# Southern Builder

Bulletin of Builders Association of India - Southern Centre

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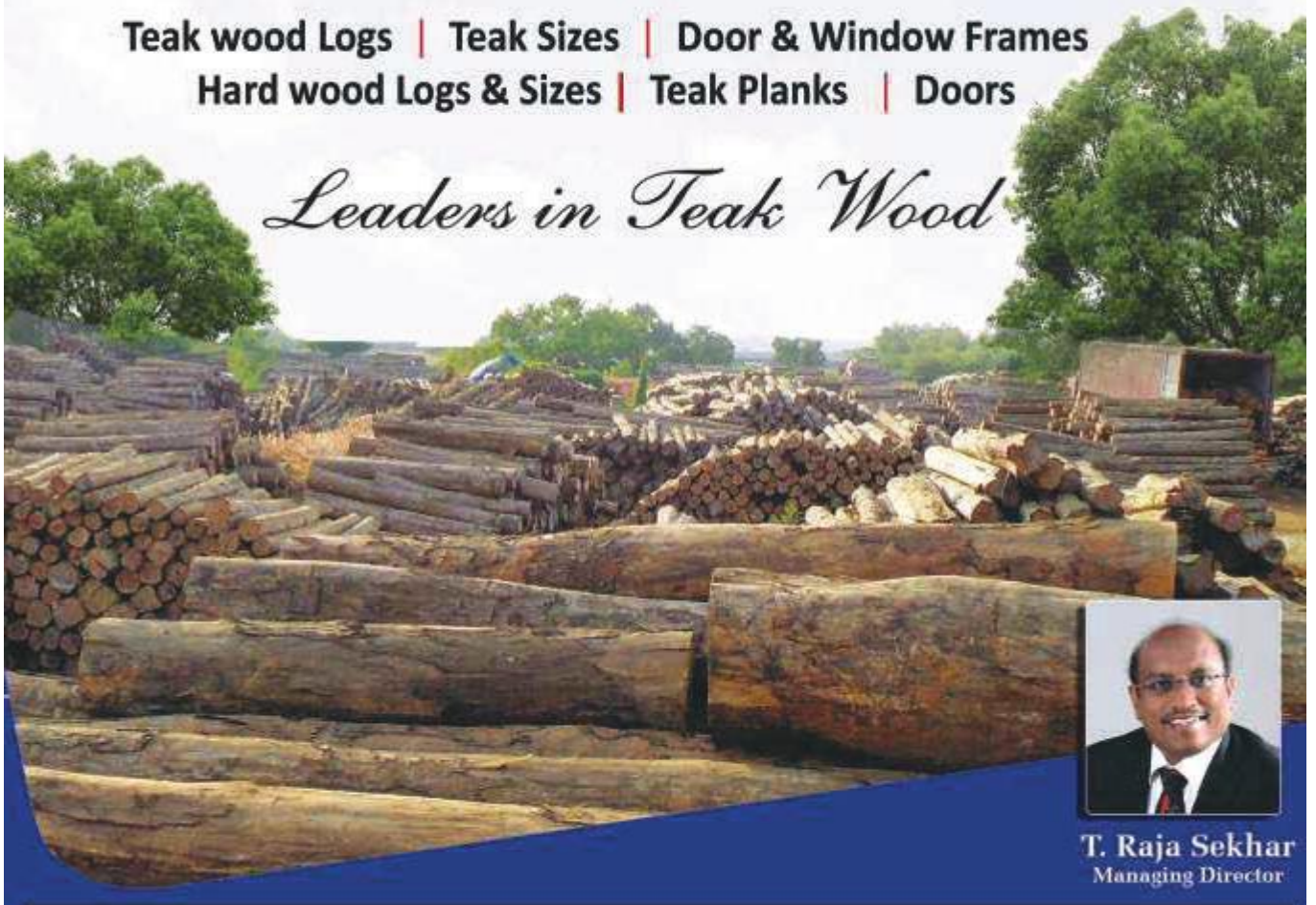



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## Contents



## Disclaimer

# ஆசிரியர் மடல்

அன்பார்ந்த கட்டுநர் நண்பர்களே வணக்கம் !

ஒரு புகழ் பெற்ற ஞானியிடம் சிலர் சென்று நாங்கள் புண்ணிய யாத்திரை சென்று புனித நதியில் நீராடி வரலாம் என்று இருக்கிறோம் ! நீங்களும் எங்களோடு வந்தால் நன்றாக இருக்கும் என அவரை அழைத்தார்கள். ஞானியோ இப்போது வருவதற்கான சாத்தியம் இல்லை என்று கூறி விட்டு, அவர்களிடம் பாகற்காயை தந்து, எனக்காக ஒரு உதவி செய்ய முடியுமா ? என்று அவர்களைப் பார்த்துக் கேட்டார். அவர்கள் என்ன செய்ய வேண்டும் என்று கேட்டனர். அதற்கு அவர் இந்த பாகற்காயையும் முழுக்கி என்னிடம் திரும்ப கொண்டு வந்து இதை சேர்த்து விடுங்கள் " என்றார்.

அன்பர்கள் ஞானி சொன்ன மாதிரியே செய்தனர். திரும்ப வந்து அவரிடம் அந்த பாகற்காயை பத்திரமாக ஒப்படைத்தனர். அவர் அந்த பாகற்காயை சிறு துண்டுகளாக நறுக்கி எல்லோருக்கும் ஒரு துண்டை கொடுத்தார். புனித நதியில் முழுகி வந்த பாகற்காய் இப்போது சாப்பிட்டுப் பாருங்கள் தித்திக்கும் என்றார்.

ஆர்வமடன் வாங்கிய அன்பர்கள் வாயில் போட்டு மென்ற வேகத்தில் முகம் மாறியது ! தித்திக்கும் என்று சொன்னீங்க ஆனா கசக்குதே என்றார்கள். ஞானியிடம் ஏமாற்றத்துடன் !

பார்த்தீர்களா? பாகற்காய் எத்தனைதான் நதியில் முழுகினாலும், அதன் சுபாவத்தை மாற்றிக் கொள்ளவில்லை. அதைப்போலவே "நாம் நமது தவறான செயல்களையும், தீய பழக்கங்களையும், துர்குணங்களை மாற்றிக் கொள்ளாமல் எந்தப் புண்ணிய தீர்த்தத்தில் ஆயிரம் முறை முழுகினாலும், எந்த கோயிலுக்கோ, சர்ச்சுக்கோ, மசூதிக்கோ, குளத்துக்கோ புண்ணிய ஸ்தலங்களுக்கோ 1008 முறை வலம் வந்து விழுந்து விழுந்து வணங்கினாலும் எந்த பயனும் வந்து விடப் போவதில்லை?

நல்ல மாற்றங்கள் மனங்களிலும், குணங்களிலும் வந்தால்தான் வாழ்க்கை இனிமையாகும் என்றார் அந்த ஞானி !

அழுக்காறு உடையான்கண் ஆக்கம்போன்று இல்லை
ஒழுக்கம் இலான்கண் உயர்வு

– திருக்குறள்

அன்புடன்

மு. மோகன்

# மய்யத் தலைவர் மடல்

அன்பார்ந்த கட்டுநர் நண்பர்களே வணக்கம் !

நமது தென்னக மய்யம் 2018-19ம் ஆண்டுக்கான தேர்தல் அதிகாரியாக முன்னாள் மய்யத்தலைவர் திரு. O.K. செல்வராஜ் அவர்களை செயற்குழு ஒப்புதலோடு நியமித்து தேர்தல் குறித்த அறிவிப்புகள் முதற்கொண்டு அனைத்தும் எப்போதும் போல் மிகவும் நேர்த்தியாகவும், துள்ளியமாகவும் யாரும் எந்தக் குறையும் சொல்லாத அளவிற்கு தேர்தல் நடத்தை விதியை கடைபிடித்து கடந்த 10.01.2018 அன்று காலை 10.00 மணிக்கு மய்யத்தின் தேர்தல் பொதுக்குழு கூட்டம் சென்னை எழும்பூர் அசோகா ஓட்டலில் துவங்கியது. இதில் நமது தென்னக மய்ய நிர்வாகிகள் மற்றும் EC, GC, GC(Patron) யாருக்கும் போட்டிகள் இல்லாததால் அனைவரும் ஒரு மனதாக போட்டியின்றி தேர்ந்தெடுக்கப்பட்டதாக அறிவிக்கப்பட்டார்கள். இதில் மிகச் சிறப்பாக தேர்தல் பணியாற்றிய திரு. O.K.செல்வராஜ் மற்றும் அவருக்கு துணையாக செயல்பட்ட திரு.S. சத்தியமூர்த்தி அவர்களையும் மனதார இந்த மய்யம் பாராட்டுகிறது.

கடந்த 14.01.2018 அன்று நமது மத்திய நிதியமைச்சர் மாண்புமிகு அருண் ஜெட்லி அவர்கள் சென்னை வந்த போது நமது பீஷ்மர் தலைமையில் மய்ய நிர்வாகிகள், நான், மய்யச் செயலாளர் திரு. S. இராமப்பிரபு, உடனடி அகில இந்திய துணைத்தலைவர் திரு. Mu. மோகன், தென் பிராந்திய செயலாளர் திரு. R. சிவக்குமார்ஆகியோர் கலந்து கொண்டு ஆறு கோரிக்கைகள் அடங்கிய மனுவையும் அளித்து நமது பீஷ்மர் அவர்கள் அது குறித்து எடுத்துரைத்து அதற்கு மத்திய அமைச்சர் அவர்கள் GST Council கூட்டத்தில் விவாதித்து முடிவெடுப்பதாக தெரிவித்து அடுத்த ஐந்தாவது நாளே அவர்கள் குறிப்பிட்டபடி அரசாங்க ஒப்பந்தங்களில் Sub-Contractor-களுக்கு 18 % இருந்த GST-யை 12%குறைத்து அரசாணை வெளியிட்டுள்ளார்கள் என்பதையும் உங்களுடன் பகிர்ந்து கொள்வதில் மகிழ்ச்சி அடைகிறேன்.

15.01.2018 அன்று மாண்புமிகு தமிழக ஆளுநர் அவர்களை சந்தித்து நமது விருது வழங்கும் விழாவில் சிறப்பு விருந்தினராக கலந்து கொள்ள விடுத்த அழைப்பை ஏற்று அவர்களும் உடனே இசைவு தெரிவித்துள்ளார்கள் என்பதை மகிழ்ச்சியோடு தெரிவித்துக் கொண்டு அதைத் தொடர்ந்து 26.01.2018 அன்று ஆளுநர் மாளிகையில் நடைபெற்ற கொடி நாள் விழாவிற்கு நமது பீஷ்மர் அவர்களை சிறப்பு விருந்தினராக அழைத்தார்கள். அதில் நானும் நமது பீஷ்மா அவர்களுடன் கலந்து கொண்டேன் என்பதை தெரிவித்துக் கொள்கிறேன்.

கடந்த 19.01.2018 முதல் 21.01.2018 வரை நமது அகில இந்திய கட்டுநர் சங்கத்தின் 28வது மாநாடு பெங்களூரில் கோலகலமாக நடைபெற்றது அங்கு வழங்கப்பட்ட அகில இந்திய விருதுகளில் நமது மய்யம் தொடர்ந்து அகில இந்திய அளவில் 9வது வருடமாக அனைத்து வகையிலும் சிறந்த மய்யம் என்ற விருதை பெற்றுள்ளது என்பதையும், முன்றாவது வருடமாக Best publication Award நமது சதர்ன் பில்டர் புத்தகம் பெற்றுள்ளது. அகில இந்திய அளவில் சிறப்பாக கூட்டம் நடத்தியதற்கான பவள விழா நிறைவு விழாவிற்கு வழங்கப்பட்டது. மேலும் சிறப்பு சேர்க்கும் விதமாக நமது பீஷ்மர் அவர்களுக்கு அகில இந்திய அளவில் சிறந்த கமிட்டி தலைவராக பவள விழா கமிட்டி தலைவராக பணியாற்றியதற்காகவும், நமது பாசமிகு அண்ணன் திரு. மு. மோகன் அவர்களுக்கு சிறந்த அகில இந்திய துணைத்தலைவர் விருதும் வழங்கி கவுரவிக்கப்பட்டார்கள் என்பதை உங்களோடு பகிர்ந்து கொள்வதில் பெருமகிழ்ச்சி அடைகிறேன்.

இந்த தென்னக மய்யமும் அதன் நிர்வாகிகளும் தொடர்ந்து உங்களின் நலனில் அக்கறை கொண்டு சிறப்பாக பணியாற்ற உறுதி கொண்டு பணியாற்றுகிறோம் என்றும் இவை அனைத்தும் நிறைவேற உங்களின் ஒத்துழைப்பு என்றும் போல் இருக்கும் என்ற மன நிறைவோடு என்றும் உங்கள் அன்பன்

உங்கள் அன்புடன்

K. வெங்கடேசன்.

A.R.Santhakumar
Former Dean (Civil Engineering),
Anna University, Chennai, India

## History of Tall Buildings:

In ancient history high building constructions are well known for example the Egyptian Pyramides.

The Great Pyramid of Giza - for thousands of years, it was the world's tallest structure.

Several tall buildings were constructed in Chicago and New York. During the 1880's and 1890's several buildings of 10-30 floors were constructed in these two cities. The tallest of these exceeded 100 m of height.

*Flatiron Building, architect Daniel Burnham, built 1902 and considered to be the oldest remaining skyscraper in New York, 87 meters tall with 22 floors.*

# DEVELOPMENTS IN THE DESIGN OF EARTHQUAKE RESISTING SYSTEMS FOR TALL BUILDINGS

*Chrysler building, 319 m, 77 floors, constructed 1930, Architect William Van Alen, both at Manhattan, New York City.*

Empire State Building with the roof height of 381 m was the tallest building in the

world from 1931 to 1973 when World Trade Center was constructed. When Petronas Tower in Kuala Lumpur, Malaysia with 452 m of height was constructed 1998 the world record left United States for the first time for more than 100 years. Since 2004 Taipeh 101 in the Republic of China is regarded as the tallest house in the world with its 509 m of pinnacle height, though the roof height is actually less than Petronas Tower. But the world record will soon leave south east Asia for the Middle East when Burj Tower in Dubai in the United Arab Emitates will be finished 2006 or 2007, expected to be some 800 m of height. Reaching these heights some people talk about superscrapers.

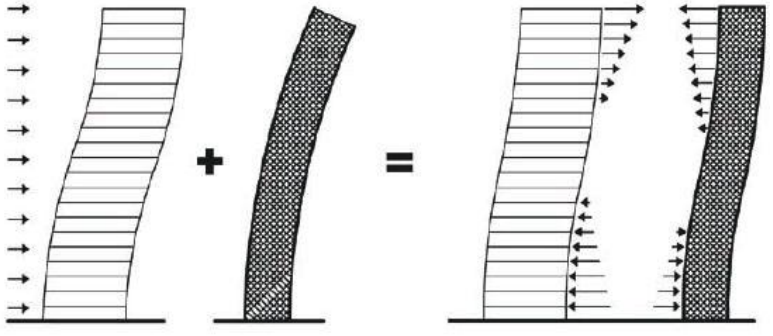
**Structural configurations for earthquake resisting systems**

Rigid frames connect the columns and girders via moment-resistant connections. The lateral stiffness of a rigid frame depends on the bending stiffness of the columns, girders and connections to the frame. A major advantage of the rigid frame is the open rectangular spaces which allow greater planning for windows and doors. Rigid frames typically span 7 m to 10 m bays. When used as the sole lateral load resisting system, rigid frames are economical up to 25 stories. Above that height, they are too flexible. Increasing the member sizes would call for uneconomical solutions. Rigid frames are ideal for reinforced concrete, because of the inherent rigidity of the joints. Steel frames are costly and takes more effort to stiffen the moment-resistant connections. The size of the columns and girders at any level are directly proportional to the external shear at that level. Therefore, they increase in size towards the base. Floor designs are not repetitive as in the case of braced frames. Ceiling height also increases towards the base because of the larger girders at the base. Therefore the story heights may vary.

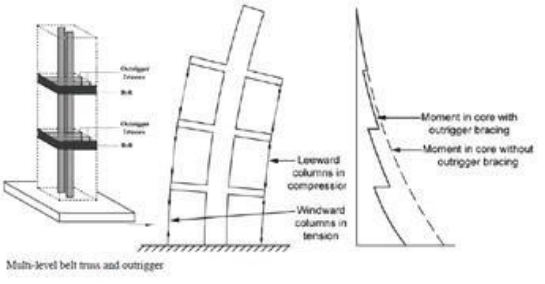
Reinforced concrete planar solid or coupled shear walls have been one of the most popular systems used for high-rise construction to resist lateral forces caused by wind and earthquakes. They are treated as vertical cantilevers fixed at the base. When two or more shear walls in the same plane are interconnected by beams or slabs, as is the case with shear walls with door or window openings, the total stiffness of the system exceeds the sum of the individual wall stiffness put together. This is so because the connecting beam forces the walls to act as a single unit by restraining their individual cantilever actions. These systems are known as coupled shear walls. Shear walls used in tall office buildings are generally located around service and elevator cores, and stairwells. In fact, in many tall buildings, the vertical solid core walls that enclose the building services can be used to stabilize and stiffen the building against lateral loads . Many possibilities exist with single or multiple cores in a tall building with regard to their location, shape, number, and arrangement. The core walls are essentially shear walls that can be analyzed as planar elements in each principal direction or as three-dimensional elements using computer programs.

Rigid frames may be combined with vertical steel trusses or reinforced concrete shear walls to create shear wall (or shear truss)-frame interaction systems. Rigid frame systems

are not efficient for buildings over 30 stories in height because the shear racking component of deflection caused by the bending of columns and girders causes the building to sway excessively. On the other hand, vertical steel shear trusses or concrete shear walls alone may provide resistance for buildings up to about 10 or 35 stories depending on the height-to-width ratio of the system. When shear trusses or shear walls are combined with Moment Resisting Frames (MRF), a shear truss (or shear wall)-frame interaction system results. The approximately linear shear-type deflected profile of the MRF, when combined with the parabolic cantilever sway mode of the shear truss or shear walls, results in a common shape of the structure when the two systems are forced to deflect in the same way by the rigid floor diaphragm. The upper part of the truss is restrained by the frame, whereas at the lower part, the shear wall or truss restrains the frame . This effect produces increased lateral rigidity of the building. This type of system has wide applications for buildings up to about 40 to 70 stories in height. A “milestone” paper by Khan and Sbarounis presented the mechanics of a shear wall-frame interaction system that led to the development of innovative structural systems that are cost-effective .



During the last few decades several buildings have been built utilizing belt truss and outrigger system for the lateral loads transfer throughout the world. This system is very effective when used in conjunction with the composite structures especially in tall buildings . Outrigger systems have been historically used by sailing ships to help resist the wind forces in their sails, making the tall and slender masts stable and strong. The core in a tall building is analogous to the mast of the ship, with outriggers acting as the spreaders and the exterior columns like the stays. As for the sailing ships, outriggers serve to reduce the overturning moment in the core that would otherwise act as pure cantilever, and to transfer the reduced moment to the outer columns through the outriggers connecting the core to these columns . The core may be centrally located with outriggers extending on both sides or in some cases it may be located on one side of the building with outriggers extending to the building columns on the other side.The outrigger systems may be formed in any combination of steel, concrete and composite construction. Because of the many functional benefits of outrigger systems and the advantages outlined above, this system has lately been very popular for super-tall buildings all over the world. A very early example of outrigger structure can be found in the Place Victoria Office Tower of 1965 in Montreal designed by Nervi and Moretti. It was also used by Fazlur Khan in the 42-story First Wisconsin Center of 1973 in Milwaukee, Wisconsin. However, major application of this structural system can be seen on contemporary skyscrapers such as the Jin Mao Building in Shanghai and the Taipei 101 Tower in Taipei.



Multi-level belt truss and outrigger

Whether it is frame shear wall system or outrigger system or the buttressed core system used in Burj Khilifa in Dhubai , the behaviour of the core under lateral loads is vital for good seismic performance. Therefore let us examine the failure modes of the shear wall systems and its seismic behavior.

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   பீஷ்மா R. இராதாகிருட்டிணன் அவர்களுக்கும்,
5. Best All India Vice Presedent (South) விருது

   திரு Mu. மோகன் அவர்களுக்கும் வழங்கப்பட்டது.

# அன்பு நிராகரிப்பு

வலியிலேயே அதிகமான வலி நிராகரிப்புதான் அல்லது நிராகரிப்பு குறித்த பயம்தான். வாழ்க்கை உறவுகளினால் தட்டி எழுப்பப்படுகிறது. நம்மடைய வாழ்வில் நாம் எதற்கு முக்கியத்துவம் கொடுக்கிறோம் என்பதை வைத்தே நம்முடைய வாழ்க்கையின் ஆனந்தர் நிர்ணயிக்கப்படுகிறது.

ஒருவர் அழகாய் இருக்கிறார் என்பதனால் நீங்கள் அவரை அன்பு செய்வதில்லை. நீங்கள் அன்பு செய்வதால் அவர் அழகாய்த் தெரிகிறார் என்று ஒரு மிகப் பிரசித்தி பெற்ற சொல்வடை உண்டு. இழக்கும் வரை இருந்ததின் மதிப்பு தெரியாது என்பார்கள். அதிலும் திரும்பப் பெற முடியாத உயிரின் இழப்பெனில் அந்த ஈடுஈகட்ட முடியாத இழப்பு நமக்குள் ஏற்படுத்தும் வடு காலம் முழுவதும் மறைவதில்லை.

பேருந்தில் ஏறுகையில் தெரியாமல் யாருடைய காலையேனும் மிதிக்க நேர்ந்தால் " சாரி" என்று கண்யிமாக சிறு புன்னகையுடன் கேட்க நாம் மறுப்பதில்லை. அவரும் பரவாயில்லை என்ற பார்வையை வீசிவிடுவார் பெரும்பாலும். ஆனால் நெருங்கிய உறவுகளிடம் பல நேரங்களில் அந்த அன்பைப் பகிர மறந்துவிடுகிறோம்.

ஒரு கதை உண்டு.

ஒரு மனிதர் சாலை ஓரத்தில் ஓடிக்கொண்டிருந்தபோது தெரியாமல் இன்னொரு நபர் மீது இடித்துவிட்டார். ஐயோ தெரியாமல் இடித்து விட்டேன் மன்னித்து விடுங்கள் என்று இவர் சொல்ல, பரவாயில்லை என்று அவர் சொல்ல இருவருமோ கண்ணியத்துடனும், புன்னகையுடனும் விடைபெற்றார்கள். அவர்களிடையே மனஸ்தாபத்துக்கான காரணமில்லாமல் போயிற்று.

அன்று அவர் வீட்டுக்கு வந்தார். இருவு உணவு முடித்து திரும்புகையில் அவருடைய மகன் அவருக்கு பின்னால் நின்றிருந்தார். கைகளைப் பின்னால் கட்டியபடி தந்தை திரும்புகையில் அவனைத் தெரியாமல் இடித்து விட்டார்.

வழியில் நிற்காதே, ஓரமாய்ப் போ அவருடைய வார்த்தையில் அனலடித்தது. சிறுவன் முகம் வாடிப்போய் விலகினார். அவனுடைய கண்களில் சோகத்தின் நதி முளைத்தது. அது இமை ஓரங்களை இடித்து தரையிறங்கத் துவங்கியது.

இரவு தூங்குகையில் அவர் மனதுக்குள் ஒரு சிந்தனை ஓடியது. வழியில் யாரோ ஒருவரிடம் நாகரீகமாகவும், அன்பாகவும் நடந்து கொள்ளத் தெரிந்த எனக்கு சொந்த மகனிடம் அப்படி நடந்து கொள்ளத் தெரியவில்லை என்று மனதுக்குள் எண்ணினார். நேராக எழுந்து மகனின் படுக்கையறைக்குச் சென்றார்.

உள்ளே மகன் தூங்காமல் விசும்பிக் கொண்டிருந்தார். அவனுடைய கண்கள் சிவந்திருந்தன. அவனருகில்

மண்டியிட்ட தந்தை என்னை மன்னித்துவிடு நான் உன்னிடம் அப்படி பேசியிருக்கக் கூடாது என்றார். சிறுவன் திரும்பினார். சிறுவனின் கண்களிலிருந்த கவலை சட்டென்று மறைந்தது. எழுந்து உட்கார்ந்தான். வேகமாக கட்டிலிலிருந்து கீழே குதித்து கட்டிலினடியில் வைத்திருந்த பூங்கொத்தை தந்தையின் கையில் வைத்தார்.

இதென்ன தன்னை வியந்தார். இன்றைக்கு வெளியே நடந்து கொண்டிருந்தபோது இந்தப் பூக்களைப் பார்த்தேன். பல நிறுங்களில் இருந்த பூக்களைப் பொறுக்கி உங்களுக்காக ஒரு மலர்க்கொத்து செய்தேன். அதிலும் குறிப்பாக உங்களுக்கு நில நிறம் பிடிக்கும் என்பதற்காக அதை நிறைய சேகரித்தேன். அதை உங்களிடம் ரகசியமாகச் சொல்வதற்காகத்தான் உங்கள் பின்னால் வந்து நின்றேன். சிறுவன் சொல்ல தந்தை மனம் உடைந்தார். சிறுவனையும், மலர்களையும் ஒரு சேர மணைத்த அவருடைய கண்களில் கண்ணீர் வழிந்தது.

ஒரு மழலையின் அன்பைப் புரிந்து கொள்ள முடியாத நிலையில்தான் இருந்ததற்காக அவர் வருந்தினார்.

குடும்பம் என்பது கடவுள் நமக்காக பூமியில் ஏற்பாடு செய்திருக்கும் சொர்க்க. அதை சொர்க்கமாக்குவதும் நரகமாக்குவதும் நம்முடைய செயல்களில் தான் இருக்கிறது. பணத்துக்கான ஓட்டங்களில் நாம் இழந்து கொண்டிருப்பது ஆனந்தத்தின் நிமிடங்களை என்பதை நாம் அறிந்து கொள்ள வேண்டும். ஒரு வேளை நாம் நாளை இறந்து போக நேரிட்டால் அலுவலகம் இன்னொரு திறமைசாலியை சில நாட்களில் கண்டு பிடிக்கும். குடும்பம் அப்படியல்ல. ஏற்படும் இழப்பு ஆழமாய்த் தைத்த முள் போல நினைவுகளால் நிமிண்டும் போதெல்லாம் வலித்துக் கொண்டே இருக்கும்.

வாழ்க்கையில் எல்லாம் இருந்தாலும் அன்பினால் நிரப்பப்படாவிட்டால் அது வெபறுமையாகவே இருக்கும். பணமே மகிழ்ச்சியைத் தரும் என்பது தலைமுறைக்கும் தரப்பட்டிருக்கும் தவறான பாடம். மகிழ்ச்சியை சதுர அடிகளில் வாங்க முடியாது. எனவே தான் ஏழைகளால் மகிழ்ச்சியாய் இருக்க முடிந்த அளவுக்கு பணக்காரர்களால் நிம்மதியாக இருக்க முடிவதில்லை.

குடும்பங்களில் அதிக நேரம் செலவிடுங்கள். அன்பை அதிகமாய் சம்பாதியுங்கள்.

நன்றி

P.K.P.நாராயணன்

# General Body Meeting
# 10.01.2018



# General Body Meeting
# 10.01.2018

# அவமானமும் ஓர் மூலதனம்

மன்னரின் அரசவை ஒருவர் தான் ஆரம்பிக்க இருக்கும் கல்லூரிக்கு நிதி கேட்டு வருகிறார். அந்த மன்னர் இந்து என்றாலே கோபப்படுபவர். " நிதி தானே இந்தா என தன் காலில் இருந்த ஷூவை வந்தவர் மேல் வீசி எறிந்தார். எதிர்பாராத நிகழ்வால் நிலைகுலைந்தாலும் ஒரு பக்கம் அவமானம். மனதை கஷ்டப்படுத்தியது. இருந்தாலும் ஒரு நல்ல விஷயத்துக்காகத்தானே அவமானப்படுகிறோம் என தேற்றிக் கொண்டு மன்னருக்கு நன்றி சொல்லி கிளம்பினார். மன்னருக்கு ஒன்றும் புரியவில்லை. என்னடா நாம் அவமானப்படுத்த ஷூவை வீசினோம் நன்றி சொல்கிறானே என.

ஒருவரை எப்படி அமவமானப்படுத்த முயன்றாலும் எதிரிலிருப்பவர் தன் நோக்கத்தில் உறுதியாய் இருந்தால் என்ன செய்யமுடியும். மேலும் தன் மேல் நம்பிக்கையில்லாதவர்கள் தான் அவமானமாய் உணர்ந்து எமோஷன் ஆவார்கள். வெளியில் ஒரே சத்தம். அமைச்சரை அழைத்த மன்னர் என்ன அங்கே,, என்றார். நீங்க எறிந்த ஷூவை ஏலம் போடுகிறான் மன்னா,, கல்லூரி கட்ட மன்னர் தந்த ஷூ என்றே கூவுகிறான் என்றார். எவ்வளவு போகிறது,,, படு கேபலமாய் பத்து நாணயத்துக்கு மேல் ஏலம் போகவில்லை என்றார். அய்யய்யோ.. என்ன விலையானாலும் ஏலம் எடு. அமைச்சரும் ஐம்பது லட்சம் கொடுத்து எடுத்தார்.

நிதி கேட்டு வந்தவர் மீண்டும் மன்னரிடம் வந்தார். மன்னா நீங்கள் போட்ட ஷூ பாதி கட்டடம் கட்ட கிடைத்துவிசட்டது. அடுத்த ஷவுை எப்போது போடுவீர்கள் என்றார் பாருங்கள். மன்னர் வந்தவரின் சாமர்த்தியத்தையும் சகிப்புத்தன்மையையும் எண்ணி தாமே கல்லுரியை கட்டித்தந்தார். அது தான் தற்போதைய காசி பனரஸ் பல்கலைக்கழகம். அவமானத்தை யார் ஒருவர் அவமானமென உணர்கிறார்களோ அவர்கள் ஒருநாளும் எதையும் ஜெயிக்க முடியாது. எப்போதும் நோக்கம் நிறைவேறுவது தான் முக்கியம். மான அவமானங்களல்ல,, நாம் செய்வது நல்லதாய் இருக்க வேண்டும்.

ஒவ்வொரு அவமானமும் வெற்றிக்கான படிக்கட்டுக்கள் என எண்ணுவோம். எந்தவொரு வளர்ச்சியையும் நீண்டம நாட்கள் யாராலும் தடுத்து நிறுத்த முடியாது. அவமானம் என்பது ஒருவித மூலதனம்.

அந்த காலணி வீசப்பட்டது திரு. மதன் மோகன் மாளவியா அவர்கள் மீது. அவர்தான் பனாரஸ் பல்கலைக்கழத்தை நிறுவியவர்.

நன்றி

P.K.P.நாராயணன்

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**ABSTRACT**

Urban Development – Chennai Metropolitan Planning Area – Inclusion of additional areas in Chennai Metropolitan Planning Area under clause (23-a) of section 2 of the Tamil Nadu Town and Country Planning Act, 1971(Tamil Nadu Act 35 of 1972) – Intention – Notified

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**HOUSING AND URBAN DEVELOPMENT (UD1) DEPARTMENT**

**G.O.(Ms) No.13** **Dated: 22.1.2018**

திருவள்ளுவர் ஆண்டு 2049

ஹேவிளம்பி வருடம், தை 09

Read:

1. G.O.Ms.No.2451, Rural Development and Local Administration Department, dated 19.11.1974.
2. From the Member Secretary, Chennai Metropolitan Development Authority, Letter No. C1/20154/2011, dated 2.8.2017.

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**ORDER:**

While moving the Demand No.26 on 3.7.2017 the then Hon'ble Minister, Housing and Urban Development on the Floor of Tamil Nadu Legislative Assembly made an announcement on Expansion of the jurisdiction of Chennai Metropolitan Planning Area by adding certain villages in Kancheepuram, Thiruvallur Districts and Arakkonam and Nemili Taluks in Vellore District.

2. Based on the above announcement, the Member-Secretary, Chennai Metropolitan Development Authority has sent the proposal for expansion of Chennai Metropolitan Area for inclusion of additional area under clause (23-a) of section 2 of the said Act.

3. The Government, after careful consideration of the above proposal of the Member-Secretary, Chennai Metropolitan Development Authority have decided to declare the intention to include additional areas in the Chennai Metropolitan Planning Area under clause (23-a) of section 2 of the said Act. The appended Notification will be published in the Tamil Nadu Government Gazette.

4. The Collector of Thiruvallur, Kancheepuram and Vellore Districts are directed to republish the said Notification in the District Gazette.

5. The Director of Translation, Chennai-9, is directed to arrange to have the Notification translated into Tamil and to forward the translation urgently to the Collector of Thiruvallur, Kancheepuram and Vellore Districts under intimation to the Government.

2..

6. The Collector of Thiruvallur, Kancheepuram and Vellore Districts are directed to report to the Government, the date of republication of the Notification in the District Gazette.

**(BY ORDER OF THE GOVERNOR)**

**S.KRISHNAN**
**PRINCIPAL SECRETARY TO GOVERNMENT**

To
The Works Manager,
Government Central Press,
Chennai-600 079.
(for publication of notification in the TNGG)
The Member Secretary,
Chennai Metropolitan Development Authority,
Chennai-8
The Commissioner of Town and Country Planning,
Chennai-600 002.
The District Collector,
Chennai District, Chennai.
The District Collector,
Thiruvallur District, Thiruvallur.
The District Collector,
Kancheepuram District, Kancheepuram.
The District Collector,
Vellore District, Vellore,
The Director of Translation,Chennai-600 009.
All Departments of Secretariat, Chennai- 600 009.
The Pay and Accounts Officer, Chennai (East/North/South)
The Pay and Accounts Officer, Chennai - 600 009.
The District Treasury Officer, Chennai/Kancheepuram/Thiruvallur/Vellore.
The Principal Chief Accountant General(A&E), Chennai- 600 018.
The Principal Chief Accountant (Audit I) General, Chennai- 600 018.
The Principal Chief Accountant (Audit II) General, Chennai- 600 018.
The Accountant (CAS) General, Chennai – 600 009.

**Copy to:**
The Hon'ble Chief Minister's Office, Chennai-9
The Deputy Secretary to Hon'ble Deputy Chief Minister, Chennai-9.
The Special Personal Assistant to Hon'ble Deputy Chief Minister
Chennai-600 009.
The Senior Private Secretary to Secretary to Government,
Housing and Urban Development Department, Chennai-9.
The Law (Hg&UD-sty)Department, Chennai-600 009.
**SF/SC**.

**// FORWARDED BY ORDER //**

**SECTION OFFICER.**

GST

Mr.G.Ravindranath
IRS Commissioner

# E-WAY BILL
# CONCEPT AND KEY POINTS

Tax Corner

**Seminar on E-Way Bill Goods and Service Tax on 31.01.2018.**

1. Every registered person who causes movement of goods whose value is exceeding Rs. 50,000; (i) in relation to supply, (ii) other than relation to supply, (iii) due to inward supply from an unregistered person, shall file the details of the goods before commencement of movement of goods in PART A of GST EWB-01.

If there is Principal- Job Worker relation sending goods from one state to another, then principal has to furnish the details irrespective of any value of the consignment.

If one person who is not liable to get register himself under GST has supplied the handicraft goods from one state to another is also liable to file e-way bill irrespective of the value of the consignment.

2. If the goods are transported by registered person as consignor or the recipient as consignee, whether in his own conveyance / by hired one / by railways / by air / by vessel, then the registered person or the recipient shall file the GST EWB-01 after furnishing the details in PART-B of GST EWB-01.

If E Way bill is not furnished by the supplier or recipient and directly handed over to transporter, then transporter has to furnish the details in PART-A of GST EWB-01 on the basis of PART-B of GST EWB-01 furnished by the supplier or recipient.

If the value is less than Rs. 50,000, then it's optional to issue E Way bill for transporter.

**If movement of goods is caused by the unregistered person, then it is optional for him or transporter to issue the e-way bill**

**It shall be deemed that the movement of goods is caused by the registered person (the recipient), if an unregistered person supplies goods to the registered person.**

If goods has been sent by consignor to transporter within 10 Kms(Same State or Union Territory), then there is no need to issue E Way bill.

3. E Way Bill Number ( EBN) will be generated after submitting the E Way bill.

4. If there is a change in the vehicle between the movement of goods, then transporter has to update the details of conveyance in GST EWB-01. But if movement of goods between transporter place to final place is less than 10 kms(Same State or Union Territory), then no need to update the information.

5. **GST EWB-02 (Consolidated E Way Bill)** has been generated by the transporter, if there is multiple E Way bill has been generated for multiple consignments.

If the value of the consignment is more than Rs. 50,000 and the supplier / recipient has not generated the E Way bill, then transporter has to generate the E Way bill on the basis of invoice.

6. **E Way bill can be cancelled** directly through common portal within 24 hrs.

**7. Validity of E Way Bill:**

Upto 100 Kms – One Day
For every additional 100 Kms of part thereof – One additional day.

8. Information has been made available to recipient. **Recipient has to communicate the acceptance or rejection of the consignment within 72 hrs** of the details made available to him. If it is not done, then it shall be deemed to be accepted.

**9. No requirement to issue E Way bill** under following circumstances:

Where goods transported is specified below.

| S.No. | Description of Goods |
|---|---|
| 1. | Liquefied petroleum gas for supply to household and non domestic exempted category (NDEC) customers |
| 2. | Kerosene oil sold under PDS |
| 3. | Postal baggage transported by Department of Posts |
| 4. | Natural or cultured pearls and precious or semi-precious stones; precious metals and metals clad with precious metal (Chapter 71) |
| 5. | Jewellery, goldsmiths' and silversmiths' wares and other articles (Chapter 71) |
| 6. | Currency |
| 7. | Used personal and household effects |
| 8. | Coral, unworked (0508) and worked coral (9601)"; |

- Goods are being transported by a non-motorised conveyance.
- If goods are being transported for custom clearance.
- Goods are being transported in notified area.
- where the goods, other than de-oiled cake, being transported are specified in the Schedule appended to **notification No. 2/2017- Central tax (Rate) dated the 28th June, 2017** published in the Gazette of India, Extraordinary, Part II, Section 3, Sub99 section (i), vide number G.S.R 674 (E) dated the 28th June, 2017 as amended from time to time;
- goods being transported are alcoholic liquor for human consumption, petroleum crude, high speed diesel, motor spirit (commonly known as petrol), natural gas or aviation turbine fuel; and
- where the goods being transported are treated as no supply under Schedule III of the Act.

10. A **person in charge of conveyance shall carry** the (i) tax invoice / bill of supply / delivery challan and (ii) Copy of E Way Bill or EBN

11. A summary report of every inspection shall be recorded by the proper officer within 24 hrs of inspection in **PART-A GST EWB-03** and the final report shall be submitted within 3 days of such inspection in **PART-B GST EWB-03.**

12. If the **vehicle has been intercepted and detained for period exceeding 30 Minutes,** then the transporter may upload the said information on common portal in **GST EWB-04.**

13. **Present Status of E-Way Applicability:-**

Please note E-Way bill now not mandatory due to technical glitches and the Government of India deferred the same by a notification appended below

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**`[To be published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i)]**

**Government of India**
**Ministry of Finance**
**Department of Revenue**
**Central Board of Excise and Customs**

**Notification No. 11/2018 – Central Tax**

**New Delhi, the 2nd February, 2018**

G.S.R……(E):- In exercise of the powers conferred by section 164 of the Central Goods and Services Tax Act, 2017 (12 of 2017), the Central Government hereby rescinds, except as respects things done or omitted to be done before such rescission, the notifc ation of the Government of India in the Ministry of Finance (Department of Revenue) No. 74/2017 – Central Tax dated the 29th December, 2017, published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R 1601 (E), dated the 29th December, 2017.

[F. No.349/58/2017-GST(Pt.)]

(Dr. Sreeparvathy S.L.)
Under Secretary to the Government of India

# Seminar on E-Way Bill Goods and Service Tax





# Seminar on E-Way Bill Goods and Service Tax




# Suitability of manufactured sand (M-Sand) as fine aggregate in mortars and concrete

**Prof. B. V. Venkatarama Reddy**
**Department of Civil Engineering**
**Indian Institute of Science**
**Bangalore – 560 012**

***January 2012***

## 1. Introduction

Sand is used as fine aggregate in mortars and concrete. Natural river sand is the most preferred choice as a fine aggregate material. River sand is a product of natural weathering of rocks over a period of millions of years. It is mined from the river beds and sand mining has disastrous environmental consequences. River sand is becoming a scarce commodity and hence exploring alternatives to it has become imminent. Rock crushed to the required grain size distribution is termed as manufactured sand (M-sand). In order to arrive at the required grain size distribution the coarser stone aggregates are crushed in a special rock crusher and some of the crushed material is washed to remove fines. This investigation is an attempt to evaluate the characteristics of mortars and concrete using M-sand as fine aggregate. For the purposes of comparison characteristics of mortar and concrete with river sand has also been explored.

## 2. Scope and details of the study

Major objective of the study was to examine the suitability of M-sand as fine aggregate in mortars and concrete. Apart from characterising the properties of M-sand, tests were performed on the mortars and concrete using M-sand as well as natural river sand. One M-sand sample (supplied by the Department of Mines and Geology) and one natural river sand sample were used in the investigations. The following tests were performed.

1. Characteristics ofM-sand; grain size distribution, pH and chemical composition
2. Mortar and masonry characteristics using M-sand and river sand
    - Compressive strength of mortar
    - Flow/workability
    - Water retentivity
    - Brick-mortar bond strength
    - Compressive strength and stress-strain relationships for masonry
3. Concrete characteristics (two grades M20 and M30)
    - Consistency
    - Strength (compression and flexure)
    - Shrinkage

- Bond (pull out test) strength
- Modulus: stress-strain relationships

The test programmes for mortars and concrete are highlighted in Tables 1 and 2 respectively. Two cement mortars (1:6 and 1:4, cement : sand by volume) were used and tested for strength, workability, water retentivity, masonry compressive strength and masonry bond strength. Similarly, M20 and M30 grade concretes were tested for workability, shrinkage, strength, stressstrain characteristics and bond strength.

**Table 1: Test programme for mortars using River sand andM-sand**

| Mortar and masonry property | 1:6 cement mortar | | 1:4 cement mortar | |
|---|---|---|---|---|
| | River sand | M-sand | River sand | M-sand |
| W/C ratio versus mortar flow | √ | √ | √ | √ |
| Compressive strength at 85% and 100% flow | √ | √ | √ | √ |
| Compressive strength at 85% and 100% flow | √ | √ | √ | √ |
| Strength and stress-strain relationships for masonry | √ | √ | ---- | ---- |
| Flexure bond strength of masonry | √ | √ | ---- | ---- |

**Table 2: Test programme for concrete using River sand andM-sand**

| Concrete property | M20 grade concrete | | M30 grade concrete | |
|---|---|---|---|---|
| | River sand | M-sand | River sand | M-sand |
| Consistency (slump) | √ | √ | √ | √ |
| Drying shrinkage | √ | √ | √ | √ |
| Compressive and flexure strength | √ | √ | √ | √ |
| Stress-strain relationships | √ | √ | ---- | ---- |
| Bond strength (pull out test) | √ | √ | ---- | ---- |

## 3. Test methods and testing procedures

One rich mortar (1:4) and one commonly used mortar (1:6, M2 grade as per IS: 1905) were selected. Standard mix proportions for M20 and M30 grade concrete (commonly used) were selected following IS 456 code guidelines. Selected mix proportions for M20 and M30 grade concretes are 1:2:4 and 1: 1.66: 3.33 (cement: fine aggregate: coarse aggregate, by weight) respectively. The tests were performed using relevant standard codes of practice guidelines as mentioned below.

**(a) Mortars**

- Flow characteristics: BS 4551 - 1980
- Water retentivity and compressive strength: IS 2250 – 1981 (2000)
- Flexure bond strength: ASTM C1072
- Masonry compressive strength: IS: 1905 – 1987 (2002)

**(b) Concrete**

- Consistency of concrete: IS: 1199 – 1959 (2004)
- Drying shrinkage: IS: 1199 – 1959 (2004)
- Stress-strain relationships: IS: 516 – 1959 (2004)
- Bond strength (pull out test): IS: 2770 (Part I) – 1967 (2002)
- Compressive strength and flexure strength: IS: 516 – 1959 (2004)

## 4. Test results and discussion for mortars

### *(a) Characteristics of M-sand and natural river sand*

Fig. 1 shows texture and shape of the M-sand and natural river sand particles. The grain size distribution curves of these sand samples are displayed in Fig. 2. Also, the upper and lower bound grain size distribution of curves of grading Zone-II sand specified in IS 383 code are displayed. Table 3 gives details of the properties of both the types of sand. The following observations can be made from the grain size analysis results in Fig. 2 and the results given in Table 1 and Fig. 1.

1. The shape of the M-sand particles resembles with those of river sand particles. Flaky and elongated coarse particles are absent in the M-sand.
2. M-sand is well graded and falls within the limits of grading Zone-II sand, grading limits specified in IS 383 code. Code allows 20% fines less than 150 microns for crushed stone sands.M-sand is devoid of clay size fraction and the fraction below 150 microns is about 18% (IS 383 code limit is 20%).
3. The specific gravity is 2.63 and 2.67 for M-sand and river sand respectively. Bulk densities of M-sand and river sand are 15.1 and 14.5 kN/m3 respectively. Bulk density of M-sand is marginally higher than that of river sand. The pH of M-sand and river sand is 10.11 and 8.66 respectively.
4. M-sand contains typical rock forming minerals like quartz, feldspar, mica group of minerals, etc as revealed by X-ray diffraction (XRD) studies. Rock forming minerals like Quartz, feldspar, etc are basically inert in nature. Mica group consists of muscovite, biotite, boromuscovite, etc. The mica group of minerals are not interfering in the cement hydration and strength development in mortars and concrete.

**Table 3 – Properties of M-sand and river sand**

| Properties | Type of Sand | |
|---|---|---|
| | M-sand | River sand |
| Textural composition (% by weight) | | |
| Coarse Sand (4.75 – 2.00 mm)<br>Medium sand (2.00 – 0.425 mm)<br>Fine sand (0.425 – 0.075 mm) | 28.1<br>44.8<br>27.1 | 6.6<br>73.6<br>19.8 |
| Specific gravity | 2.63 | 2.67 |
| Bulk density (kN/m3) | 15.1 | 14.5 |
| pH | 10.11 | 8.66 |
| Chemical composition ofM-sand | | |
| M-sand contrains elements like Si, Al, Ca, Mg, Na, K, Fe, etc. | | |


**Fig. 1 – Texture of M-sand and natural river sand particles**

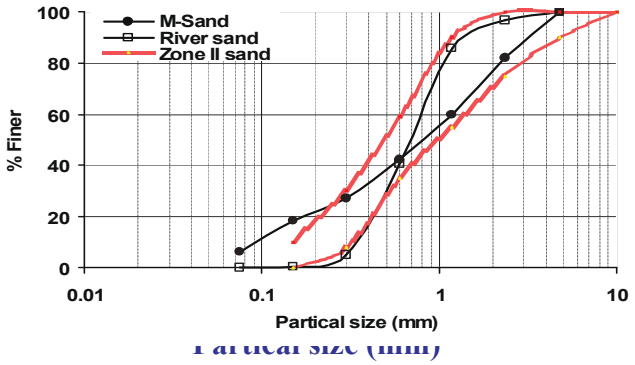


**Fig. 2 – Grain size distribution curves of the M-sand and River sand (b) Mortar characteristics (b)**

**b) Mortar characteristics using M-sand and river sand:**

**Flow/workability:** Workability of the mortar should be such that it allows the mason to spread the mortar easily and adheres well to the masonry units. Mortar composition as well as watercement ratio affects the workability. Workability of the fresh mortar can be measured by conducting a flow table test following the BS – 4551 code guidelines. Workability of fresh mortar is expressed as flow value. Fig. 3 shows mortar flow at 85% using M-sand in 1:6 cement mortar.

Fig. 3 – M-sand mortar at 85% flow (no segregation)

Flow tests were performed on the two types of mortars in order to establish relationships between flow and water-cement ratio. Figs. 4 and 5 show the flow versus water-cement ratio relationships for the 1:6 and 1:4 cement mortars respectively. Mortars with M-sand exhibit better flow characteristics. For example in case of 1:6 cement mortar, to achieve 100% flow the water cement ratio required is about 1.4 using M-sand and 1.75 using river sand. Similarly, for 1:4 cement mortar, it is 0.88 and 1.20. To achieve a given flow value, mortar with M-sand requires lower water-cement ratio. Lower water-cement ratio results in better characteristics for the mortars in hardened state. Flow values of different types of mortars from various construction sites were measured by Reddy and Gupta (2005) and they indicate a range of 85 – 100% for flow values.

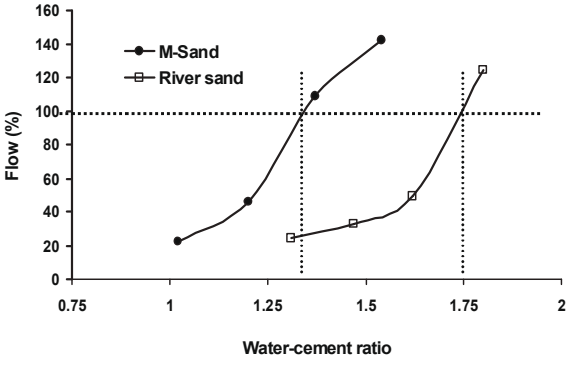


Fig. 4 – Flow versus water cement ratio for

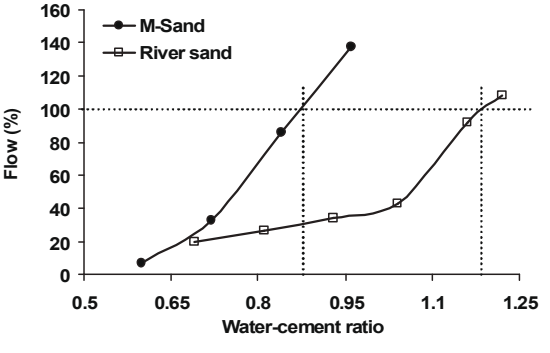


Fig. 4 – Flow versus water cement

cement mortar ratio for 1:41:6 cement mortar

***Compressive strength:*** Compressive strength of mortars was assessed following the guidelines of IS 2250 code. Mortar flow (indicates workability) measurements carried out by Reddy and Gupta (2005) for a set masonry mortars collected from the different construction sites indicate a range of 85 – 100%. Therefore, the strength of the mortars was examined at two flow values of 85 and 100%. The water-cement ratio corresponding to the flow of 85 and 100% for the 1:4 and 1:6 cement mortars (using river sand and M-sand) is given in Table 4. For a given flow value there is considerable difference in the water-cement ratio of mortars using M-sand and river sand. Mortars with M-sand exhibit better flow and need lower water-cement ratio when compared to mortars with river sand.

Compressive strength values given in Table 4 represent mean of four specimens. Considerable increase in compressive strength of mortars between 7 and 28 days curing irrespective of flow value and sand type for both the mortars. There is doubling of mortar strength when M-sand is used instead of river sand. 28 day compressive strength of 1:6 and 1:4 cement mortars is about 8 and 16 MPa respectively for flow in the range of 85 – 100%. The results reveal that use of Msand produces higher strength for the mortars.

**Table 4 - Compressive strength mortars**

| Mortar Proportion (by volume) Cement : sand | Flow (%) | Water – cement ratio | | cement ratio strength (MPa) | | | |
|---|---|---|---|---|---|---|---|
| | | River sand | M-Sand | River sand | | M-Sand | |
| | | | | 7 days | 28 days | 7 days | 28 days |
| 1:6 | 85 | 1.72 | 1.30 | 2.10 | 4.03 | 5.15 | 8.53 |
| | 100 | 1.75 | 1.34 | 1.96 | 3.82 | 4.88 | 8.19 |
| 1:4 | 85 | 1.13 | 0.84 | 2.84 | 7.35 | 12.89 | 15.96 |
| | 100 | 1.18 | 0.88 | 2.77 | 6.04 | 11.89 | 15.96 |

***Water retentivity:*** Fresh mortar is sandwiched between bricks or blocks during the construction of masonry. Moisture gets sucked by the brick or block from the water rich mortar joint. The amount of water sucked by the brick or block from the mortar depends upon the porosity of the masonry unit, moisture content of the brick or block at the time of construction and the ability of the mortar to retain water against brick suction. Thus water retentivity can be defined as the ability of the mortar to retain water against the suction of the brick or block. Mortar has cementitious materials, thus initially it requires certain amount of water for the hydration process and development of strength. If the water loss from the mortar is large, this leads to low watercement ratio in the mortar and improper hydration of the fresh mortar, thereby affecting the mortar characteristics and the bond development. Water retentivity of the mortar depends upon various factors like the mix proportion, water-cement ratio, type of cementitious binder, etc. ater retentivity of 1:6 and 1:4 cement mortars was examined using the procedure laid down in IS-2250 code.

Water retentivity values for 1:6 cement mortar using river sand and M-sand are 27.3% and 28.5% respectively. For 1:4 cement mortar it is 25.6% and 35.6% for river sand and M-sand respectively. Thus, water retentivity of mortars improves with the use of M-sand. Better water retentivity results in better strength and bond development.

***Brick-mortar bond strength:*** There should be good bond between the mortar and the brick for the masonry to perform satisfactorily. Bond strength becomes significantly important when the masonry has to resist tensile and shear stresses. Large number of parameters pertaining to bricks/blocks, mortars and

construction practices influence the masonry bond strength. Surface characteristics of the masonry unit (pore size distribution, porosity, etc.), moisture content of the unit at the time of construction, absorption characteristics of the unit and mortar composition are some of the important characteristics influencing brick-mortar bond development. Brick-mortar bond strength can be measured by testing the masonry prism using a bond-wrench test set-up. ASTM C1072 code gives the procedure for bond-wrench test to evaluate the flexure bond strength of masonry prism. Fig. 5 shows the modified bond wrench set-up used in determining the flexure bond strength of masonry prism.

Flexure bond strength of masonry prisms using local burnt clay bricks and the 1:6 cement mortar with M-sand and river sand was determined. Six prisms were tested in each category to get the mean value of flexure bond strength. The flexure bond strength of masonry using 1:6 cement mortar (with 85% flow) was 0.06 MPa and 0.15 MPa for river sand and M-sand mortars respectively. The flexure bond strength of masonry prism has improved by 150% when M-sand was used instead of river sand in the 1:6 cement mortar.

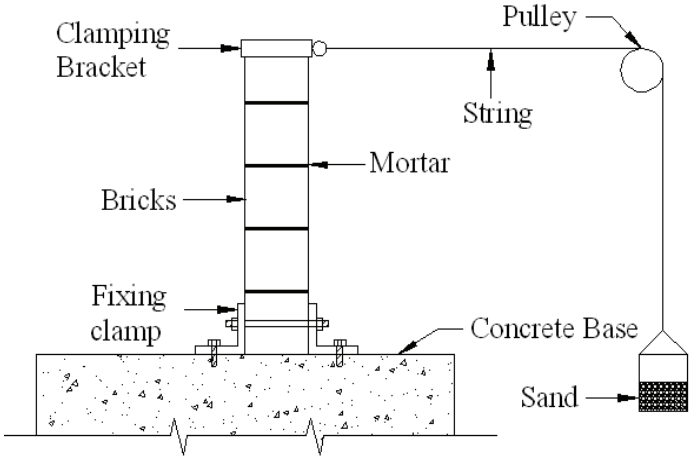


Fig. 5 – Flexure bond test set-up for masonry prism

***Compressive strength of masonry:*** Compressive strength of masonry was examined by testing five brick high stack bonded masonry prisms. Prisms (size: 105 x 225 x 445 mm, having height to width ratio of 4.23) were prepared using burnt clay bricks having compressive strength of 10.1 MPa (mean value) and using 1:6 cement mortar with river sand and M-sand. Compressive strength of the masonry prisms was 3.35 MPa and 4.38 MPa for mortar with river sand and Msand respectively. These are the mean values of six prisms. Nearly 30% increase in masonry strength due to the use of mortar with M-sand was observed. Fig. 6a shows the masonry prism failure (typical vertical splitting cracks) using mortar withM-sand.

***Stress-strain relationships for masonry:*** Stress-strain relationship was generated by testing stack bonded masonry prisms built using 1:6 cement mortar. The longitudinal strains were monitored through electrical resistance strain gauge as shown in Fig. 6b. The stress-strain curve for the masonry is shown in Fig. 7. The initial tangent modulus for the masonry is 1200 MPa and 500 MPa for the mortar with M-sand and river sand respectively. Modulus of masonry with M-sand is more than double that of modulus for masonry with river sand. The increase in modulus can be attributed to better bond between the mortar and the brick.

(a) Typical failure pattern

(b) Prism with strain gauge

Fig. 6 – Stack bonded masonry prisms under compression tests

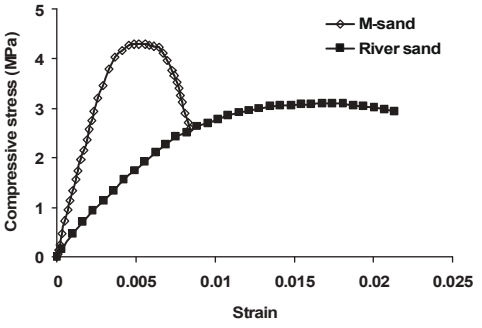


Fig. 7 – Strain-strain relationships for the masonry

## 5. Summary of results on mortars

The results of the tests on mortars and masonry using river sand and M-sand as fine aggregate can be summarised as follows.

1. Grading limits of M-sand falls within the grading Zone-II sand, grading limits specified by IS 383 code.
2. Shapes of the M-sand particles resemble the shape of river sand particles.
3. Bulk density and specific gravity of M-sand are comparable to those of river sand.
4. Mortars with M-sand show better workability and require lower water-cement ratio to achieve a specific flow value when compared to mortars with river sand.
5. M-sand mortars show higher water retentivity values
6. Compressive strength of mortar with M-sand is higher than that of the mortar with river sand for mortar flow in the range of 85 – 100%.
7. Flexure bond strength of masonry using M-sand mortar is significantly higher when compared with the mortar using river sand.
8. M-sand mortar shows higher compressive strength and modulus for masonry when compared with the values for masonry using river sand.

## 6. Test results and discussion for concrete

Standard mix proportions for commonly used M20 and M30 grade concrete were selected following IS 456 code guidelines are given in Table 5. Various tests on fresh and hardened concrete were conducted following the guidelines of standard codes of practice mentioned in section 3.

***Consistency of concrete:*** This was measured by conducting a slump test. Keeping the watercement ratio at 0.50 and using super plasticizer (at 15 ml per kg of cement as specified by the manufacturer) the slump values were determined for both M20 and M30 mixes using river sand and M-sand as fine aggregate. Concrete with river sand gives higher slump value. IS 456 code specifies a minimum slump of 50 mm for medium workability. Both the concrete mixes meet this requirement irrespective of the type of sand.

***Compressive and flexure strength of concrete:*** Compressive strength was determined by testing the 28 days cured cube specimens (of size: 150 mm). The mean compressive strength values of 5 cube specimens are reported in Table 5. Compressive strength of M20 and M30 grade concretes with M-sand as fine aggregate is 6 – 9% higher when compared with the results using river sand as fine aggregate.

Flexure strength of concrete was determined using prisms (size: 100 x 100 x 500 mm) following the IS 516 code guidelines. Three specimens were tested in each category and the mean values are reported in Table 5. The results show that use of M-sand as fine aggregate lead to 12 – 15% higher flexure strength when compared to the results of concrete with river sand.

Table 5 – Characteristics of concrete usingM-sand and river sand
* C: cement, FA: Fine aggregate, CA: Coarse aggregate;
Standard deviation values in parenthesis

| Mix proportion (by weight) (C:FA:CA)* | W/C ratio | Slump (mm) | River sand | | M-Sand | | |
|---|---|---|---|---|---|---|---|
| | | | Compressive strength (MPa) | Flexure strength (MPa) | Slump (mm) | Compressive strength (MPa) | Flexure strength (MPa) |
| 1: 1.66: 3.33 (M30 grade) | 0.50 | 80 | 42.20 (1.00) | 42.20 (1.00) | 55 | 44.78 (2.59) | 4.54 (1.15) |
| 1: 2: 4 (M20 grade) | 0.50 | 110 | 37.68 (6.06) | 3.29 (0.16) | 76 | 41.03 (3.95) | 3.86 (0.33) |

***Bond strength:*** The bond between rebar and the concrete was examined by conducting a pull out test. The pull out test was performed using 12 mm tor-steel bar for M20 concrete following the IS 2770 code guidelines. Fig. 8 shows the pull-out test specimens and the test set-up. The bond strength at failure (mean of three specimens) with river sand and M-sand as fine aggregate is 13.9 and 14.1 MPa respectively. The bond strength is marginally higher in case of M20 concrete with M-sand.

(a) Test specimen

(b) Test set-up

Fig. 8 – Pull-out test

***Stress-strain characteristics of concrete:*** Concrete cylindrical specimens of size 150 mm diameter and 300 mm height were cast using M-sand and river sand as fine aggregates. After 28 days of curing the cylinders were tested in a displacement controlled testing machine. Fig. 9 shows the test set-up with electrical resistance strain gauge in position and the typical failure of the concrete cylindrical specimen. Fig. 10 shows the stress strain curves (mean of three) for M20 concrete with M-sand and river sand as fine aggregate. Both the concretes show similar stressstrain behaviour. The secant modulus (at 30% of compressive strength) of the concrete (M20 grade) with M-sand and river sand is nearly equal at 24,000 MPa. The strain corresponding to peak stress is 0.0017 and 0.0021 for the concrete using river sand andM-sand respectively.

Fig. 9 – Test set-up for stress-strain measurements and the failure pattern of concrete cylinder

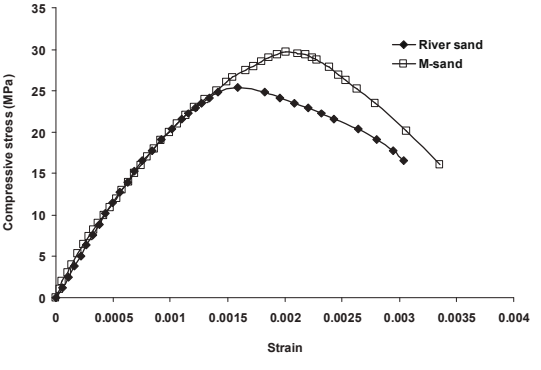


Fig. 10 – Stress-strain curve for concrete with M-sand

**Drying shrinkage:** Shrinkage studies are under progress

## 7. Summary of results on concrete

Two commonly used grades of concretes M20 and M30 were examined for their characteristics in fresh and hardened state. The results can be summarised as follows.

1. IS 456 code specifies a minimum slump of 50 mm for medium workability. M20 and M30 grade concrete mixes meet this requirement when M-sand is used as fine aggregate.
2. Compressive strength of concrete (M20 and M30) with sand is marginally higher (6 –9%) when compared to the concrete with river sand.
3. Flexure strength of M-sand concrete is 12 – 15% higher than that of river sand concrete.
4. Pull out bond test indicates marginally higher bond strength for M-sand concrete when compared with the bond strength of river sand concrete.
5. The stress-strain behaviour of M-sand and river sand concretes are similar. The secant odulus (at 30% of compressive strength) of the M20 grade concrete with M-sand and river sand is nearly equal at 24, 000 MPa.

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## Summary and Recommendations

Characteristics of mortars, masonry and concrete were examined using M-sand as fine aggregate and the results were compared with those of river sand as fine aggregate. Two mortars (1:6 and 1: 4, cement : sand, by volume) and two grades of concrete (M20 and M30) were considered in these investigations. M-sand supplied by the Department of Mines and Geology was used. A natural river sand belonging to grading Zone – II sand classification (IS 383) was used for the purposes of comparison. The following points emerge from the experimental investigations using M-sand and river sand examined in the present investigation.

1. M-sand is a well graded material and falls within the grading limits specified by the IS 383 code for grading Zone –II sand. Shape of the M-sand particles resemble with those of river sand particles. Flaky and elongated coarse particles are absent in the M-sand.
2. Mortars withM-sand exhibit better workability and water retentivity characteristics.
3. Compressive strength of mortars with M-sand is higher than that of the mortar strength with river sand for a given flow.
4. Flexure bond strength of masonry using M-sand mortar is significantly higher than the mortar using river sand. This indicates better adherence of mortar to the masonry unit.
5. Compressive strength and modulus for masonry using M-sand mortar is higher when compared with the values for masonry using river sand.
6. Concrete with M-sand possess higher strength (compressive and flexure) when compared with river sand concrete.
7. M-sand concrete possess better bond strength between rebar and concrete. M-sand concrete and river sand concrete have similar stress-strain behaviour and stress-strain characteristics.

IS 2116 and IS 383 codes on sand for mortars and masonry specify the use of crushed stone sand for concrete and masonry mortar. Some of the definitions and notes on crushed stone sand mentioned in these two IS codes are highlighted below.

1. IS – 2116, clause 2.3: Crushed stone sand and crushed gravel sand: A fine aggregate produced by crushing of stone or natural gravel.
2. IS – 383, clause 1.1: This standard covers requirements for aggregates, crushed or uncrushed, derived from natural resources, such as river beds, deposits, rocks, bed rocks and gravel.
3. IS – 383, clause 2.1.2: Crushed stone sand is a fine aggregate produced by crushing of hard stone
4. IS – 383, clause 2.1.3: Crushed gravel sand is a fine aggregate produced by crushing of natural gravel.
5. IS – 383, Table 4 (clause 4.3): This Table is about fine aggregates. Fine aggregates are grouped under four grading zones (Grading Zone I to IV). Table gives upper and lower bound limits for the grain sizes in each grading zone. Note 1 in this Table specifies the permissible limit enhancement for crushed stone sands. Note 1 reads as: “For crushed stone sands, the permissible limit on % passing 150-micron IS Sieve is increased to 20%. This does not affect the 5% allowance permitted in clause 4.3 applying to other sieve sizes”.

***The present investigation shows that the characteristics of mortars and concrete using M-sand as fine aggregate are superior when compared to the natural river sand as fine aggregate. The results pertain to the most commonly used grading zone – II sand. M-sand falling within the grading Zone II sand, grading limits specified by IS 383 code and manufactured from the hard rock is suitable as fine aggregate in concrete and masonry mortars. Also, IS-2116 and IS 383 codes permit the use of crushed stone fine aggregate in masonry mortars and concrete.***

# Media Focus



## Real estate regulator to get head, members soon

Will make sure only persons of integrity and those without financial interest in the sector are picked for the posts, says official

T. RAMAKRISHNAN
CHENNAI

The Tamil Nadu Real Estate Regulatory Authority (TNRERA), a body meant for protecting the interests of the consumers, is all set to get a chairperson and two members shortly.

The State government will, in a matter of days, announce the appointment of the chief and members, says an official in the Housing Department. A three-member selection committee, comprising a judge of the Madras High Court, is said to have completed its task of zeroing in on probable candidates for the three slots.

For the time being, Principal Secretary (Housing) [S. Krishnan] is functioning as the Authority. In December, B. Rajendran, a former judge of the High Court, was made chairperson of the Real Estate Appellate Tribunal, on the basis of the recommendation of Chief Justice Indira Banerjee. Both RERA and the Tribunal will have jurisdiction over Andaman and Nicobar Islands too.

Responding to reports of pressure being exerted on the government to include representatives of the real estate industry in RERA, the official pointed out that the government itself had invited nominations from different sections. At the same time, the authorities are also "conscious that only persons of integrity beyond question" and those who have "no financial interests" in the sector should be appointed to the Authority. M. G. Devesahayam, civil society activist, who is often critical of the working of various standing commissions, said that unless the government picked up "independent professionals" for the TNRERA, the body would not function as a meaningful institution.

However, the official, comparing the TNRERA with the Electricity Regulatory Commission and other bodies for human rights and women, said the former was closer to the Reserve Bank of India and the Securities and Exchange Board of India. It has got "extensive powers" including the power to order imprisonment, if one were to go by Section 59 of the Real Estate (Regulation and Development) Act, 2016. "Certainly, it is not an advisory body, unlike the Commission for Women or the Human Rights Commission," the official said.

### Huge expectations

An urban planner, speaking on the condition of anonymity, said those who were going to be part of the Authority should be able to balance the interests of the consumers and those of the sector. "Already, the industry is struggling to overcome the lean phase that it has been going through on account of a variety of factors," she said.

S. Ramaprabhu, secretary, southern centre of the Builders' Association of India (BAI), said that while his organisation welcomed the establishment of the Authority, it did not want the new body to conduct itself as yet another "inspection cell" of the Chennai Metropolitan Development Authority (CMDA) or the Directorate of Town and Country Planning. "We will have no issues if the TNRERA functions with utmost transparency," he said, urging the regulator to open offices in other cities of the State such as Coimbatore, Madurai and Tiruchi.

On the row over the temporary location of the Authority's office on the premises of the CMDA, the official said that while the government was looking for a permanent site for the TNRERA, the ties between the Authority and the CMDA are not like the one between the regulator and the regulated, as the TNRERA has no jurisdiction over the CMDA.

### Regulating realty sector – the Tamil Nadu way

An offshoot of the 2016 Central law on real estate regulatory authority, the rules were notified by the State in June 2017. Some key facts:

- 30% of the State's economy and 13% of workers are dependent on the construction and real estate sectors
- All projects and agents to be registered with TNRERA
- Agents include, in TNRERA's words, "property dealers, brokers and middlemen by whatever name called."
- Ongoing and future projects, undertaken by both private players and the Housing Board, covered
- Slum Clearance Board's projects exempted
- No sale to take place without registration
- 70% of amount collected from allottees to be deposited separately
- Only carpet area matters, not plinth area
- Authority to host on its website details regarding promoters
- Violations to attract penalty up to 10% of project cost or 3-year imprisonment or both



CHENNAI THE HINDU
SATURDAY, JANUARY 20, 2018

## HC confirms order to close down all sand quarries

Hits out at government for having failed to protect riverbeds; rules that regulating import of sand doesn't fall under the State's ambit

MOHAMED IMRANULLAH S.
CHENNAI

In a hard-hitting judgment, a Division Bench of the Madras High Court on Friday held the State government squarely responsible for having failed in its duty to protect riverbeds from indiscriminate sand mining and confirmed a single judge's November 29 order directing the State government to impose a blanket ban on sand mining within six months.

Justices K. Kalyanasundaram and T. Krishnavalli said: "If ecology is not protected, there is no doubt that it will endanger the very existence of human life and we might not even have a future generation. Therefore, as a custodian of fundamental as well as constitutional rights, it is the duty of this court to ensure that the environment is protected."

**Stringent steps:** The court had ordered the setting up of permanent check posts and equipping them with CCTV cameras, besides severe penal action against those misusing import permits.

The Bench also confirmed other directions issued by Justice R. Mahadevan, who had directed the State government to permit the sale of imported river sand either by way of executive instructions or by enacting a law.

Further, to ensure that local sand dealers do not continue to exploit the rivers by misusing the permission granted to them to sell imported sand, the judge had ordered strict vigilance by establishing permanent check posts and equipping them with closed circuit television cameras, besides subjecting the guilty to severe punishment.

Concurring with this, the Division Bench said policy decisions on export and import were within the domain of the Centre, which had already permitted import of river sand, and therefore, the State government could not have any objection. Besides, Sections 15 and 23C of the Mines and Minerals (Development and Regulation) Act of 1957 empower the State governments to frame statutory rules for preventing illegal mining, transportation and storage of only domestic and not imported river sand.

> If ecology is not protected, there is no doubt that it will endanger the very existence of human life
> MADRAS HIGH COURT

### Appeal by State

The judgment was delivered on a writ appeal preferred on behalf of the State Government challenging the single judge's order. The government contended that the judge had traversed beyond the scope of the writ petition by ordering a ban on sand mining.

Rejecting this, the Bench said, "The court (single judge) was able to see that the actions of the State were not only [not] in accordance with law but also not in the interest or welfare of the State and rather are in the nature of suiting individual commercial interests [of local sand dealers]. More particularly, when alternate source is available, the court felt it could be used to preserve the ecology of the State."

Authoring the judgment, Mr. Justice Kalyanasundaram pointed out that the State has a long history of illegal mining and the government was unsuccessful in curbing it. Rejecting the government's contention that imported sand with 81.6% silica content may not be fit for civil constructions, the Bench agreed with senior counsel M. Vallinayagam and Isaac Mohanlal, representing the importer and the subsequent purchaser, that only sand with above 95% of silica content could not be used for construction.

The judges also noted the fact that Karnataka had imported river sand from Malaysia and that many sky scrapers in Malaysia had been built only with its river sand. Experts in Malaysia and India had certified the quality of the sand that had been imported by the petitioner firm. The single judge had directed the government to also close down, in a phased manner, quarries where minerals such as granite were mined and the Bench confirmed this direction too.

NADU

# Curbs on direct import of sand

PWD named the sole authority for storing and selling sand being brought into the State

T. RAMAKRISHNAN
CHENNAI

The State Public Works Department (PWD) has been made the sole authority to deal with imported river sand as well as sand brought from other States. It alone shall have the powers of storing and selling such river sand, a Government Order issued said, thereby banning private players from storing or selling imported sand.

Any consignment of sand coming to the State for construction purposes will have to be sold only to the PWD at the rates fixed by the department on a case-to-case basis, according to the government order issued on December 8.

This decision follows the permission given by the Madurai Bench of the Madras High Court in late November for the import of sand from Malaysia on a petition filed by a private firm, whose consignment, subsequent to its arrival at the Thoothukudi port trust, was seized by the police for "want of valid transport permit."

**Mounting trouble:** Anyone importing sand into Tamil Nadu has to sell it to the Public Works Department at the rate fixed by the State government. KEVIN PAUL

The government order says the PWD would have the power to refuse any consignment of imported sand that has failed to fulfil the department's specifications.

No consignment would be permitted to be taken outside the State. For the transport of such sand within the State, the seller or the buyer should have a valid transport permit issued by the PWD.

One of the reasons adduced in the order is that "alternative sources for fine aggregates like imported sand, if allowed into the State without regulation, may pose a challenge to public safety at large, because of substandard aggregates getting into the market, which would lead to poor quality of construction and pose a grave risk to life and property." The order states that "it is desirable" for drawing up regulations for "the sale of ordinary sand imported from other countries or brought from other States/ Union Territories" with a view to meeting "the growing imbalance" between demand and supply in the State and supplement "indigenous sand" for construction.

**Quality control**

At present, there are 14 river sand quarries in the State and a senior official in the PWD asserts that the department is taking care of issues concerning the quality of river sand mined by the authorities.

Criticising the government action, S. Ramaprabhu, secretary, southern centre - Builders Association of India (BAI), says the government could have imposed a blanket ban on the import of sand instead of laying down "such guidelines." As regards the apprehensions raised in the government order on the quality of imported sand, he complains that "adulterated sand" is being sold in the domestic market.

A government official points out that the PWD has "no locus standi" in issuing an order on storage, transportation and sale of imported sand, a matter which falls within the domain of the office of the Commissioner of Geology and Mining or the Department of Industries. Through two of its orders in October 2003, the government had permitted the PWD only to "quarry and sell" sand, says the official add.

6 TIMES REGION

# Sand imported from Malaysia to Tuticorin diverted to Mangaluru

## Vessel Failed To Get All Clearances

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@timesgroup.com

**Chennai:** Yet another attempt to import sand from abroad to Tamil Nadu has hit A road block. A vessel carrying 58,618 metric tonnes of river sand from Malaysia to Tuticorin has been diverted to Mangaluru after it failed to get the statutory clearances to offload the sand.

Official sources with the V O Chidambaranar Port at Tuticorin said the importer has decided to shift the consignment to the New Mangalore Port at Karnataka. "We have received a letter from the importer on Friday that he wants to move the vessel to Mangalore. So, it would be diverted to the new destination," a port official told TOI.

The vessel, MV Groton Eagle, arrived at the Tuticorin on the midnight of January 3. It was at the anchorage awaiting clearances for offloading the consignment, sources said. "The port did not have any issues with the import, but necessary clearances must be given by the state government," another official said adding that the ship would not have obtained it. "The vessel would depart from the anchorage and reach the New Mangalore Port in two days," the port official added. It is learnt that a Chennai-based agency has sourced the sand from Malaysia.

The development comes three months after an unsuccessful attempt by a Pudukottai-based private firm to import sand from overseas was stone-walled with the sand lying idle in the yards of the V O Chidambaranar Port at Tuticorin. Though the vessel Anna Dorothea from Malaysia arrived and offloaded the sand in October last year, it is stuck at the port in the wake of failure to obtain the mandatory clearance from the state government. The importer has taken up the issue with Madras high court.

Ramaprabhu, honorary secretary of the Builders' Association of India's Southern Centre, Chennai said that diversion of the vessel with river sand meant for Tamil Nadu was a setback for the construction sector. "The current cost of per cubic feet of sand is sold at Rs 150. Still, we cannot get quality sand. Against this backdrop, importing sand is the only viable solution because the key construction material can be imported at a cost of Rs 100 per cubic feet from aboard," he said.

Noting the guidelines by the government on importing sand, he said, "As per the new guidelines, imported sand could be sold only to the PWD. This would discourage importers from sourcing sand from abroad."

On a daily basis, Tamil Nadu requires about 20,000 loads of sand, of which the demand for Chennai and peripheries alone accounts for 7,500. Only 2500 to 3000 loads of sand, however, are currently scooped from 14 quarries in the state.

**RULES OF TRADE** REGULATIONS REGARDING IMPORT OF SAND TO TAMIL NADU

- The right to store or sell sand imported from overseas or brought from other states for construction purposes is vested with the Public Works Department (PWD)
- The sand should be sold only to the PWD at the rates fixed by PWD
- Import of such sand must be accompanied with documents of origin
- The PWD will collect samples and ensure that the sand is as per the prescribed specifications
- Transporting imported sand between ports within Tamil Nadu or other states can be executed only with a valid licence
- Vehicles found transporting such sand from other countries or states would be treated as violation to rules

**DEMAND AND AVAILABILITY OF SAND**

Tamil Nadu requires about **20,000** loads of sand on a daily basis

Presently only **2,500-3,000** loads of sand are scooped from 14 quarries in the state

A portion of the demand is also met by Manufactured Sand (M Sand)

# Strict sand import rules leave builders worried

Govt order says PWD alone reserves the right to sell imported sand

C SHIVAKUMAR @ Chennai

TAMIL Nadu has for the first time brought in regulations on import and buying sand from outside the State. But, builders say the regulations are so stringent that it would make import of sand very difficult.

The carefully worded government order issued by Public Works Department on December 8 (but made public only on Friday), says the department alone reserves the right to sell imported or sand brought from outside the State.

Though it does not explicitly bans import or purchase of sand from outside the State, the order could mean that such sand could be allowed only for own use of the importer or the purchaser.

Even then, Public Works Department alone reserves the right to store the sand and it can be transported only with the permission of the department. This could mean the importer may have to store sand in a PWD godown and transport it to his site after taking permission from the department.

PWD can also reject the use of such sand for construction purpose if the sample test by the department shows the material is substandard.

If the importer wishes to sell the sand, he can do it only to PWD at the price fixed by the department.

The order justified the restrictions since unregulated import of sand could lead to invasion of exotic flora and fauna. Also, substandard sand could result in poor construction quality and hence a threat to people's lives.

"Why would a developer import 55,000 tonnes of sand at a cost of ₹7 crore and risk the threat of it getting rejected," asks S Rama Prabhu, secretary, Builders Association of India. He says the government itself better import the sand and sell it to builders.

> **Why would a developer import 55,000 tonnes of sand at a cost of ₹7 crore and risk the threat of it getting rejected. The government itself better import the sand and sell it to builders**
>
> S Rama Prabhu, secretary, Builders Association of India

The government order was silent in this aspect.

While the Madras High Court order in November, which was the first to point out the lack of regulation on import of sand, suggested a sand corporation for the purpose, the government order is silent on this aspect.

Prabhu also questioned why the PWD is not conducting the same checks on local sand whose quality is also being questioned. He said the first consignment of sand imported from Malaysia is facing risk of being returned as it has lot of silicon.

Currently, the second consignment of sand has also arrived in Thoothukudi from Malaysia, Prabhu said.

Ban on sand mining in the State has already resulted in spiralling of prices to ₹135 per cubic feet.

A retired senior engineer from Public Works Department said the government should work on creating a Sand Corporation, as proposed by the former Chief Minister J Jayalalithaa, to import sand from outside the country. The proposal was mooted exclusively to sell and procure sand with PWD engineers monitoring the quality. The proposal never materialised.

Meanwhile, developers question why the government is trying to control import of sand from other countries when the same parameters are not being adopted in import of steel, cement, coal and other things.

Suresh Krishn, president of Confederation of Real Estate Developers' Association of India (CREDAI), Chennai Chapter, who was vociferous that government allow sand to be imported, says that when the government is permitting import of steel and cement why it is controlling the import of sand by not allowing private players.

# SOUTHERN CENTRE ACTIVITIES

**10.01.2018 மய்யத்தேர்தல் 2018-19**

அகில இந்திய கட்டுநர் வல்லுநர் சங்கத்தின் தென்னக மய்யத் தேர்தல் 2018-19க்கான அறிவிப்புகள் டிசம்பர் 25ந்தேதி வெளியிடப்பட்டு மனுக்கள் வழங்கப்பட்டது. திரு. O.K. செல்வராஜ் அவர்கள் தேர்தல் அதிகாரியாகவும், திரு. S, சத்தியமூர்த்தி அவர்கள் துணைத் தேர்தல் அதிகாரியாகவும் செயல்பட்டனர்.10.01.2018 அன்று ஓட்டல் அசோகாவில், தேர்தல் முடிவுகள் அதிகாரப்பூர்வமாக அறிவிக்கப்பட்டது. மய்ய நிர்வாகிகள், செயற்குழு உறுப்பினர்கள் 15, பொதுக்குழு உறுப்பினர்கள் - 26, பொதுக்குழு(Patron) - 9 உறுப்பினர்கள் போட்டியின்றி தேர்ந்தெடுக்கப்பட்டனர். பெரும்பாலான மய்ய உறுப்பினர்கள் இந்த கூட்டத்திற்கு வந்து சிறப்பித்தனர்.

**14.01.2018 GST கூட்டம்**

GST பற்றிய கூட்டத்தில் கலந்து கொள்ளCIIல் இருந்து நமக்கு அழைப்பு வந்திருந்தது. அதில் கலந்து கொள்ள அகில இந்திய முன்னாள் தலைவர் திரு. R. இராதாகிருட்டிணன், உடனடி முன்னாள் அகில இந்திய துணைத்தலைவர் திரு. Mu. மோகன், மய்யத்தலைவர் திரு. K. வெங்கடேசன், மய்யத் துணைத்தலைவர் திரு. L. வெங்கடேசன், செயலாளர் திரு. S. இராமப்பிரபு, தென் பிராந்திய செயலாளர் திரு. R. சிவக்குமார் ஆகியோர் கலந்து கொண்டு மாண்புமிகு அருண் ஜெட்லி அவாகளிடம் நமது கோரிக்கை மனு அளிக்கப்பட்டது.

**15.01.2018 மாண்புமிகு ஆளுநர் அவர்களுடன் சந்திப்பு**

நமது விருது வழங்கும் விழாவில் சிறப்பு விருந்தினராக கலந்து கொள்ள அழைப்பு விடுப்பதற்காக மாண்புமிகு ஆளுநர் அவர்களை நமது அகில இந்திய முன்னாள் தலைவர் திரு. R. இராதாகிருட்டிணன், மய்யத்தலைவர் திரு. K. வெங்கடேசன், மய்யத் துணைத்தலைவர் திரு. L. வெங்கடேசன், செயலாளர் திரு. S. இராமப்பிரபு, தென் பிராந்திய செயலாளர் திரு. R. சிவக்குமார் ஆகியோர் சந்தித்தனர்.

**19.01.2018 -21.01.2018 28வது அகில இந்திய மாநாடு**

பெங்களூரில் 28வது அகில இந்திய மாநாட்டு கூட்டம் ஜனவரி 19 முதல் 21 வரை நடைபெற்றது. அதில் நமது மய்யத்திலிருந்து அகில இந்திய முன்னாள் தலைவர் திரு. R. இராதாகிருட்டிணன், உடனடி முன்னாள் துணைத்தலைவர் திரு. Mu. மோகன், மய்யத்தலைவர் திரு. K. வெங்கடேசன் அவர்களும், மய்யச் செயலாளர் திரு. S. இராமப்பிரபு, பொருளாளர் திரு. L. சாந்தகுமார், இணைச் செயலாளர் திரு. R. பார்த்திபன் , தென் பிராந்திய செயலாளர் திரு. R. சிவக்குமார், மாநிலச் செயலாளர் திரு. S. அய்யநாதன், மாநிலப் பொருளாளர் திரு. O.K. செல்வராஜ் மற்றும் நமது செயற்குழு, பொதுக்குழு உறுப்பினர்களும் கலந்து கொண்டனர். செயற்குழு மற்றும் பொதுக்குழு உறுப்பினர்கள் உட்பட 50க்கும் மேற்பட்ட உறுப்பினர்கள் கலந்து கொண்டனர்.

**இம் மாநாட்டில் நமது மய்யத்திற்கு**

**1.Overall Best BAI Centre, above 200 members (9th Consecutive Year)**

**2.Special Award of Conducting Platinum Jubilee Celebration**

**3.Best Publication Southern Builders by BAI Centre (3rd - Consecutive Year)**

**4.Best Chairman of BAI Functional Committee -க்கான விருது பீஷ்மா R. இராதாகிருட்டிணன் அவர்களுக்கும்,**

**5.Best All India Vice Presedent (South) விருது திரு Mu. மோகன் அவர்களுக்கும் வழங்கப்பட்டது.**

**22.01.2018 58th PWD ASSESSMENT COMMITTEE MEETING**

தமிழ்நாடு பொதுப்பணித்துறையின் 58வது Assessment Committee Meeting (Special meeting for approval of M- Sand) கருத்தரங்கம் காலை 11 மணிக்கும் PWD campus, Chennai-5 ல் நடைபெற்றது. நமது மய்யத்தின் சார்பாக நமது துணைத்தலைவர் திரு. L. வெங்கடேசன், அவர்களும் தென் பிராந்திய செயலாளர் திரு. R. சிவக்குமார் அவர்களும் கலந்து கொண்டு தன் கருத்துக்களை தெரிவித்தனர்.

**24.01.2017 CMDA MEETING**

CMDA - Master Plan Unit -ன் workshop Hotel Eco Park, Chennai-10 ல் காலை 10மணிக்கு நடைபெற்றது. இதில் செயலாளர் திரு. S. இராமப்பிரபு அவர்களும், செயற்குழு உறுப்பினர் திரு. A. சத்தியநாரயாணா அவர்களும் கலந்து கொண்டனர்.

**26.01.2018 ஆளுநருடன் சந்திப்பு**

மாண்புமிகு ஆளுநரின் வேண்டுகோளுக்கிணங்க நமது மய்யத்தின் சார்பாக அகில இந்திய முன்னாள் தலைவர் திரு. R. இராதாகிருட்டிணன் அவர்களும், மய்யத்தலைவர் திரு. K. வெங்கடேசன் அவர்களும் குடியரசு தினத்தன்று மாலை 6.00 மஅணிக்கு தேநீர் விருந்தில் கலந்து கொண்டார்.

**31.01.2018 Goods & Service Tax கருத்தரங்கம்**

தென்னக மய்யத்தின் சார்பாக கருத்தரங்கம் 31.01.2018 அன்று ஓட்டல் சவேரா சென்னையில் நடைபெற்றது. Taxation குழுத்தலைவர் திரு. S.D. கண்ணன் அவர்கள் நிகழ்ச்சியை தொடங்கி வைத்தார். நமது மய்யத்தலைவர் திரு. K. வெங்கடேசன் அவர்கள் ததிரு. G. ரவீந்திரநாதன், IRS, GST, Commisioner திருமதி. R. சுப்ரியா, Asst. Commissoner, GST , திரு. திலீபன், Asst. Commissioner. திரு.M.K. மதிவாணன் அவர்களை அறிமுகம் செய்து வைத்தார்.

திரு. M.K. மதிவாணன் அவர்கள் GST E-way bill பற்றிய விவரங்களை Power Point Presentation முலம் உறுப்பினர்களுக்கு விவரமாக எடுத்துக் கூறினார். இறுதியாக கேள்வி பதில் அமர்வில் திரு. G. ரவீந்திரநாத் IRS Commissioner அவர்கள் உறுப்பினர்கள் கேட்ட கேள்விகளுக்கு மிகவும் பொறுமையாகவும், தெளிவாகவும் விளக்கமளித்தார். அகில இந்திய முன்னாள் தலைவர் திரு. R. இராதாகிருட்டிணன் அவர்கள் commissioner அவர்களை பாராட்டிப் பேசினார். கலந்து கொண்ட அனைவருக்கும் தென்னக மய்யத்தின் சார்பாக திரு. S. இராமப்பிரபு அவர்கள் நன்றி கூறினார். மதிய விருந்துடன் கூட்டம் நிறைவடைந்தது.

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