்து கொண்ட அனைவரும் இதன் மூலம் மிகவும் பயனடைந்தனர்.

அதேபோன்று நமது தென்னக மய்யத்தின் 2020-2021-ம் ஆண்டிற்கான அலுவலக நிாவாகிகள், செயற்குழு, பொதுக்குழு உறுப்பினா்களின் தோதல் மிகவும் நல்ல முறையில் நடந்து அனைவரும் போட்டியின்றி ஒருமனதாக தோ்ந்தெடுக்கப்பட்டனா். இந்த தோதலில் தோதல் அதிகாரியாக இருந்து செயல்பட்ட நமது அகில இந்திய காப்பாளா் திரு. O.K. செல்வராஜ் அவா்களும், அவருக்கு துணையாக செயல்பட்ட திரு. J. தாஜூதின் அவா்களும் மிகச் சிறப்பாக நடத்திக் கொடுத்தனா்.

மேலும் 20ந் தேதி நமது மய்யத்தின் செயற்குழு மற்றும் பொதுக்குழு கூட்டம் மிகச் சிறப்பான முறையில் நடைபெற்றது. அதில் நமது தொழில் சார்ந்த நிகழ்வுகள் விரிவாக விவாதிக்கப்பட்டது.

நமது பொது மகாசபைக் கூட்டம் 22ந் தேதி ஒட்டல் அசோகாவில் நடைபெற்றது. அதில் 2020-2021ம் ஆண்டிற்காக தோந்தெடுக்கப்பட்ட அலுவலக நிாவாகிகள், செயற்குழு உறுப்பினா்கள், பொதுக்குழு உறுப்பினா்கள் அறிமுகம் செய்யப்பட்டாா்கள். 2020-2021ம் ஆண்டிற்கான தலைவராக தற்போது துணைத்தலைவராக இருக்கும் திரு. L. சாந்தகுமாா் தோந்தெடுக்கப்பட்டாா். இத்தருணத்தில் அவருக்கும் அலுவலக நிாவாகிகளுக்கும், செயற்குழு மற்றும் பொதுக்குழு உறுப்பினா்களுக்கும் எனது மனமாா்ந்த வாழ்த்துக்களை தெரிவித்துக் கொள்கிறேன்.

மற்றுமொரு மகிழ்ச்சியான செய்தி, தமிழ்நாடு பொது கட்டிட விதிகளின் (TNCBDR) சில மாற்றங்களுக்கு பிறகு நமது தமிழக அரசு ஒப்புதல் 29ந்தேதி அளித்துள்ளது. இதில் பல்வேறு கோரிக்கைகளை நமது சங்கம் மூலம் அரசாங்கத்தின் கவனத்திற்கு கொண்டு செல்லப்பட்டது. இந்த நேரத்தில் மாண்புமிகு தமிழக முதல்வருக்கும், துணை முதல்வருக்கும் வீட்டு வசதி செயலாளா் அவா்களுக்கும் நமது சங்கத்தின் சாா்பாக நன்றியைத் தெரிவித்துக் கொள்கிறேன். இந்தப் புத்தகம் தங்களுக்கு கிடைக்கும் நேரத்தில் நமது மத்திய அரசின் பட்ஜெட் வெளி வந்து இருக்கும். அதைப்பற்றி மிகத் தெளிவாக விவாதிக்க நமது சங்கம் மூலம் பிப்ரவரி மாதத்தில் ஒரு கலந்தாய்வுக் கூட்டமும், மேலும் Structural Awarness / Documentation and legal பற்றிய கூட்டம் என இரண்டு கூட்டங்கள் நடத்தப்பட உள்ளது. அனைவரும் தவறாது இந்த கூட்டங்களில் கலந்து பயனடையுமாறு கேட்டுக் கொள்கிறேன்.

நமது தென்னக மய்யத்தின் நீண்ட நாள் கனவாகிய சொந்த அலுவலக கட்டிடத்திற்கு நாங்கள் 30ந்தேதி இடம்பெயர்ந்துள்ளோம். பெரும்பாலும் நமது சங்கம் நடத்தும் அனைத்து கூட்டங்களும் இனி வரும் காலங்களில் நமது கட்டிடத்தில் உள்ள அரங்கிலே நடத்தப்படும். இந்த கட்டிடத்திற்கு வித்திட்ட நமது பீஷ்மா திரு. R. இராதாகிருட்டிணன் உள்ளிட்ட அனைவருக்கும் இந்த நேரத்தில் நான் நன்றி கூற கடமைப்பட்டுள்ளேன்.

நன்றி / வணக்கம் /

SAVE WATER SAVE LIFE

அன்புடன் **S. இராமப்பிரபு**

FUTURE TRENDS IN CONCRETE TECHNOLOGY



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mall or large, all types of construction use concrete. Though conventional concrete is a widely used construction material, there are other 'tailored' forms of concrete that are being increasingly used for special purposes. Depending upon the need, one may employ prestressed, self-compacting, and/or fibre-reinforced concrete. There are many varieties of modified concrete.

Developments in concrete industry can be classified into five major focus areas as shown in Fig. 1. Recycling of demolition waste, use of industrial wastes such as fly ash, and green building method are developments that have stemmed from the need to conserve materials and obtain maximum output from them. High-strength and ultrahigh-strength concrete are, on the other hand, concentrating on improving the strength and ductility behaviour under challenging loading conditions. Currently, a good number of

structures are built in very hostile environments. Such structures need to withstand severe and cyclic environmental and weather changes. Therefore, the durability of concrete has been an important consideration in the recent developments in concrete. Polymers and co-polymers are added to concrete to impart it new and improved properties that were thought impossible about 20 years ago. The use of special polymeric fibres has made it possible for a material technologist to produce concrete as flexible as rubber and as strong as steel. Similarly, the introduction of glass into the concrete mix makes concrete look as beautiful as a jewel. Composites have enhanced the scope of the applicability of this widely used construction material.

1 Sustainability of Concrete Industry

Concrete industry is drawing upon enormous natural resources. Disposing of large quantities of construction and demolition wastes in landfills for building new and high-rise structures has become the order of the day. The cement manufacturing process, as well as the accumulation of considerably large volumes of debris and rubble resulting from the demolition of structures, is a serious threat to the environment.

Application of smart technology Improvements to rebar technology Use of hybrid materials in concrete Developments Enhancement of in concrete durability properties of industry concrete structures Enhancement of concrete behaviour in terms of its strength and ductility for making it behave well even under adverse load conditions Conservation of concretemaking materials so that the industry is sustainable

Fig. 1 Developments in concrete industry

The search for environment friendly material to substitute cement in concrete becomes most important in the light of the world facing serious problems with CO2 emissions. It is known that production of 1 ton of Portland cement accounts for about 1 ton of CO2 being added to the atmosphere.

In such a situation the industry is faced with the task of finding ways and means both to ease the pressure on the natural resources and to optimize the use construction material. Efforts in this direction have led to the use of high-volume fly-ash concrete, which can help save about 60% of cement. Also, geopolymer, an inorganic alumino-silicate polymer synthesized from minerals, and by-products such as rice husk ash or fly ash are being used as a binder in concrete.

Rapid modernization and reconstruction of bridges, roads, and industrial structures involve demolition of old structures, which generates lot of waste. The worldwide consumption of concrete is approximately 4.5 billion tonnes a year. It has been estimated that every year approximately 50 million tonnes of concrete are discarded in Europe, 60 million tonnes in the United States, and 10 to 20 million tonnes in Japan. It has been further estimated that by the year 2020 these figures will multiply several fold.

Apart from reconstruction, debris results from natural calamities and ravages of wars. For instance, the hurricane Andrew caused damages to more than 10,000 houses in Florida, and after the earthquake in Kobe, Japan, the amount of construction demolition waste was assessed to be of the order of 20 million tonnes. In India, the Gujarat earthquake resulted in the accumulation of large construction debris and wastes. Afghanistan and Iraq wars resulted in dumping of large quantities of demolished structures without recycling. If the concrete industry is to sustain then the debris has to be recycled. The current trend is to use technology to recycle wastes so that available resources for making concrete do not get depleted. In addition, the structures that are built should be such that they do not generate waste and/or deplete the natural resources.

1.1 Recycled Aggregate Concrete

The depleting nature of the concrete aggregates has led to recycling of waste/debris aggregates. In the long run, this will prove to be economically advantageous and sustainable. Such recycled aggregates were used in the reconstruction of European cities on a large scale after the Second World War. Demolished waste with partial substitution of natural aggregates by recycled aggregates originating from concrete provided a solution for the 200 million tons/year construction waste generated in European Union recently.

Both fine and coarse aggregates can be produced by recycling (Source: Kannappan et al. 2004) of waste. Physical properties of aggregates should be checked for compliance before using them in the concrete mix. Owing to variation in the composition of the debris at different locations, samples of debris from each location should be tested for basic properties. Thereafter, depending upon the requirement, design of the mix must be arrived at.

The demolition waste aggregates (Fig. 2) contain the following basic materials (the proportions are approximate):

(a) Demolition concrete = 75% (b) Demolition brickwork = 20%

(c) Mosaic tiles and other impurities = 5%

The typical recycled coarse aggregate is shown in Fig. 3.

Grading curves

A detailed sieve analysis should be made with normal aggregates and various proportions of recycled aggregates identified. The proportion of recycled aggregates for which the fineness modulus is nearly the same as that for normal aggregates should be chosen and used. A typical grading curve drawn for recycled and conventional coarse aggregate used in a project is shown in Fig. 4.

Properties of recycled aggregate concrete

Recycled aggregate is a good substitute to conventional aggregate in concrete. Experimental investigations have shown

that recycled aggregate concrete has compressive strength similar to conventional aggregate concrete. Moreover, demolition waste possesses relatively low bulk density, higher water absorption, and cause low workability in the fresh concrete. However, workability can be improved by using a suitable superplasticizer. The experimental investigations have also shown that recycled aggregate concrete can be effectively and successfully used for structural concrete work. From the point of view of sustainable growth of concrete industry, recycled aggregate concrete holds promise. However it should be emphasized that proper mix design and quality control are essential for the successful use of recycled aggregate concrete.



Fig. 2 Demolition waste



Fig. 3 Recycled coarse aggregate (Source: Kannappan et al. 2004)



1.2 Green Building

Green buildings are structures which are designed, built, operated, and/or reused in an ecologicaland resource-efficient manner. Green buildings are environment friendly, protect occupants health, and make efficient use of water, energy, and other resources. Such buildings also reduce the overall impact of concrete construction on the environment. Green buildings are also known as sustainable buildings.

Environmental benefits of green buildings are the following:

1.They sustain the quality of water and air.

2. They help conserve natural resources.

3. They help reduce quantity of waste produced.

4. They improve the ecosystem.

Economic benefits of such buildinngs include the following:

1. The initial cost of green building constructions is a little high, but its operation cost is less.

2.Improved occupant health, comfort, productivity, and reduced pollution ensure that the higher initial cost incurred is justified and, in the long run, proves economical as well.

3. Green buildings need reduced life-cycle cost.

Material benefits from resorting to green buildings practices are as follows:

1.Reduction in building material needed and, hence, reduction in the cost of construction.

2.Recycling of construction waste.

3.Water is treated and reused (rainwater and water from washbasins can be treated and used for garden).

4. Solid waste management program prevents waste generation and makes waste a resource.

5. Preserving environment.

Green building practices offer benefits for the occupants of the structure also. These include the following:

1. These buildings offer good quality environment and hence reduce the rate of respiratory diseases. 2. Adequate ventilation is provided.

3.Building material is chosen in such a way that it is nontoxic and helps protect environment.

4.Natural heating and cooling systems improve the room condition and comfort.

5. Prevent indoor microbial contamination by using materials resistant to microbial growth.

6. The overall life style and comfort of the occupant is improved.

Maintenance

A green building cannot achieve its goal unless all the systems in it work properly because all features in the building are interlinked. Stagnation in any one process can affect the entire system. Proper maintenance is important for realizing the benefits of green buildings. Maintenance includes mechanical, electrical, plumbing, and many other aspects. The maintenance staff should have complete knowledge about the green building system and have experience in operating and using the equipment required. Adequate and proper maintenance can ensure optimum use of the concept of green buildings.

Need for green buildings

One of the major components of sustainability is to save resources for the future generations. We should use natural resources judiciously and preserve the Earth and its environment. The green building technology optimizes the use of resources and thus helps slow down their depletion. The concepts of multiple use, future modification, and efficient deconstruction and re-use of materials are intrinsic to green design. The green building construction technology offers real potential for increasing profitability for the society in an environment friendly way.

1.3 Use of Supplementary Material for Sustainable Development

Conservation of Portland cement by partial substitution of supplementary cementitious products and thereby enhancement of service life of structures are essential for sustainable development. The supplementary material that can advantageously be used (either singly or jointly) are

- fly ash,
- silica fume,
- rice husk ash, and
- metakaoline.

The typical physical and chemical characteristics of these materials are given in Table 1.

Characteristic	PFA	SF	RHA	GGBS	MK		
	(Chemical composition					
Silica (%)	48	85-95	85-95	35	52		
Carbon	1-2	1-2	2-8	40	-		
Alkali	20	10.5-2	2-3	10	<1%		
		Physic	alproperties				
Average particle size	0-1	0.1-0.2	7-10	0-1	0-1		
Specific surface (m*/kg)	300-600	15000-30000	700	400	12000		
Colour Specific gravity	Black/grey 2.3	Grey 1.4	Grey 2.4	Light grey 2.8	White 2.5		

Table 1 Typical characteristics of supplementary cementitious materials

Concrete containing fly ash content of about 20% is used in India. Laboratory studies have shown excellent properties at low water binder ratios. Elsewhere in the world, especially in Canada, concrete has been used successfully with a cement replacement of about 60%. The high-volume fly ash is an economical concrete mix component. It can be mixed, placed, and consolidated with conventional equipment. It is possible to use large quantities of fly ash and therby make the construction industry sustainable, especially because it encourages bulk utilization of an industrial waste product which is actually a resource.

Silica fume and rice husk ash have been used in small amounts (10% by mass of binder) to enhance the desirable properties such as impermeability and durability of concrete. Though both the silica fume and rice husk ash have been successfully employed as admixtures to concrete, it is worthwhile to develop cement blends composed of fly ash, silica fumes, and/or rice husk ash in order to conserve cement clinker for the sustainability of cement industry in the long run. Silica as a product of agriculture, i.e., rice husk ash is a renewable resource. In India the use of rice husk ash blend with cement will not only help sustain the cement industry in an environment friendly way but also ensure rural development in a sustainable manner.

Ground granulated blast furnace slag, a by-product of steel industry, is a unique cementitious material which posses an inherent ability to provide strength, stiffness, and durability to concrete structures. The most important contribution of slag is its ability to reduce the heat of hydration during the concreting process. Added to its ability to reduce the temperature rise due to heat hydration and the resulting thermal strains and microcracking, it has high early strength and excellent durability. The mineralogy and chemistry of slag is able to mobilize a very fine pore structure. A proper use of this waste material will bring desired benefits to society in terms of energy resource conservation and environmental protection.

Metakaoline is a white pozzolan made by heating kaolin clay to the temperature of 600–800°C. It reacts rapidly with calcium hydroxide in the cement paste and converts it into a stable cementitious compound. It refines the microstructure of concrete and improves impermeability.

Supplementary cementitious materials are considered as alternative binders. These are cement replacement materials and have become a necessity for the construction industry because of the economic, environmental, and technological benefits resulting from their use. In the years to come, wider utilization of these materials and further search for such waste materials and industrial by-products will find application owing to their energy- and cost-saving considerations. These materials may thus be 'unloading' the surcharged environment by providing a route to 'lock up' the waste, which is otherwise hazardous to environment. In the process, this also helps reduce CO2 emissions attributed to cement/construction industry.

2 Enhancement in Strength/ductility of Concrete

The current trend is to build tall and long-span structures. For such structures strength and ductility become important. Hence concrete with ultrahigh strength and which behaves in a significantly ductile manner is essential and needs to be researched upon. Developments in this domain will enable us to build tall and long-span structures, probably a building more than one kilometer tall or a bridge having span larger than the longest single-span steel bridge of the suspension type. For building tall or long-spanning structures, good ductility behavior becomes necessary. Reinforced concrete unlike steel is a tailor-made material. Hence the challenge before us is to produce concrete as strong and ductile as steel

and at the same time retain all the advantages of a concrete structure such as durability, fire resistance, and mouldability. A few examples of initiatives towards this end are considered in the following section.

2.1 Use of High-strength Concrete

In the past the use of high-strength concrete was made mostly in columns of tall buildings. As tall buildings began to be designed with larger heights the need for high-strength concrete emerged. More recently high-strength concrete has been used in long-span bridges. It has been used in precast, prestressed components to achieve longer spans and wider-beam-spacing shallower sections, and lighter superstructures. High-strength concrete has also become inevitable in offshore structures. Table 2 shows the progressive increasing application of high-strength concrete in deep sea structures.

Year installed	Water depth (m)	Concrete volume (m)	Strength (MPa)	Project
1984	145	130000	55	Statfjorf C
1989	216	240000	70	Gulfaks C
1993	251	80000	75	Draugen
1995	303	235000	80	Troll A

Table 2 Deep sea structure with high strength concrete

The use of high-strength concrete with a higher modulus of elasticity reduces the axial shortening of tall columns and walls.

2.2 Use of Highly Ductile High-strength Concrete

Highly ductile high-strength concrete (Ductal) is an ultrahigh-performance concrete product. Ductal concrete is a concrete proportioned with a maximum particle size of 600 μ m and a minimum particle size of 0.1 μ m, which provides a dense mix with minimum void spaces. Such a concrete has a poor ductile character. So, in order to improve ductility, fibres are mixed along with the concrete.

It has got the following advanatges:

- 1. Compressive strength up to 200 MPa can be achieved.
- 2. Flexural strength exceeding 40 MPa can be achieved.
- 3. High abrasion resistance.
- 4. Good resistance to chemical agents.

5. Structures can be designed without passive and shear reinforcement. The properties of Ductal are tabulated in Tables 3 and 4.

Table 3 Mechanical properties of Ductal

Property	Without heat treatment	With heat treatment	
Density	2500 kg/m ³	2500 kg/m ³	
Compressive strength	130–150 MPa	150–180 MPa	
Bending strength	30 MPa	32 MPa	
Direct tensile strength	7 MPa	8 MPa	
Shrinkage	500 µm	0	
Creep	0.8	0.15-1.3	
Young's modulus	55000 MPa	50000 MPa	
Poisson ratio	0.2	0.2	
Thermal expansion	12.10 ⁶ m/m	12.10 ⁻⁵ m/m	
Resistance to fatigue	> 10 million cycles	> 10 million cycles	

Source: Behloul & Ganz 2004

Table 4 Durability properties of Ductal

Property	Value
Gas perm eability (nitrogen)	$1.5 \times 10^{-20} \text{ m}^2$
Waterporosity	1.9%
Abrasion resistance	1.1
Chlorine ion diffusion	$2 \times 10^{-14} \text{ m}^2/\text{s}$
Carbonation depth	Nil
Tritium water diffusion	$10^{-5} \mathrm{c} \mathrm{m}^2/\mathrm{J}$
Inad Internet terepton & Ganz 2004	No effect on aspects and mechanical properties

Having a look at these tables it is clear that we can achieve many favorable behavioral parameter by use of Ductal.

Figure 5 shows the behaviour of Ductal in compression, Fig. 6 in bending, and Fig. 7 in shrinkage.



Fig. 7 Ductal shrinkage (Source: Behloul & Ganz

3 Enhancement of Durability of Concrete Structures

Concrete is the most used construction material and concrete structures are generally assumed to have a very long life. However, recently durability problems have manifested in many cases especially for structures in severe environments. Design codes do not provide a comprehensive tool for evaluating either the chloride ion ingress or carbonation of concrete due to carbon dioxide. The present practices of durability design followed can be divided into following categories:

- 1. Perspective design
- 2. Performance type design
- 3. Performance based design

As explained earlier, IS: 456-2000 in a perspective manner specifies the maximum w/c ratio and minimum cement content depending on the exposure condition of a structure. The ACI building code for structural concrete prescribes total air content for frost resistance requirement. For concrete exposed to deicing solution and/or sulphate solution limits are provided to ensure durability. Note that all these clauses in IS: 456-2000 or ACI: 318-02 are stipulated in a perspective manner.

Perspective design is based on simplification for adoption rather than on performance. However, the required performance in a real sense has to be verified through analysis of time-dependent durability behaviour of concrete under the specified environmental action. This calls for lengthy numerical approach and currently many models for solution are being researched upon. Under these conditions, some of the codes such as Japan Society of Civil Engineers have introduced the performance type method for durability design. This calls for verification of the following:

- 1. The concrete structure maintains the required performance throughout its life.
- 2. The resistance to structural deterioration due to the carbonation of concrete, ingress of chloride ions, freeze-thaw attack, chemical action, and alkali aggregate reaction should be assessed and the combined effect should satisfy the prescribed performance level.

For example, the verification of carbonation is done using the formula:

$$\gamma_i = y_d / y_{\lim} \le 1$$

where

 γ_i = structure factor

 y_{iim} = limit depth of carbonation to induce corrosion initiation calculated as

 $y_{\text{lim}} = \mathbf{C} - \mathbf{C}\mathbf{k}$

C = design cover

 C_k = carbonation depth y_d = designed carbonation depth

 $y \alpha' = \gamma_{cd} + \alpha'_d \sqrt{t}$ α'_d = coefficient of design carbonation speed

 $\alpha'_d = \alpha'_k \beta_c \gamma_c$

 α'_{k} = characteristic value of carbonation speed coefficient

 $\hat{\beta_c} = \text{environment factor}$ $\gamma_c = \text{material factor for concrete}$

t = design life span for carbonation

 $\gamma_{\rm cd}$ = coefficient to consider

Approximately, α'_k is taken based on experiments and statistical evidence,

$$\alpha'_{k} = 3.57 \pm 9.0 w / b$$

where w/b is the water-binder ratio.

To consider the effect of environment, the environment factor βc is introduced. The βc value varies from dry environment to wet environment (i.e., varies between 1.6 and 1.0). Thus, the framework of concrete technology is made to be performance based by integrating structural and durability design parameters in terms of performance parameters. Since detailed probablistic analysis is not done and the analysis is

based on semiemperical factors such as α'_k and βc , this approach is called performance type design method.

If considerable data on environmental factors are collected and are available, the values of α'_{μ} and βc can be refined using probablistic methods. For such an approach considerable effort is needed to prepare the probablistic models, which are under research study in various parts of the world. When these results are available, we may be able to postulate a design phylosophy which will lead us to performance-based design approach.

4 Use of Hybrid Systems in Concrete

It is well known that mineral cementitious materials contribute to the durability of concrete structures. There are a number of cementitious materials, such as fly ash, ground granulated blast furnace slag, and silica fume, which are widely available and are being used extensively. Similarly, the use of different types of steel and polypropylene fibers has enhanced the ductility performance of concrete. Composite mineral admixtures as well as multiple types of fibres in the same mix may be used to get the desirable performance. This section discusses the use of a few types of such composites which are likely to find application in the construction industry. This section discusses the use of different types of composites and hybrids for getting tailor-made properties of concrete.

4.1 Polypropylene Structural Fibres

Fibre-reinforced concrete (FRC) is gaining importance with growing demand for concrete. Glass, carbon, and steel fibres are being used to produce fibre-reinforced concrete. Polypropylene fibre can also be used for producing fibre-reinforced concrete. Using polypropylene fibre has the following advantages:

1. The mode of failure is changed from brittle to ductile.

- 2. This fibre can be incorporated in specific amounts without causing balling and segregation.
- 3. This fibre is corrosion resistant (when compared with steel fibres).
- 4. Its dead weight is less.
- 5. It can be used in magnetic areas as well.

4.2 Slurry Infiltrated Fibrous Concrete

Slurry infiltrated fibrous concrete (SIFCON) is a variety of fibre-reinforced concrete. In normal fibrereinforced concrete fibres are mixed with wet concrete and placed. As against this, cement slurry is infiltrated into the fibre-packed bed in the case of SIFCON. SIFCON has higher ductility and impact resistance when compared with normal FRC.

4.3 Types of Cementitious Materials

Portland cement is being used widely since 1824. Modernization and technology have led to the development of new cementitious materials. Developments in cementitious materials have been from the points of view of quality, environment friendliness, and utilization of industrial by-products. A brief discussion on these developments is given next.

Environment-friendly cement

The process of Portland cement manufacture releases considerable amounts of CO2 into the atmosphere. This cause environmental pollution. The need to avoid environmental pollution has led to the development of environment-friendly cement.

Geopolymer cement

Geopolymer cement has good durability. It is produced using oxides of Si and Al. When compared with the conventional Portland cement, CO2 emission is reduced by 80% by resorting to geopolymer cement production.. Geopolymer concrete undergoes low creep and very little shrinkage and is a good alternative to conventional concrete.

Sodium cement

Sodium is the major component in this cement. This is also an environment-friendly cement. In this cement the calcium content is reduced, which in turn reduces the CO2 gas emission during production of cement.

Calcium sulpho-aluminate cement

Calcium sulpho-aluminate (CSA) cement uses $Ca_4(AI, Fe) 6O_{13}SO_3$ instead of C_3S . This cement has a good resistance to corrosive ions such has sulphates and chlorides. The strength character of CSA cement and its setting property permit it to be used for repair works.

Reactive belite cement

The manufacture of this variety of cement saves energy. Additionally, the quantity of lime stone used is minimized. In this type the alite phase is restricted to a minimum and the belite phase increased to a range of 55%–60% with a low proportion of C3A and C4AF.

Belite cement has low carbonation and a capillary porosity of 7%–14%. However, a major challenge in this cement is that it has a low hydration rate.

Magnesium phosphate cement

Magnesium phosphate cement (MPC) is suitable for quick repair of concrete pavements. MPC has excellent compressive strength. Its setting time is 8–10 min. It has good resistance to freezing and thawing conditions. The reaction responsible for bond is

$$MgO + NH_4H_2PO_4 \rightarrow NH_4MgPO_46H_2O$$

MPC is corrosion resistant and does not require special care for handling.

Microdefect-free system

By adapting special rheologial aids and special processing techniques, tensile and flexural strengths of cement paste can be improved with a reduced water–cement ratio.

Densified particle system

In the 1970s this system was developed in Denmark by Aalborg Portland. It consists of low porosity matrices produced from mixing OPC and condensed silica fumes. DSP concrete can also be considered to be an improved version of high-strength concrete with a lower water–cement ratio. It has more abrasion resistance, but low permeability to ions and gases.

Microfine cement

Microfine cement is produced by ultrafine grinding in a cement mill to a higher fineness of about 750 to 800 m2/kg. This cement is suitable for repair works.

4.4 Fibre-reinforced Self-consolidating Concrete

Fibre-reinforced concrete has proved to be a good alternative to conventional concrete. Much research

has been conducted to enhance the workability of FRC. In Taiwan a local mixture proportion method called densified mixture design algorithm (DMDA) has been developed to produce fibre-reinforced self-compacting concrete (FRSCC). An important advantage of the DMDA method is that fly ash can be utilized properly to fill the voids between aggregate and cement paste. The relationship between the unit weight and fibre content of concrete is shown in Fig. 8.



Fig. 8 The relationship between unit weight and fibre content (Source: Hwang et al. 2004) The following are the advantages of FRSCC:

- (a) Improved ductility.
- (b) Least voids.

(c) FRSCC designed by DMDA also reduces the balling problems of fibres and improves the flowing and self-consolidating capacity.

4.5 High-performance Fibre-reinforced Cementitious Composites

The demand for improvement in the quality of structure and repairing them is increasing.. To meet this demand, a special concrete or construction material with more durability is required. This has led to the development of high-performance fibre-reinforced cementitious composites (HPFRCC). The large ductility of HPFRCC makes it an excellent construction material. Engineered cementitious composite (ECC), a type of HPFRCC, has high tensile strain capacity and is a very good repair material.

4.6 Fibre-reinforced System for Seismic Strengthening

Earthquake is a natural phenomenon capable of exerting unspecified, extraordinary loads on a structure. So the likelihood that a structure might be subjected to devastating seismic loads during its service life has forced the engineers and designers to search for ways and means to minimize the consequences due to seismic activity. These efforts have led to the development of FRC and FR construction systems. Introduction of fibre into the construction system imparts more ductility to the construction system, which in turn helps a structural system to better dissipate the earthquake energy. Many structures constructed before 1990 need to be strengthened if they are to be made safe for the current specification requirements. This can be achieved by using fibre-reinforced systems. In this method, the columns and beams to be strengthened are clad with FRP sheets (Fig. 9). The adhesion between FRP structural members is provided by epoxy coating. The entire member is covered by concrete grouting. In order to carry out strengthening, adhesion shear versus load slip between old and new materials may have to be accounted for, by taking into account the value of slip. The typical load slip curves as a function of adhesion shear are shown in Fig. 10.



4.7 Hybrid Fibre Concrete

Cracks in fresh concrete can be caused due to plastic shrinkage. This problem can be avoided by 14 | Southern Builder

using FRC. Addition of two fibres of different properties can improve the strain capacity of fresh concrete. A combination of fibres prevents early cracking and makes concrete tougher. This combining of various types of fibres in a mix results in the formation of hybrid fibre composites. One type of fibre improves the properties of fresh concrete and prevents early shrinkage cracks while the other type of fibres contributes to the improvement of ductility of hardened concrete.

Fibres used in hybrid concrete should be selected carefully. The volumes of both the fibre materials combined together should not exceed the permitted fibre volume fraction.

Hybrid steel fibres (long and short steel fibres) can also be used in concrete. This combination of hybrid steel fibres can decrease the shrinkage crack by 10%–34% and also provide good ductility for seismic resistance. Researches have proved that hybrid fibres reduces the plastic shrinkage crack of concrete when compared with normal FRC.

4.8 Hybrid Micro Silica Concrete

Fly ash concrete is used to produce high-performance/strength concrete. By adding a small percentage of micro silica, the structural performance of high-strength concrete is increased. Fly ash blended with micro silica or other such materials is used to produce hybrid admixture concrete. Hybrid fly ash concrete has more compressive strength and flexural strength as compared to normal fly ash concrete. The use of micro silica in concrete makes the transition zone denser. The transition zones of hybrid fly ash concrete after 7 and 135 days are shown in Fig. 11. Table 5 shows hybrid admixture concrete mix proportions when two or more cementitious material are mixed.

	Percentage of total cementitious material			
	Conv en tional la rge aggregate mass concrete	Structur al concrete	Underwater or Infill mass concrete	
Portland cement	20-50	40-70	15-40	
GGBFS	30-50	20-50	30-60	
Fly ash	20-50	0-25	15-45	
Silica fume	0	0	0-8	

Table 5 Cementitious material proportions if three or more materials are used





5 Developments in Rebar Technology

The conventional reinforcing bar made of steel is susceptible to corrosion. Even CRS steel cannot be said to be corrosion proof. Hence there has been a spurt in research activities to develop corrosion-proof steel. In this section a few of these developments are included.

5.1 Armoured and Clad Bars

In this type of bars the steel core is protected by corrosion-proof superior grade stainless steel. Such bars are known as stainless steel clad armoured rebars. Such bars are often used in aggressive coastal environment and in off-shore structures.

5.2 Stainless Steel Rebars

Stainless steel has also been used to overcome the corrosion problem. Chromium is the a major alloy in stainless steel and imparts the corrosion resistance property to steel. The corrosion resistance property of steel can be increased by increasing the chromium content. Stainless steel can withstand chloride attacks. The advantages of using stainless steel rebars are the following:

1. Stailless steel is environment friendly.

2. It has good resistance against corrosion (no need of surface protection).

3. It has good engineering properties.

4. The cover of concrete can be reduced if stainless steel bars are used.

5. It is easy to handle.

6. It helps reduces maintenance.

7. Stainless steel is recyclable.

8. Its design, detailing, and construction techniques are similar to that of ordinary steel bars.

5.3 FRP Rebars

Steel is the conventional material used for providing reinforcement. In order to overcome corrosion problem, FRP rebars provide an alternative. FRP rebars are made of fibres of glass, carbon, aramid, and basalt. Using FRB rebars in the construction has the following advantages:

- 1. FRP rebars can manufactured as per the required specification.
- 2. FRP bars are more effective in the flexural zone.
- 3. They offer resistance against corrosion.
- 4. Using FRP bars helps redue the dead load.
- 5. They do not conduct current and can be used near high voltage and magnetic fields.

6 Smart Concrete

Before we summarize this chapter, imagine concrete which can think! Can such concrete be produced? The indications are that we can build smart concrete buildings by incorporating sensors and other biological or nano materials into concrete. Though some of the trends look to be a figment of imagination today, in reality the concepts that are reported are likely to be realized in the coming future. This section attempts at throwing light on some developments that may make it happen in the coming generation.

6.1 Bacterial Concrete

The concept of bacterial concrete is considered one step towards the smart concrete technology. The concrete that has the ability to adapt itself to the environment is called smart concrete. This concept is based on the ability of bones to grow and repair. The bone has the ability to repair itself, provided nutrients are supplied properly.

Bacillus pasteruii is a common soil bacterium. It has the ability to produce calcite. When this bacterium is used in concrete, it produces a highly impermeable layer of calcite over the surface of already-existing mortar layer. Bacterial concrete is a self-repairing bio-material; therefore, it is called 'smart bio-material'.

This smart concrete has proved to be effective in successfully taking care of plastic shrinkage cracks. It also increases the durability of concrete. Higher the bacterial dosage, higher the performance. Bacteria can be suspended in water or phosphate buffer and mixed in concrete. Concrete made by suspending bacteria in phosphate buffer is more effective. There are many advantages from using bacterial concrete:

- 1. Increased resistance to alkali and sulphate attacks.
- 2. More resistance to the freezing and thawing condition.
- 3. Reduces plastic shrinkage cracks.
- 4. The additional calcite layer formed by bacteria increases the impermeability of material, which in turn prevents the penetration of harmful gases and chemicals into the concrete. This reduces the possibilities for rebar corrosion.
- 5. The compressive strength of bacterial concrete is also increased by 5%–10%.

6.2 Nanocomposite Materials

Natural bone is a natural bio-nanocomposite material of hydroxyapatite [Ca10 (PO4)6(OH)2], mineral (HAP), and organic matter.. This composite has shown improved recovery and smaller plastic strain as compared to other composites. HAP polymer composite was produced and its material properties tested. Such a composites can be used by soaking it in water and body fluids. Body fluid is prepared using NaCl, NaHCo3, KCl, K2HPO43H2O, MgCl26H2O, CaCl2, and Na2SO4. It is now possible to produce composites of strengths of 80 MPa.

Another nanocomposite material is NACRE, which improves the physical properties such as strength and toughness of concrete. NACRE is a ceramic-laminated composite consisting of highly organized polygonal-shaped aragonitic platelet layers of a thickness of 0.5 µm separated by thin 10–30 nm layers of organic matter composed mainly of proteins and polysaccharides.

Further research is going on in this field to improve and optimize the nanocomposite concrete technology

and its application in the construction industry.

6.3 Fibre-optic Sensors

Currently the need to develop infrastructure world over is being felt never than before. This has resulted in large scale construction activities especially through the length and breadth of our country. More and more massive structures are being constructed to meet the increasing demand. This spree of construction activities has made it necessary to devise a technique for assessing the quality of the structure and its useful life. In order to meet this necessity, fibre-optic sensors are being made use of.

Using fibre-optic sensors is a non-destructive technique used in evaluating the condition of a structure. Indeed it is a strain sensor for monitoring the behavior of the concrete structures.

Extrinsic Fabry perot interferometric (EFPI) sensors (Fig. 12) have a cavity comprising two mirrors which are parallel to each other and perpendicular to the axis of optic fibre. Sensing and reference fibres are the same up to the first mirror. This is the starting of the sensing region. The cavity formed between the mirrors is known as the Fabry Perot cavity. A change in the distance between the two fibre end faces (called air

gap length) cause interferometric fringe variation. From this distance change, strain can be calculated using the following known relationship:

Strain = (change in the length of air gap)/(gauge length)

Installation of such advanced sensing devices will enable us to monitor our structures live and assess the condition of our vital infrastructure.



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GST TAXPAYERS CAN FILE THEIR GSTR-3B RETURNS IN A STAGGERED MANNER



திரு. S.D. கண்ணன் Taxation Committee

Considering the difficulties faced by trade and industry in filing of returns, the government has decided to introduce several measures to ease the process. The Finance Ministry today said that now GST taxpayers can file their GSTR-3B returns in a staggered manner.

Presently the last date of filing GSTR-3B returns for every taxpayer is 20th of every month. From now on, the last date for filing of GSTR-3B for the taxpayers having annual turnover of Rs 5 crore and above in the previous financial year would be 20th of the month. Thus, around 8 lakh regular taxpayers would have the last date of GSTR-3B filing as 20th of every month without late fees.

The taxpayers having annual turnover below Rs 5 crore in previous financial year will be divided further in two categories. The tax filers from 15 States/ UTs, i.e., Chhattisgarh, Madhya Pradesh, Gujarat, Daman and Diu, Dadra and Nagar Haveli, Maharashtra, Karnataka, Goa, Lakshadweep, Kerala, Tamil Nadu, Puducherry, Andaman and Nicobar Islands, Telangana and Andhra Pradesh will now be having the last date of filing GSTR-3B returns as 22nd of the month without late fees. This category would have around 49 lakh GSTR-3B filers who would now have 22nd of every month as their last date for filing GSTR-3B returns.

For the remaining 46 lakh taxpayers from the 22 States/UTs of Jammu and Kashmir, Laddakh, Himachal Pradesh, Punjab, Chandigarh, Uttarakhand, Haryana, Delhi, Rajasthan, Uttar Pradesh, Bihar, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, Assam, West Bengal, Jharkhand and Odisha having annual turnover below Rs 5 crore in previous financial year will now be having last date of filing the GSTR-3B as 24th of the month without late fees.

The Finance Ministry said that the necessary notification in this regard would be issued later by the competent authority.

In a statement issues, the Ministry further said that it has also taken a note of difficulties and concerns expressed by the taxpayers regarding filing of GSTR-3B and other returns. The matter has been discussed by the GSTN with Infosys, the Managed Service Provider, which has come out with above solution to de-stress the process as a temporary but immediate measure. For further improving the performance of GSTN filing portal on permanent basis, several technological measures are being worked out with Infosys and will be in place by April 2020.

1.0 Background

The Finance (No. 2) Act, 2019 had introduced Section 269SU which required every person with a business turnover, sales or gross receipts exceeding Rs. 50 crores to mandatorily provide facilities for accepting payments through prescribed electronic modes. The CBDT vide its **Notification [No.105/2019/F. No. 370142/35/2019-TPL]** dated **30th December 2019** has prescribed such electronic modes, which needs to be provided from 1st January 2020. Details are as under:

2.0 Prescribed Electronic Modes of Payment

Every person with a business turnover of more than Rs. 50 crores has to mandatorily provide all the following modes for the purpose of acceptance of payment, which is in addition to the facility for other electronic modes of payment, if any, being provided by such person:

- (a) Debit Card powered by RuPay;
- (b) Unified Payments Interface (UPI) (BHIM-UPI); and
- (c) Unified Payments Interface Quick Response Code (UPI QR Code) (BHIM-UPI QR Code).

Note: On perusal of the above notification, it can be inferred that all the 3 alternatives as mentioned in (a), (b) & (c) need to be provided for accepting payment through electronic modes.

3.0 Due Date for Compliance & Consequences of Failure to Comply

Every person required to comply with the provisions of Section 269SU must provide the facilities by 1st January 2020.

Every person who fails to offer the prescribed modes (*installation & operationalization of the facilities*) by 31st January 2020 would be subjected to a penalty of Rs. 5,000 per day of default with effect from 1st February, 2020.

4.0 Applicability of Other Charges on the prescribed electronic modes

Any payments made through the prescribed electronic modes would not be subject to transaction charge or any other charge including Merchant Discount Rate (MDR) on or after 1st January 2020.

Sources:

- (i) Circular No. 32/2019 F. No. 370142/35/2019-TPL dated 30th December 2019
- (ii) Notification [No.105/2019/F. No. 370142/35/2019-TPL] dated 30th December 2019

For further information please contact:

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This newsflash is general in nature. In this newsflash, we have summarized regarding the electronic modes of payment as prescribed by CBDT vide Notification [No.105/2019/F. No. 370142/35/2019-TPL] dated 30th December 2019. It may be noted that nothing contained in this news-flash should be regarded as our opinion and facts of each case will need to be analyzed to ascertain applicability or otherwise of the said notification and appropriate professional advice should be sought for applicability of legal provisions based on specific facts. We are not responsible for any liability arising from any statements or errors contained in this newsflash.

31 December 2019

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Office of the Director of Town and Country Planning, 807, Anna Salai, Chennai – 600 002.

Roc. No.6423/2017-T

Dated: 27.01.2020

Sub: Simplification of procedure to obtain reclassification of land use and planning permission for developments – Clarification issued – Regarding.

Ref: This office circular of even No. dated: 1.12.2017

A copy of the earlier circular cited above relating to the subject is attached.

It has already been instructed vide the circular cited above that a single application for both reclassification of land use and development of layout or building construction can be received from the applicant and processed further. It is reiterated that the circular instructions should be followed scrupulously and deviation, if any, will be viewed seriously.

Further, it is clarified that in cases for which single application for both reclassification and layout or building development was received and G.O. for reclassification of land use was issued and the date of publication of the said reclassification was made in the Tamil Nadu Government Gazettee (TNGG) on or after 4.2.2019 i.e., the date of coming into force of new Tamil Nadu Combined Building Regulations (TNCDBR), 2019, then the layout or building proposal of the said application which is still under scrutiny shall be examined in the new TNCDBR, 2019 only. Whereas, in cases for which publication of reclassification in TNGG was made prior to 4.2.2019 and the layout or building proposal of the combined application still under process may be examined in the old rules or in the new rules as per the option of the applicant as given under rule 73(3) of "Transitory Provisions" of the TNCDBR, 2019.

> (sd./-) Chandra Sekhar Sakhamuri, Director of Town and Country Planning

Encl.: A copy of the earlier circular cited in reference above. To

All the Regional Deputy Directors/Assistant Directors and Member Secretaries of all Composite Local Planning Authorities and New Town Development Authorities.

Copy to:

All Deputy Directors, Assistant Directors and Planning Assistants and Supervisors of head office.

/forwarded/by order/

Deputy Director

அகில இந்திய மாநாட்டில் 2019-2020 ம் ஆண்டிற்கான சிறந்த மய்யத்திற்கான விருது தென்னக மய்யத்திற்கு வழங்கப்பட்டது



2019-20ம் ஆண்டிற்கான சிறந்த மாநிலத்தலைவருக்கான விருது திரு. S. அய்யநாதன் அவர்களுக்கு வழங்கப்பட்டது



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ELECTION 2020-2021









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2020-2021ம் ஆண்டிற்கான மய்ய நிர்வாகிகள்









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2020-2021ம் ஆண்டிற்கான செயற்குழு உறுப்பினர்கள்



2020-2021ம் ஆண்டிற்கான பொதுக்குழு உறுப்பினர்கள்



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தேர்தல் அதிகாரி திரு. O.K. செல்வராஜ் அவர்கள் தேர்தல் முடிவினை மய்யத்தலைவர் திரு. S. இராமப்பிரபு அவர்களிடம் அளித்தார்.



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Copy of:

Office of the Commissioner of Town and Country Planning, 807, Anna Salai, Chennai- 600 002. Dated: 1.12.2017

Roc. No.6423/2017-T

Circular

Sub: Simplification of procedure to obtain reclassification of land use and planning Permission for developments - Issued – Regarding.

In respect of planning areas, planning permission for proposed developments like layout or building construction are issued when the land use zoning of the statutory plan is complied with. Whenever, the proposed development requires land use reclassification, first proposal for reclassification is processed by the planning authority and forwarded to Government through Commissioner of Town and Country Planning for orders. After issue of Government order only the proposal for development of land or building is received from the applicant and processed for planning permission. This present procedure requires placing the subject before the planning authority meeting chaired by the District Collector twice for its recommendation.

In order to simplify the above lengthy procedure and to save time, the following procedure to be adopted hereafter:

- A single application for both reclassification of land use and development for land or building construction to be received from the applicant with the required number of drawings for both proposals.
- (2) Both the reclassification and development proposals shall be placed in the authority meeting as a single subject and recommendation of the planning authority shall be obtained in a single instance for both.
- (3) The reclassification proposal shall be forwarded to the Commissioner of Town and Country Planning along with development proposal if it is not within power delegation. Both proposals to be processed simultaneously.
- (4) Once, the Government order is obtained in favour of the reclassification, then the planning permission/ concurrence for the layout or building construction shall be issued by the planning authority or the Commissioner of Town and Country Planning, as the case may be, without any further delay.

This procedure comes into immediate effect and shall be followed scrupulously. The receipt of this letter shall be acknowledged by return of post.

(sd/-) Dr Tmt Beela Rajesh, IAS Commissioner of Town and Country Planning

То

All the Regional Deputy Director(i/c)/ Assistant Directors and

Member Secretaries of all Composite Local Planning Authorities and New Town Development Authorities

Copy to: All Assistant Directors, Planning Assistants and Supervisors of head office

/True copy/

Deputy Director







மக்கள் நல்வாழ்வு மற்றும் குடும்ப நலத்துறை

கொரோனா வைரஸ் காய்ச்சல் (nCov -2019)

• கொரோனா வைரஸ் (nCoV - 2019)

- கொரோனா வைரஸ் என்பது மனிதா்களுக்கு சளி, இருமல், காய்ச்சல் மற்றும் மூச்சுத் திணறல் ஆகியவற்றை ஏற்படுத்தக் கூடிய ஒருவகை வைரஸ் கிருமியாகும்.
- சீனாவின் வூகான் நகரத்தில் கொரோனா வைரஸ் நோய்த் தொற்று ஏற்பட்டுள்ளது. இது விலங்குகளிலிருந்து மனிதாகளுக்கு பரவி இருக்கலாம் என சந்தேகிக்கப்படுகிறது.

நோயின் அறிகுறிகள்:

- 🕨 காய்ச்சல், இருமல் மற்றும் சளி
- 🕨 உடல் சோர்வு
- 🕨 ஒரு சிலருக்கு மூச்சுத் திணறல் ஏற்படும்.

கொரோனா வைரஸ் நோய் பரவும் விதம்:

- நோய் அறிகுறிகள் கண்ட நபர் இருமும் போதும், தும்மும் போதும், வெளிப்படும் நீர்த் திவலைகள் மூலம் நேரடியாக பரவுகிறது.
- மேலும் இருமல் மற்றும் தும்பல் மூலம் வெளிப்படும் கிருமிகளை உடைய நீர்த் திவலைகள் படிந்துள்ள பொருட்களை தொடும்பொழுது கைகள் மூலமாகவும் பரவுகிறது.

நோய் தடுப்பு நடவடிக்கைகள் :

- + தினமும் 10 முதல் 15 முறை சோப்பு போட்டு, நன்கு தேய்த்து கழுவ வேண்டும்.
- இருமும் போதும் தும்மும் போதும் வாய் மற்றும் மூக்கை கை குட்டை கொண்டு மூடி கொள்ள வேண்டும்.
- சிகிச்சை தரும் அனைத்து மருத்துவமனைகளிலும் கிருமி நாசினி கொண்டு சுத்தமாக துடைத்து பராமரித்தல் வேண்டும்.

சிகிச்சைகள்

- சளி, இருமல் மற்றும் காய்ச்சல், போன்ற அறிகுறிகள் தென்பட்டால் உடனே அருகில்
 உள்ள மருத்துவரை அனுகவும்.
- + இளநீா், ஓ.ஆா்.எஸ், கஞ்சி போன்ற நீா்ச்சத்து மிகுந்த ஆகாரங்களை பருகுதல் வேண்டும்.

சுற்றுலா மேற்கொள்ளும் பொது மக்களுக்கு அறிவுரை

- 1. கொரோனா வைரஸ் காய்ச்சல் பாதிக்கப்பட்டுள்ள சீனாவுக்கு பயணம் செல்லுவதை தவிர்க்கலாம்.
- 2. இருமல் சளி, ஜலதோசம் உள்ளவர்கள் பொதுமக்கள் கூடும் இடங்களுக்கு செல்வதையும், விழாக்களில் பங்கு பெறுவதையும் தவிர்க்க வேண்டும்.
- சமீபத்தில் சீனாவுக்கு பயணம் சென்றுவந்தவர்கள் இருமல் சளி, காய்ச்சல், மூச்சுத் திணறல் ஏற்பட்டால் அருகில் உள்ள அரசு மருத்துவமனைகளுக்கு சென்று ஆலோசனை பெற வேண்டும்.

கைகளை கழுவும் முறைகள்

நன்றாக கை கழுவ குறைந்தது 30 வினாடிகள் தேவைப்படும்.



கைகளைத் தண்ணீரில் ஈரப்படுத்தவும்



வலது விரல்களை இடது விரலிடுக்களில்_{நு}ழைத்து மாறி மாறித் தேய்க்கவும்



கட்டைவிரலை சுழற்றி இருகைகளையும் தேய்க்கவும்



தாராளமாகக் கை முழுவதும் சோப் போடவும்



விரல்களை கோர்த்து இருகைகளையும் தேய்க்கவும்



பின்பக்கம் முன் பக்கமாக விரல்களை சுழற்றி மாறி மாறி தேய்க்கவும்



கையோடு கை சோ்த்துத் தேய்த்துக் கழுவவும்



கைகளை விரல் பின் பாகங்களை இடுக்கியிட்டுத் தேய்க்கவும்



தண்ணீரில் நன்கு கைகளை / அலம்பவும்

24 மணி நேர உதவி எண் : 011 - 23978046

F.No.370142/35/2019-TPL Government of India Ministry of Finance Department of Revenue Central Board of Direct Taxes ****

Dated: 30th December, 2019

Sub.: Clarifications in respect of prescribed electronic modes under section 269SU of the Income-tax Act, 1961 – reg.

In furtherance to the declared policy objective of the Government to encourage digital economy and move towards a less-cash economy, a new provision namely Section 269SU was inserted in the Income-tax Act, 1961 ("the Act"), *vide* the Finance (No. 2) Act 2019 ("the Finance Act"), which provides that every person having a business turnover of more than Rs 50 Crore ("specified person") shall mandatorily provide facilities for accepting payments through prescribed electronic modes. The said electronic modes have been prescribed vide notification no. 105/2019 dated 30.12.2019 ("prescribed electronic modes"). Therefore, with effect from 01st January, 2020, the specified person must provide the facilities for accepting payment through the prescribed electronic modes. Further, Section 10A of the Payment and Settlement Systems Act 2007, inserted by the Finance Act, provides that no Bank or system provider shall impose any charge on a payer making payment, or a beneficiary receiving payment, through electronic modes prescribed under Section 269SU of the Act. Consequently, any charge including the MDR (Merchant Discount Rate) shall not be applicable on or after 01st January, 2020 on payment made through prescribed electronic modes.

2. In this connection, it may be noted that the Finance Act has also inserted section 271DB in the Act, which provides for levy of penalty of five thousand rupees per day in case of failure by the specified person to comply with the provisions of section 269SU. In order to allow sufficient time to the specified person to install and operationalise the facility for accepting payment through the prescribed electronic modes, it is hereby clarified that the penalty under section 271DB of the Act shall not be levied if the specified person installs and operationalises the facilities on or before 31st January, 2020. However, if the specified person fails to do so, he shall be liable to pay a penalty of five thousand rupees per day from 01st February, 2020 under section 271DB of the Act for such failure.

(Ankur Goval) Under Secretary to the Govt. of India 30.12.



EMPLOYEES STATE INSURANCE CORPORATION PANCHDEEP BHAWAN, C.I.G. ROAD NEW DELHI – 110 002 Website - esic.nic.in Ph : (011) 23234092

No.P-11/12/11/04/2018 Rev.II

Dated : 28.01.2020

То

All RDs/Director (I/c)/JD (I/c/DD (I/c) All ROs/SROs

Sub: Clarification regarding checking of records beyond 5 year period for conducting test inspections and other inspections

Sir,

Hqrs. Office is receiving representations from employers regarding demand of records beyond 5 years period by ESIC officials for conducting test inspection/inspection. As per second proviso to section 45-A (1) the time limit of five years is strictly to be followed in determining the contributions and issue of speaking orders by authorized officer. Authorized officer shall not ask for any records beyond five years the SSO shall not ask for any records beyond five years the SSO shall not ask for any records beyond five years the SSO shall not ask for any records beyond five years the SSO shall not ask for any records beyond five years from the employer.

The RO/SRO shall mark the Test inspections as per the instruction No.S-11/15/1/2010-Rev-II dt.14.03.2012 promptly and in such a ways that the TIO is able to complete the test inspection within the time limit of five years.

This instruction may be brought to the knowledge of all officers/officials concerned for strict compliance and any deviation from the above will be viewed seriously.

This issues with the approval of Insurance Commissioner (Rev.).

Yours faithfully

(MOHIT RAJA) DY. DIRECTOR(REV.)

VARIOUS STANDARDS FOLLOWED FOR CONSTRUCTION MATERIALS AND GREEN BUILDING CONCEPT



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Introduction

Shelter, along with food and clothing, is one of Man's three most necessities. Shelter protects people from the weather, shields them against wild animals and insects, and provides a place to rest. The first man-made shelter was made out of stones and tree branches. The stones were placed at the base of the structure to hold the branches in place. Other materials such as huge stone slabs, bones, and even animal hide were used to build the structures, which then provided much more stability, security, and comfort. Eventually, mud soil was taken from the ground and dried in the sun to form clay blocks, most important to the usage of bricks as the basic building block of shelters. Subsequently, man used varieties of artificially made, innovative construction materials that need to be standardised for enhanced quality and proper utilisation point of view. To quantify the properties and maintain quality, Indian Standards have been introduced in materials and construction methodology.

Various Standards Followed for Construction Materials

The standards for materials have been varying from time to time over a decade to account the variations and supply of large varieties of innovative materials to the market. They are ISI, BIS and ISO standards. **Indian Standards Institution (ISI)**

National standardization activity started in India during 1947 with the establishment of the ISI as a society under the Societies Registration Act 1860, to prepare and promote the adoption of national standards. In 1952, the Institution was also given the responsibility of operating a certification marking scheme under an Act of Parliament. ISI become an implementing body for the quality standards set by the Government of India. In 1986, the national authorities made a review of the structure and status of ISI and assessed the impact made on the national economic development & the technological growth of various sectors of Indian industry. The Government of India felt that a new thrust had to be given to standardization and quality control activities. A national strategy was evolved for giving appropriate recognition and importance to standards for integrating them with the growth & development of production and exports in different sectors. ISI bureau certifies the products for domestic consumer consumption with an 'ISI' mark. The ISI mark becomes mandatory at that time for certain products sold in India, for example, many of the electrical appliances like switches, electric motors, wiring cables, heaters, kitchen appliances, etc., and other products like Portland cement, LPG valves, LPG cylinders, automotive tyres, etc. However, most other products, ISI mark was optional.

Bureau of Indian Standards (BIS)

The socio-economic conditions had changed in the mid-1980, and need arose for a stronger body specifically dealing with national standards. The Government of India, therefore, decided to create a statutory organization as the national standards body which was named as the Bureau of Indian Standards (BIS), with adequate autonomy as well as flexibility in its operations to achieve harmonious development of the activities of standardization, certification marking and connected matters. The Bureau of Indian Standards Act was passed by the Parliament in 1986 and BIS came into existence on 1 April 1987. BIS has a list of products that affect the health & safety of consumers and products of mass consumption. BIS is authorized to use the ISI mark and offers the product certification, which was previously voluntary. The term "ISI mark" continues to be used as a symbol of assurance that certain products conform to the quality standards set by the government. BIS is suppose to check the reliability of the reports within a month and grant a license for usage of the ISI mark.

International Organization for Standardization (ISO)

ISO 9000 was first published in 1987 by the ISO, a specialized international agency for standardization composed of the national standards body of more than 160 countries. The standards underwent major revisions in 2000 and 2008. The most recent versions of the standard, ISO 9000:2015 and ISO 9001:2015, were published in September 2015. ISO 9000 is a set of international standards on quality management ³² Southern Builder

and quality assurance developed to help companies effectively document the quality system elements needed to maintain an efficient quality system. They are not specific to any one industry and can be applied to organizations of any size. ISO 9000 can help a company satisfy its customers, meet regulatory requirements, and achieve continual improvement. It should be considered to be a first step or the base level of a quality system.

The ISO 9000:2000 revision had five goals, they are:

Meet stakeholder needs; Be usable by all sizes of organizations; Be usable by all sectors; Be simple and clearly understood; Connect quality management system to business processes; ISO 9000:2000 was again updated in 2008 and 2015. ISO 9000:2015 is the most current version.

Principles of ISO 9000:2015 Quality Management standards are based on seven quality management principles which are shown in figure, that senior management can apply to promote organizational improvement. Many of the construction industry, company and manufacturers have obtained ISO certificate to help their product during export and implement better standards in their production process.

Green Building Concepts to improve the Standards of Construction Materials and Technologies What Makes a Building Green?



The concept of a green building was developed in the 1970s in the US in response to the energy crisis and people's growing concerns about the environment. The green building concept has been gaining importance in various countries. The concept ensures that waste is minimized at every stage during the construction and operation of the building, resulting in low costs due to specialized technology. Green buildings are designed to reduce the overall impact of the built environment on human health and natural environment by: Efficiently using energy, water, and other resources; protecting occupant's health and improving employee productivity; reducing waste, pollution and environment degradation.

A green building, also known as a sustainable building, means, a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Sustainable development is maintaining a delicate balance between the human need to improve lifestyles and feeling of well-being. It preserve natural resources and ecosystems, on which our future generations depend on green building complements by designing a building with concerns of economy, maximum utility, more durability, and maximum comfort. A green building is one which uses less water, optimizes energy efficiency, conserves natural resources, generates less waste and provides healthier space for occupants as compared to the conventional buildings.

Another meaning of green structure is to provide a clean environment, portable water, and healthy living. Building green structures is not only more efficiency, it is also about creating buildings that optimize the local ecology, use of local materials and most importantly they are built to cut power, water, and natural material requirements. Thus, if these things are kept in mind, then one can realize that our traditional architecture was very green. Today, many of us have forgotten that how to make natural and environment friendly building, instead of copying it from developed countries.



Philosophy Behind Green Architecture

Generally, the cost difference while raising a green building is approximately 5% to 10% more than a conventional building but the investor recovers costs within 3 years. Not only green buildings consume less energy to build but also reduce running costs of buildings by up to 35 - 40%. The energy requirements of some well-designed green buildings around the world are 15% lower than that of a conventional building. By preferring green building over the conventional building, it helps the earth to save nature as much as possible, retain the external environment at the location of the building, improve the internal environment for the occupants and preserve the environment at their location.

Green Building Certification

Green Building Rating System promotes the expansion of green practices and education around the world through the creation and implementation of universally understood performance criteria. Green building rating system adopted for developing high-performance, sustainable buildings and incorporates a holistic approach that integrates all phases of design, construction, and operation. Categories include building design and construction, interior design and construction, building operations and maintenance, neighbourhood development. Certification emphasizes state-of-the-art strategies and certifies buildings according to the sustainability of the site. It also concern about water efficiency, energy use and impact on the atmosphere, natural materials and sustainable resources, indoor environmental quality and innovative design.

India has been witnessing tremendous growth in infrastructure and construction development over two decades. The building sector in India has been growing at a rapid pace and contributing immensely to the growth of the economy. As the sector is growing rapidly, preserving the environment poses a host of challenges. There is an imminent need to introduce green concepts and techniques in construction sector, which can resolve national issues like water efficiency, energy efficiency, reduction in fossil fuel use for commuting, handling of consumer waste and conserving natural resources. Most importantly, these concepts are capable of enhancing occupant health, productivity, and well-being. The certification will encourages, builders, developers, owners, architects and consultants to design & construct green buildings, thereby enhancing the economical and environmental performance of buildings.

All the green building rating system addresses green features under the categories of: Sustainable Architecture and design; Site selection and planning; Water conservation; Energy efficiency; Handling of consumer waste; Use of Renewable energy; Sustainable building materials and resources; Use of recycled & reused materials; Indoor environmental quality; Health and well-being of occupants; Innovation and development. The rating system awards marks and categorise based on the marks obtained for healthy competition and steady improvements. LEED, GRIHA, and IGBC are the rating systems adopted in India.

Leadership in Energy and Environmental Design (LEED) Green Building Rating System

LEED with platinum certification is the highest level of the US Green Building Council's rating system, was introduced in 2000. The council is a non-profit organization that certifies environmentally sustainable businesses, homes, hospitals, schools, and neighbourhoods through their LEED rating system. LEED promotes the expansion of green practices and education around the world through the creation and implementation of universally understood performance criteria. LEED is a voluntary, consensus-based rating system for developing high-performance, sustainable buildings by integrating all phases of design, construction, and operation. LEED certifies buildings according to the sustainability of the site, water efficiency, energy use and impact on the atmosphere, materials and resources, indoor environmental quality, and innovation and design.

LEED Certification Categories are: Certified : 26-32 points; Silver : 33-38 points; Gold : 39-51 points; Platinum: 52-69 points.

Green Rating for Integrated Habitat Building (GRIHA) Green Building Rating System

Internationally, voluntary building rating systems have been instrumental in raising awareness and popularizing green design concept. However, most of the internationally devised rating systems have been tailored to suit the building industry of the country where they were developed. In India, a US-based LEED rating system was under promotion by CII Green Business Centre, Hyderabad which was more on energy efficiency measures in AC buildings. Keeping in view of the Indian agro-climatic conditions and in particular, the predominance of non-AC buildings, a National Rating System - GRIHA was developed to suit for all kinds of building in different climatic zones of the country.

GRIHA system was initially conceived and developed by TERI (The Energy & Resource Institute) as TERI-GRIHA which has been modified by GRIHA in 2007 as National Rating System after incorporating various modifications suggested by a group of architects and experts with initiation by Ministry of New & Renewable Energy Government of India, It takes into account the provisions of the National Building Code 2005, the Energy Conservation Building Code 2007 announced by BEE and other IS codes, local bye-laws, other local standards, and laws. The system, by its qualitative and quantitative assessment criteria, would be able to 'rate' a building on the degree of its 'greenness'. The rating would be applied to new and existing building stock of varied functions for commercial, institutional, and residential buildings.

GRIHA Project Ratings stars are: 25-30 : *; 31-35 : **; 36-40 : ***; 41-45 : ****; 46-50 : *****.

Indian Green Building Council (IGBC) Green Building Rating System

IGBC had set up the Green Buildings Core Committee under the leadership of Ar. Raghavendran, to develop the rating program and launched it in 2008. This committee comprised of key stakeholders, including architects, builders, consultants, developers, owners, institutions, manufacturers, and industry representatives. The committee, with a diverse background and knowledge, has enriched the rating system, both in its content and process.

IGBC continuously works to provide tools that facilitate the adoption of green building practices in India. The development of the IGBC Green Buildings rating system is another important step in this direction. Against this background, the Indian Green Building Council has launched 'IGBC Green New Buildings rating system® to address the national priorities. This rating program is a tool that enables the designer to apply green concepts and reduce measurable environmental impacts. The rating program covers methodologies to cover diverse climatic zones and changing lifestyles.

The Green Building Movement in India has been spearheaded by IGBC since 2001, by creating awareness amongst the stakeholders. So far, the Council has been instrumental in enabling 2.23 billion sqft area of green buildings in our country. The Council's activities have enabled a market transformation concerning green building materials and technologies. To enable the construction industry to become environmentally sensitive, CII-Sohrabji Godrej Green Business Centre has been established by the Indian Green Building Council (IGBC) which is a successful example of a green building. IGBC, is a consensus-driven not-for-profit Council, represents the building industry, consisting of more than 1,923 committed members.

IGBC Certification Categories are: Certified: 50 - 59 points; Silver: 60 - 69 points; Gold: 70 - 79 points; Platinum: 80 - 89 points; Super Platinum: 90 - 100 points.

Discussion on Sources of Energy Relevant to Green Building Concept

Energy resources are broadly classified as: Conventional and Non-conventional sources of energy. Conventional sources of energy are not present in the environment in abundance; however, their uses are unlimited. On the contrary, non-conventional energy sources are the sources present naturally in the environment in large quantities but are used for limited purposes only.

Conventional Sources of Energy. Conventional sources of energy are the natural energy resources that are regularly used for many years and are accepted as fuel to produce heat, light, food, and electricity. The energy sources include firewood, fossil fuels, cow dung cake, etc. Out of these sources, fossil fuel is the greatest conventional source, wherein fossil implies the remains of plants and animals that got buried under the earth and transformed into rocks over the years. These fossil fuels are coal, oil (petroleum) and natural gas. Conventional sources of energy are generally non-renewable sources of energy as the accumulation or creation of conventional sources of energy takes years, once they are exploited or consumed. As these sources are used on a large scale, the reserves have been depleted, and their alternative is hard to find.

Non-Conventional Sources of Energy

An alternative to conventional sources of energy is the non-conventional sources of energy, that gaining popularity in recent years, after the oil crisis in 1973 and since then they are in use on a large scale. The energy can be obtained from various sources such as the sun, wind, biological wastes, hot springs, tides, etc, to generate heat and power. These are not only renewable sources of energy but are also pollution-free. These sources are present in abundance in nature, they are constantly generated, it cannot be exhausted easily, and used again and again.



Conventional Sources of Energy

These sources of energy are also known as non-renewable sources of energy and are available in limited quantity apart from hydro-electric power. Further, it can be classified under commercial and non-commercial energy.

Commercial Energy Sources

The coal, electricity, and petroleum are known as commercial energy since the consumer needs to pay its price to buy them. (a) Coal: Coal is the most important source of energy. India is the fourth-largest coalproducing country and the deposits are mostly found in Bihar, Orissa, Madhya Pradesh, and Bengal. (b) Oil and Natural Gas: Today oil is considered to be the liquid gold and one of the crucial sources of energy in India and the world. Oil is mostly used in planes, automobiles, trains, and ships. (c) Electricity: Electricity is a common source of energy and used for domestic and commercial purposes. The electricity is mainly utilized in electrical appliances like Fridge, T.V, washing machine and air conditioning. The major sources of power generation are: Nuclear power, Thermal power, and Hydro-electric power.

Non-Commercial Energy Sources:

Generally, the freely available energy sources are considered as the non-commercial energy sources. The examples of non-commercial energy sources are: straw, dried dung, firewood, etc. In the coming years, there would be a shortage of firewood. Agricultural wastes like straw are used as fuel for cooking purposes. Besides conventional sources of energy, there are non-conventional sources of energy. These are also called renewable sources of energy. Examples are: Bio-energy, solar energy, wind energy, and tidal energy. Government of India has established a separate department under the Ministry of Energy called as the Department of Non-conventional Energy Sources for the effective exploitation of non-conventional energy. The various Non-Commercial energy sources are: (a) Solar Energy: Energy produced through the sunlight is called solar energy. Solar photovoltaic cells are exposed to sunlight and output in the form of electricity is produced. The energy is utilized for cooking and distillation of water. Photovoltaic cells are those which convert sunlight energy into electricity. (b) Wind Energy: Energy can be produced by harnessing wind power. This kind of energy is generated by harnessing the power of wind and mostly used in operating water pumps for irrigation purposes. India stands as the second-largest country in the generation of wind power. (c) Bio-Energy: This type of energy is obtained from organic matter. It is of two kinds: (i) Bio-Gas: Bio Gas is obtained from Gobar gas plant by putting cow dung or other organic wastes into the plant. (ii) Bio-Mass: It is also a source of producing energy through plants and trees. The purpose of the biomass program is to encourage afforestation for energy. (d) Energy from Urban Waste: Urban waste poses a big problem for its disposal. According to the Ministry of New and Renewable Energy (MNRE), there exists a potential of about 1700 MW from urban waste (1500 from MSW and 225 MW from sewage) and about 1300 MW from industrial waste. Waste to energy projects will help in taping this potential energy source.

Sustainable Energies for Green Building

Sustainable energy is a form of energy that meet our today's demand for energy without putting them in danger of getting expired or depleted and can be used over and over again. All renewable energy sources like solar, wind, geothermal, hydropower and ocean energy, are sustainable energy, as they are stable and available in plenty. Sun will continue to provide sunlight on earth, heat caused by sun will continue to produce winds, earth will continue to produce heat from inside, and rain will go through rivers or streams and merge in the oceans and used to produce energy through hydropower. This clearly states that all these renewable energy sources are sustainable and will continue to provide energy to the coming generations. There are many forms of sustainable energy sources that are replenishable, helps us to reduce greenhouse gas emissions and cause less damage to the environment.

Need for Sustainable Energy

During ancient times, wood, timber, and waste products were the only major energy sources. In short, biomass was the only way to get energy. When more technology was developed, fossil fuels like coal, oil and natural gas were discovered. Fossil fuels proved boon to mankind as they were widely available and could be harnessed easily. When these fossil fuels were started using extensively by all the countries across the globe, they led to the degradation of the environment. Coal and oil are two of the major sources that produce a large amount of carbon dioxide in the air. This led to increasing in global warming. Therefore, a need arises to generate sustainable energy.

Types of Sustainable Energy

Sustainable energy is not just a part of renewable energy sources, they are also the sources of energy that can be used to power homes and industries without any harmful effects being experienced. This is the sole reason why many people advise the use of these forms of energy in everyday life, because its effects on the environment are purely beneficial. Solar Energy, Wind Energy, Geothermal Energy, Ocean Energy, Biomass Energy, and Hydroelectric Power are the examples of sustainable energies.

What is next for Improve the Standards of Construction Materials and Technologies Biomimicry in Construction Industry

Biomimicry is the science and art of imitating nature's best biological ideas to solve human problems. Bio means life, Mimic means copy or imitate, ie. copy the nature. It is a new discipline that studies nature's best ideas and then imitates these designs and processes to solve human problems. The practice of developing sustainable human technologies inspired by nature, Sometimes called Bio-mimetic or Bionics, it's basically biologically inspired engineering.

Humans may have a long way to go towards living sustainably on this planet, but 10-30 million species with time-tested genius have figured it out and one can learn a few things from them. Biological materials are highly organized from the molecular to the nano-scale, micro-scale and macro-scale. Nature uses commonly found materials, structures and principles of various objects found in nature can be copied by Engineers and Scientists.

The human heart is the best pump and human lung is the best filter, many such examples can be sited. Naturally available materials are degradable, does not produce waste, consume sustainable energy and it is considered as the next level to green building concept. Biomimicry is getting popular and many researchers and scientists are working on these principles for developing sustainable materials and new methodologies in all the fields including in construction.

Conclusion

Numerous materials are developed all over the world. There is a need to regulate, identify superior materials, standardise these materials to reduce environmental impact and make it sustainable/ replenishable for preservation of our earth planet. The government needs to work with multiple agencies to bring out workable standards for common man to practice/ adopt and manufacturer to produce materials without any barrier, which are made available at less cost in the market.



தலை சிறந்த கல்வி முறை

றைலகில் தலை சிறந்த கல்வியில் பின்லாந்து முதல் இடத்தில் உள்ளது அப்படி என்னதான் இருக்கிறது பின்லாந்து கல்வி முறையில்?

பின்லாந்தில் ஏழு வயதில்தான் ஒரு குழந்தை பள்ளிக்குச் செல்லத் தொடங்குகிறது. ஒன்றரை வயதில் ப்ளே ஸ்சுல், இரண்டரை வயதில் Pre KG மூன்று வயதில் எல்.கே.ஜி நான்கு வயதில் யு.கே.ஜி என்ற சித்ரவதை அங்கே இல்லை.

எல்லா நேரமும் கற்றலுக்கான துடிப்புடன் இயங்கும் குழந்தையின் சின்னஞ்சிறு மூளை தனது சுற்றத்தின் ஒவ்வோா் அசைவில் இருந்தும் ஒவ்வோா் ஒலியில் இருந்தும் கற்கிறது. இலை உதிாவதும் செடி துளிாப்பதும், இசை ஒலிப்பதும், பறவை பறப்பதும் குழந்தைக்குக் கல்விதான். இவற்றிலிருந்து வேரோடு பிடுங்கி வகுப்பறைக்குள் நடுவதால், அறிவு அதிவேக வளா்ச்சி அடையும் என எண்ணுவது மூட நம்பிக்கை.

ஏழு வயதில் பள்ளிக்குச் செல்லும் பின்லாந்து குழந்தை, அடுத்த மூன்று ஆண்டுகளுக்கு கிட்டத்தட்ட ஆண்டின் பாதி நாட்கள்தான் பள்ளிக்கூடம் செல்கிறது. மீதி நாட்கள் விடுமுறை. ஒவ்வொரு நாளும் பள்ளி இயங்கும் நேரமும் குறைவுதான். அந்த நேரத்திலும்கூட, படிப்புக்குக் கொடுக்கப்படும் அதே முக்கியத்துவம் இசை, ஓவியம், விளையாட்டு மற்றும் பிற கலைகளுக்கும் முக்கியத்துவம் உண்டு. ஒவ்வொரு பள்ளியிலும் ஓள் ஒய்வறை இருக்கும். படிக்கப் பிடிக்கவில்லை அல்லது சோர்வாக இருக்கிறது என்றால் மாணவர்கள் அங்கு சென்று ஓய்வு எடுக்கலாம். முக்கியமாக 13 வயது வரை ரேங்கிங் என்ற தரம் பிரிக்கும் கலாசாரம் கிடையாது. பிராக்ரசு ரிப்போர் தந்து பெற்றோரிடம் கையெழுத்து வாங்கி வரச் சொல்லும் வன்முறை கிடையாது. தங்கள் பிள்ளையின் கற்றல் திறன் குறித்து தெரிந்து கொள்ள வேண்டும் என பெற்றோர்கள் விரும்பினால் தனிப்பட்ட முறையில் விண்ணப்பித்துப் பெற்றுக் கொள்ளலாம்.

கற்றலில் போட்டி கிடையாது என்பதால் தோவுகளில் அதிக மதிப்பெண் எடுக்கும் மன உளைச்சல்கள் மாணவா்களுக்கு இல்லை. சக மாணவா்களைப் போட்டியாளா்களாகக் கருதும் மனப்பாங்கும் இல்லை. இவா்களுக்கு வீட்டு பாடம் தரப்படுவதும் இல்லை. மாணவா்கள் எந்தப் பாடம் பிடிக்கிறதோ அதில் இருந்து அவா்களே வீட்டுப் பாடம் செய்து வரலாம்.

ஒவ்வொரு பள்ளியிலும் ஒரு மருத்துவா் இருப்பாா். அவா் மாணவா்களின் உடல்நிலையை தனிப்பட்ட முறையில் கவனித்து ஆலோசனைகள் வழங்குவாா். ஒரு பள்ளியில் அதிகபட்சமாக 600 மாணவா்கள் இருக்கலாம். அதற்கு அதிக எண்ணிக்கை கூடவே கூடாது. முக்கியமாக பின்லாந்தில் தனியாா் பள்ளிக்கூடமே கிடையாது. அங்கு கல்வி என்பது முழுக்க முழுக்க அரசின் வசம். கோடீசுவரராக இருந்தாலும் நடுத்தர வாக்கத்தினராக இருந்தாலும், ஏழையாக இருந்தாலும் அனைவரின் குழந்தைகளும் ஒரே பள்ளியில்தான் படிக்க வேண்டும். அனைவருக்கும் சம தரமுள்ள கல்வி என்ற உத்தரவாதம் உள்ளது. அதனால் பின்லாந்தில் 99 சதவிகிதம் குழந்தைகள் ஆரம்பக் கல்வியைப் பெற்று விடுகின்றனா். அதில் 94 சதவிகிதம் போ உயா்கல்விக்குச் செல்கின்றனா். டியூஷன் என்ற அருவருப்பான கலாச்சாரம் அந்த நாட்டுக்கு அறிமுகமே இல்லை.

தேர்வுகளை அடிப்படை முறைகளாக இல்லாத இந்தக் கல்வி முறையில் பயின்று வரும் மாணவர்கள்தான் உலகளாவிய அளவில் நடைபெறும் பல்வேறு தேர்வுகளில் முதல் இடங்களைப் பிடிக்கின்றனர். இது எப்படி என்பது கல்வி செயலாளர்களுக்கே புரியாத புதிர். அந்தப் புதிருக்கான விடையை ஐ,நா சபையின் ஆய்வு முடிவு அவிழ்த்தது.

உலகிலேயே மகிழ்ச்சியாக இருக்கும் குழந்தைகள் பற்றிய தரவரிசை ஆய்வு ஒந்னறை ஐக்கிய நாடுகள் சபை ஒவ்வோா் ஆண்டும் வெளியிடுகிறது. இதில் பின்லாந்து எப்போதும் முன்னணியில் இருக்கிறது. மகிழ்ச்சியின் நறுமணத்தில் திளைக்கும் குழந்தைகள், அறிவை ஆா்வத்துடன் சுவைப்பதில் புதிா் எதுவும் இல்லை.

பின்லாந்து கல்வி முறையின் இத்தகைய சிறப்புகள் குறித்து அறிந்து வருவதற்காக உலகமெங்கும் உள்ள கல்வியாளாகளும், பிரதிநிதிகளும் அந்த நாட்டை நோக்கி குவிகின்றனா். உலகின் 56 நாடுகளில் இருந்து 15000 பிரதிநிதிகள் ஒவ்வோா் ஆண்டும் செல்கின்றனா். நாட்டின் அந்நியச் சேலாவணியில் கணிசமான சதவிகிதம் கல்விச் சுற்றுலாவின் மூலமே வருகிறது. ஆனால் இப்படி தங்களை நோக்கி வீசப்படும் புகழ்மாலைகளை பின்லாந்தின் கல்வியாளா்களும் அமைச்சா்களும் ஒடோடி வந்து எந்திக் கொள்வது இல்லை. அதற்கு அவர்கள் சொல்லும் காரணம் ''பின்லாந்து கல்வி முறைதான் உலகிலேயே சிறந்தது எனச் சொல்ல முடியாது. ஏனெனில் OCED அமைப்பின் ஆய்வில் எல்லா உலக நாடுகளும் பங்கேற்காத நிலையில் இப்படி ஒரு முடிவை ஏற்றுக் கொள்ள முடியாது. எங்களை விட சிறந்த கல்வி முறையும் இருக்க வாய்ப்பு உள்ளது என்கிறார்கள்.

பின்லாந்தில் ஆசிரியா் பணி என்பது நம் ஊா் ஐ.ஏ.எஸ்., ஐ.பி.எஸ் போன்ற மிகுந்த சமூகக் கவுரவும் உடையது. அரசின் கொள்கை வகுக்கும் முடிவுகளில் திட்டங்களின் செயலாக்கத்தில் ஆசிரியா்களுக்கு முக்கிய பங்கு உண்டு. மூன்றில் ஒரு பின்லாந்து குழந்தைக்கு ஆசிரியா் ஆவதுதான் தன் வாழ்நாள் லட்சியம். அதே நேரம் அங்கு ஆசிரியா் ஆவது அத்தனை சுலபம் அல்ல. மேல்நிலை வகுப்பில் சிறந்து விளங்கும் மாணவா்களில் இருந்து ஆசிரியா் பயிற்சிக்கு மாணவா்கள் தோவு செய்யப்படுகின்றனா். ஐந்து ஆண்டுகள் உண்டு. உறைவிடப் பள்ளிகளில் சோந்து பயிற்சி எடுக்க வேண்டும். பிறகு ஆறு மாத காலம் ராணுவப் பயிற்சி. ஒரு வருடத்திற்கு வெவ்வேறு பள்ளிகளில் நேரடியாக வகுப்பறையில் ஆசிரியா் பயிற்சி.. ஏதாவது ஒரு பாடத்தில் புராஜெக்ட். குழந்தை உரிமைப் பயிலரங்கங்களில் பங்கேற்பது. நாட்டின் சட்ட திட்டங்கள் குறித்த தெளிவுக்காக தேசிய அமைப்புகளிடம் இருந்து சான்றிதழ். தீயணைப்பு தற்காப்புப் பயிற்சி, முதலுதவி செய்வதற்கான மருத்துவச் சான்று என ஆசிரியா் பயிற்சிக்கு சுமாா் ஏழு வருடங்களைச் செலவிட வேண்டும். இப்படி ஆசிரியா்களை உருவாக்கும் விதத்தில் பின்லாந்து மேற்கொள்ளும் சமரசம் இல்லாத முயற்சிகள்தான். அங்கு கல்வியில் மாபெரும் மறுமலா்ச்சியை உருவாக்கி இருக்கிறது.

குழந்தைகள் வளாப்பில் நாம் தான் கற்றுக் கொள்ள வேண்டியது அதிகம் இருக்கிறது. முதலில் பிள்ளைகளக்கு நல்ல சிந்தனைகளை ஏற்படுத்துங்கள். ஒரு குழந்தையைவிட நாம் உயாத்வா் என்று நினைக்காதீாகள். பிள்ளைகள் ஏதாவது செய்தால் எப்போதும் குறை கூறுதல் அவாகள் பாராட்டும்படி செய்தாலும் கண்டு கொள்ளாதிருத்தல் போன்ற் செயல்களை பலா் செய்கிறாாகள். இதனால் பிள்ளைகளின் மன வளாச்சி குன்றும். எந்தக் குழந்தையும் பின்னால் எப்படி ஆகுமென எவருமே கூற முடியாது. மூடன் அறிவாளியாகலாம், பைத்தியம் தெளிந்த சித்தமுடையவனாகலாம். ஆகவே பிள்ளைகளை ஒரு காலமும் அலட்சியம் செய்யக்கூடாது.

தாமஸ் ஆல்வா எடிசனை மரமண்டை என்று பாடசாலையில் இருந்து வெளியேற்றப்பட்டவா் பின்னாளில் ஆயிரம் கண்டுபிடிப்புகளுக்கு அவரே அதிபதி. லுயி பாஸ்டியன் சராசரி மாணவனாக பாட சாலையில் இருந்தவா் பின்னாளில் நோபல் பரிசு வாங்கினாா். ஆல்பா்ட் ஜன்ஸ்டைனை அவா் ஆசிரியா் இவனை போன்ற மூளை அழுகிய மாணவனை நான் பாா்த்ததே இல்லை என்றாா். ஆனால் அவரே 20ம் நூற்றாண்டின் அதி சிறந்த விஞ்ஞானியானாா்.

குழந்தைகளடன் ஒரு நாளில் சிறிது நேரமாவது பேசுங்கள், நல்லதைப் பேசுங்கள் கனிவுடன் பேசுங்கள். அவர்கள் குறைகளைப் பற்றி அதிக நேரம் பேசாதீாகள் நிறைகளை பற்றிப் பேசுங்கள். பிள்ளைகளுடன் யாரையும் ஒப்பிட்டு பேசாதீாகள். அவன் அவனே நீங்கள் நீங்களே நீங்களே முன்னுதாரணமாக இருங்கள். உங்களை பார்த்து அவர்கள் கற்றுக் கொள்வார்கள். வாழ்வில் வெற்றிபெற்றவரைப் பற்றி பேசுங்கள் ஒவ்வொரு துறையிலும் சிறந்தவர்களைப்பற்றி பேசுங்கள்.

பிள்ளைகளுக்கு வீட்டுக்குள் விலங்கிடாதீா்கள். வீடு ஒரு சிறைந்சசாலைக் கூடமல்ல. மனிதா்களை தோற்றுவிக்கும் கோயில். நல்ல மேற்கோள்களைக் கொடுங்கள். சுதந்திரம் கொடுத்து வழிக்கு கொண்டு வாருங்கள். மலா தூவியுள்ள பாதையைப்பற்றி பிள்ளைகளுக்கு சொன்னால் அவா்கள் முள் நிறைந்த பாதையை புரிந்து கொள்வாா்கள். உழைப்பைப் பற்றி சொல்லிக் கொடுங்கள் அவா்கள் உழைப்பில்லாத கேடுகளை புரிந்து கொள்வாா்கள். வெற்றி பெற்றவா்களை சொல்லும் போது தோல்வியின் காரணங்களை அவன் அறிந்து கொள்வான். சுறுசுறுப்பை சொல்லிக் கொடுத்தால் அவன் சோம்பலை அடையாளம் காண்பான். விதியை வென்றவா்களை சொல்லும்போது அவன் வேதனையின் நொந்து அழிந்தவா்களை கண்டு கொள்வான் இது போதும்.

முதலில் நாம் மாற வேண்டும். மனம் இருந்தால் மாா்க்கம் உண்டு. மாற்றம் ஒன்றே மாறாதது. நல்ல மாற்றம் தான் வளா்ச்சியை தரும்.

பின்லாந்தின் கல்வி முறையிலிருந்து நாம் கற்றுக் கொண்டு மாறுவோம் ! குழந்தைகளின் எதிாகாலத்தைப் சிறப்பாக மாற்றுவோம்.

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	LDERS' ASSOCIA	ATION (OF INDIA on Contractors)
	Southern Centre	Estd : 19	50
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To The Secretary, BAI - Head Office G-1/G-20, 7 th Floor, Commerce Cer J. Dadajee Road, Tardeo MUMBAI – 400 034 Ph : 022-2352 0507 / 2351 4802 Website : www.baionline.in	ntre	Through The Hoi BAI - So "Casa Bl Egmore, Phone : Web : w E-mail :	norary Secretary, uthern Centre anca", 2nd Floor,11, Casa Major Road, Chennai - 600 008. 044-28192006,28191874 ww.baisouthern.com baisouthern1950@gmail.com / baisouthern@yahoo.com
Dear Sir,			
Please enroll my/our na	me (s) PATRON / RENEWAL	Member of	Builders' Association of India. I/We
am/are connected with the Build	ding Profession / Trade / Const	ruction indus	stry as (please tick relevant box/s)
Civil Construction Contractors	Real Estate Developer / Pro	omoter	Registered With
	Architect/Engineer		Central PWD
Plumbing			State PWD
Fabrication	Demolition		MES
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U Water Proofing	Dealers/Hirers		Other State/Central Govt.Dept.(specify)
Interior decorator	Engineering College/Polyte	echnics	
Repairs/Maintenance	any other (specify)		
			any other (specify)
I /we specialise in			
I/We have read the Rules and Reg	ulations of your Association and a	agree to abide	by the same. Please find herewith sum of
) by Cash/Cheq	ue/Demand	Draft No Dated
drawn c	אר	_ in favour o	f "BUILDERS ASSOCIATION OF INDIA"
towards the membership subscrip	ption.		
			Yours faithfully, (For & On Behalf of)
Date :	(To be signed by Proprietor	/ Partner / Dir	ector of Attorney / Authorised Signatory)

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2. Give names in case of partnership firm/ Ltd Company /Institution and indicate against each whether Partner / Director / Executive attorney	Name of the Person who will attend and vote at the meeting with residence address and contact numbers
a)	a)
b)	b)
c)	c)
d)	d)

		Res / Address. & Tele. No	
		PROPOSED BY	
		SECONDED BY	
APPLICATION IN ORDER : FEES	RECEIVED Rs	Receipt No	
Date	Accepted by t	he Managing Committee at its meeting h	ield on
at			
SECRETARY'S NOTING			SECRETARY
The Membership fees			
The Patron Membership fees	Rs.29,700/- (Inclusive	e of GST @18%)	
Renewal Membership fees	Rs.3627/- (Inclusive	of GST @18%)	
Annual Membership fees	Rs.3745/- (Inclusive	of GST @18%)	
Cheque May drawn in favour of I	BUILDERS ASSOCIATION	N OF INDIA.	

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M/s. J.M. Construction Mr. G. Jamil Ahmed 11/7. 1st Main Road Sabari Nagar Porur Chennai - 600 116 Mob: 9841222642

Media Focus





Rules. thile, civic body had is-spletion certificates for blings in the last three

implemented in under the CMI 4, 2019. But the mind for ann

New office bearers selected at BAI

At the general body meeting of India (BAI) held this week, L. Shanthakumar of Sagas Constructions was elected as the Chairman of BAI (Southern Centre) for the year 2020-21. Kumar was the Lions District Governor (Dist. 324A1) between 2006 and 2007. Other office bearers include R.R. Shridhar as Vice Chairman, A.N. Balaji as Secretary, R. Nimrode as loint Secretary and N.G. Lokanathan as Treasurer.



வரன்முறைத் திட்டத்தில் 6-வது முறையாக கால அவகாசம்

விதிமீறல் கட்டிடங்களுக்கு நிலையான கட்டுப்பாடுகளை விதிக்குமா தமிழக அரசு

a A.s.Comois

கட்டிடங்களுக்கான வரன் முறைப்படுத்தும் நிடத்தில் போறிப் விண்ணப்பங்கள் வரத தாலும், நீதிமன்ற தடைபணுமே தொ.ரந்து விண்ணப்பங்கள் வரு வதற்கான கலக்கேற் தீடிக்கப் பட்டுக்குவதாக கப் தென்றத்து நோம் இதுப்படுற்றது. அதே நோம், நீதிமன்ற தடை உத்தரவை தனினைப்பிக்க வாம்ப்புள்ளதாக கரைப்புதேது. விதியீறல் கட்டிடங்க விற்றேல் கட்டிடங்களை வரன் (முறைப்படுத்துகதற்கான காலக் கேடு 6-வது முறைபாக நீட்டிக்கப் பட்டுள்ள நிலையில், நிறன்பு அரு குறைபால் கிற்பல்ற தன, கைப குறைபால் கிற்பல்ற தன, கைப திகி, நிலையான உடுப்புறிகளை குறக விறக்க வேண்டும் என்ற கோரிக்கை வழந்துள்ளது. தமிறகத்தில் விறகண்டு

கூறப்படுகிறது. இதுகுறித்து, அலை இந்திய ப்புனர்கள் பிற்றைய கட்டுவர்கள் இலன்னை வைப்தின் தலைவர் எஸ்.ராம்பிரபு, கரும் போது, "விதிற்கல் கட்டிடங்களை வரன் முறைப்படுத்த இத்தான்டு தூன் 12-ம் தேதி வரை காலக் கேடு நிடங்கள்பட்டுள்ளது. கட்டிட வரன்முறை நிட்டத்தை பொழுத்த வரை, நீதியன்றம் தடை விதிதுள் எது, கதாவத் கட்டிட வரன்முறை கலாக கண்களத்து ஒருப்கு பகுத்த, நீப்பி ராதேல்கரை தலைகளையில் குழுகின பரிந்துரை கண்கையில் குழுதின் பரிந்துரை கண்கை புறிய விதிருறைகளை நற்று கருள் வருத்தது திருக்கா, 2007-ம் ஆண்டுக்கு முன் வீதி பரிக் கார்ப்பாட் கட்டிடங்களை வரன்புறைக்கட்டனத்து முன் வீதி இணைபதனை மூலம் செலுந்தி வேள்ளைப்கே வேன்றைக் கட்டனந்தை கணக்கிட்டு, 6 மாதத்துக்கு இணைபதன் மூலம் செலுந்தி வேள்ளைப்சிக வேன்றும் எழுத்து இணைபதன் மூலம் செலுந்து வேள்ளைப்சிக வேன்றும் என்று இணைபதன் இணைபதன் துறைக்குப்படது. இதன்றில் சம்பதில், சுவது மறையாக இற்றாம்பிடி தால் 21-ம் தேதி வரை படிகுத்வைதன் கல்லாற நடிக்கப்பட்டுள்ளது. வரன் (இடங்கள்) தன. (அந்ததுள் வரை, (இடன்றத் தன. (அந்ததுள் எது . அவாவது, கட்டிட வரன்முறை குறித்த சிபான வீதிகளையும், விளங்கும் அப்பான வீதிகளையும், விள்கைப்பான் பொரை தே எந்த உத்தரவைடில் பிற்பில் கல்கூடாது மன்று தெரிலித்துள்ளது. இத்த விவனைத்தை பொறுத்த வரன், நற்து அரசு மனைக்கு வரன் (மறைத் திட்டத்துக்கு நில்கை வரன் (மற்றது அடைவட்டிற்தி கால் அரசுமினைற்றை கட்டிட வீறி கோல் அரசுமினைறை வரை கேரு இன்றிலை வருதிதுக்கு பிற்கது கட்டிடல்கள் வரது வன்பதற்தான க. குறியை அளிது எதிற்றை கட்டி

யில் இரண்டரை

சென்னையில் இரன்பனர லட்சம் கட்பட கழிப்பைற் பூரையதற் 3 லட் ரத்தந்தைம் அதிகமான கட்டிடங் களை வரல்பதைப்படுத்த முடி யும்" என்றா?. அதே தேரம், சட்டத்தில் மூலம் திலையான கட்டுப்பாற்களை விதில் தேலைக்கும் வைக்கட்பது தொல் இதலத்தது. வீடு மற்றும் அருக்குமாவு கட்டுவேர் சங்கம் கன்க்கட் பாலப்புறைநிலதாலைற் பேனிரங்கர் கூறுப்போது, "முன் தைரக, கடந்த 2001-ல் மற்றும் பேணிசங்கர் கூறுமலாகு கதாக, கடந்த 2006-11 காலங்களிலும் இரது வீதி மேல் பாஸங்களிலும் இரது வீதி முல் கட்டிபங்கள் கழிமுகப் படுத்தம் நட்டங்கள் கழிமுகப் படுத்தப்பட்டு, காலக்கேடு குலப்படது திட்டிக்கப்பட்டது குப்பாது கிதிமூல் கட்டிட தரி கையயானர்கள் வரன்முறைக்கு ாளர்கள் ஸாபித்து,

ல், அப்போ infiliar -2000-ib ஆனால், அப்போது (நிலகரும்) 2000-ம் ஆண்டுக்கு முன்னத் கட்டிடம் கட்டி முடிக்கப்பட்டிகள் வேன்டும் மில் இலையப்பு உள் ளிட்டவை பெற்றிருக்க வேண்டும் வரும் மற்றிருக்கு வேண்டும் வரும் பற்றிருக்கு வேண்டும் தல் பில் வருக்கு வில் வரும் பற்றிருக் வரல்புறைப்பத் தேம் இட்டம் வெண்டுறைப்பத் தின்று பின்டும் வரல்புறைப்பத் குற்றது. இதில் குரிவகைவேணம் பிரை பலைப்பிட தி. ராள்கும் மதல் ஏற்றகைகைப் பண்டி கட்டிய யாரும் புதிய திட்டத்தில் பணம் செலுத்தவில்லை. எனவே, விதியீறல் இனி தொடரக்கூடாது என்பதற்கான நிலையான கட்டுப் பாடுகள் விதிக்கப்பட வேண்டும்"

Remove ceiling on housing loan I-T rebate: BAI

CHENNAI: The Builders' Association of India (BAI) has urged the central government to remove the present ceiling of Rs 2 lakh on providing income tax rebate for housing loan interest.

In his petition to Union Finance Minister Nirmala Sitharaman, S Ramaprabhu, chairman of BAI (southern centre), said that presently an individual

could claim a tax deduction of the interest payment on the housing loan up to a maximum amount of Rs 2 lakh against the actual interest component. 'We request the FM to consider removing this ceiling of Rs 2 lakh," he wrote.

Pointing out that the banks are reluctant to fund real estate project, Ramaprabhu urged the government to issue clear guidelines and criteria to banks. "Under the Affordable Housing Scheme, people with low income are offered houses at cheaper prices. To boost the economically downtrodden, we request to waive the stamp duty. Also, the government should allow claiming Input Credit for the GST," the representation said.

The representation urges the Finance Minister to reduce the rate for infrastructure projects of government civil engineering contractors from existing 12 per cent to 9 per cent. "GST rates for private contracts is currently 18 per cent. Since the construction industry is the key driver for the economic growth of the country, reduce the rate for private projects to 12 per cent."

ான தடைபையும் நீக்க அவ்வாறு செய்தால்,

While demanding to reduce the interest rate for housing loans, the Association also sought Finance Minister's appointment SO that the demands could be clarified in person.

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SOUTHERN CENTRE ACTIVITIES

03.01.2020 – 05.01.2020 அகில இந்திய மாநாடு

29வது அகில இந்திய மாநாடு மற்றும் அகில இந்திய மேலாண்மை மற்றும் பொதுக்குழு கூட்டம் கொல்கத்தாவில் நடைபெற்றது. அகில இந்திய மாநாட்டை தலைமை தாங்கி நடத்துவதற்கு நமது மரியாதைக்குரிய அகில இந்திய முன்னாள் தலைவா் திரு. R. இராதாகிருட்டிணன் அவா்களுக்கு கோரிக்கை வைக்கப்ப்பட்டது. அந்த கோரிக்கையை ஏற்றுக் கொண்டு மூன்று நாட்கள் மாநாட்டை எவ்வித இடையூறு இல்லாமல் செவ்வனே நடத்தி வைத்தாா். தென்னக மய்யத்திலிருந்து 25 பேருக்கு மேல் கலந்து கொண்டனா். மேலாண்மை மற்றும் பொதுக்குழு கூட்டத்தில் தென்னக மய்யத்திற்கு "Overall Best Centre". "Best Publication" மற்றும் "Best State Chairman" என மூன்று விருதுகள் வழங்கப்பட்டது.

06.01.2020 சிறப்பு செயற்குழு கூட்டம்

தென்னக மய்ய அலுவலகத்தில் 06.01.2020 அன்று செயற்குழு உறுப்பினா்களுக்கான சிறப்புக் கூட்டம் நடைபெற்றது. அக்கூட்டத்தில் தோதல் அதிகாரியாக திரு. O.K. செல்வராஜ் அவா்களையும் அவருக்கு துணையாக திரு. J. தாஜூதின் அவா்களையும் நியமிக்க சபையில் ஒப்புதல் அளிக்கப்பட்டது. மேலும் அக்கூட்டத்தில் தோ்தலில் பின்பற்றுவதற்கான விதிமுறைகள் பற்றி விரிவாக விவாதித்து ஒப்புதல் வழங்கப்பட்டது.

20.01.2020 பத்தாவது செயற்குழு கூட்டம்

பத்தாவது செயற்குழு மற்றும் பொதுக்குழு கூட்டம் காஸ்மோ பாலிடன் கிளப்பில் அன்று உயர்திரு R. மனோகரன், உயர்திரு. K.G. ஜானகிராமன் உயர்திரு. K. குமார், உயர்திரு. A. விஜயகுமார், உயர்திரு. M. செந்தில்குமார் ஆகியோரின் உபசரிப்பில் நடைபெற்றது.



22.01.2020

ஓட்டல் அசோகாவில் மாலை 4.30 மணி அளவில் நடைபெற்ற மகாசபைக் கூட்டத்தில் தோதல் அதிகாரியாக திரு. O.K. செல்வராஜ் அவா்கள் தென்னக மய்யத்தின் 2020-21 ஆண்டிற்கான புதிய மய்ய நிாவாகிகள், செயற்குழு மற்றும் பொதுக்குழு உறுப்பினா்கள் ஒரு மனதாக தோ்ந்தெடுக்கப்பட்டதை அறிவித்தாா்.



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