SSIDC CORPORATE TIMES

www.ssidcon.org

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SS Infrastructure
Development Consultants Limited

VISION

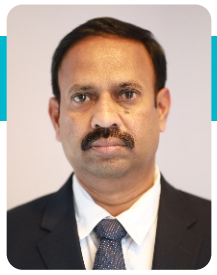
Our Vision is to deliver cost effective, innovative and sustainable infrastructure solutions for a greener future.

MISSION

Our mission is to provide comprehensive, integrated, cost effective, time-bound & feasible infrastructure development solutions and project management services, while adhering to stringent quality standards, processes and procedures, validated quality management systems and reliance on state-of-the-art technologies.

WHAT'S INSIDE

CHAIRMAN'S MESSAGE



Dear Friends,

It is a matter of great pleasure and satisfaction that SS Infrastructure Development Consultants Limited has come up with the first issue of the News Letter "SSIDC Corporate Times."

I believe that the newsletter will serve as a window through which the projects, achievements, clientele, activities and progress made during the period can be viewed.

From a modest beginning in 1987, to becoming one of the leading and eminent Architectural & Structural engineering consulting companies in South India, the growth of SS Infrastructure evolved through a journey of almost three decades of planning, hard work and dedication. This commitment has made SS Infrastructure a recognized brand for the successful delivery of numerous prestigious projects for our clients. It also continues to participate in large scale projects, both independently or in joint ventures with reputed national and international companies.

We are proud of our achievements and are committed to further enhance our capabilities to ensure that we remain at the forefront of the industry. It is our collective effort and responsibility to keep the momentum going.

Over the years, we have been developing and venturing out in new verticals, the recent development being the SSIDC-AES started in Bengaluru providing wide range of advanced engineering solutions to defense, aerospace, civil, automobile and other sectors with a unique approach of product development, simulation driven design and development.

Friends, with the company now being a public limited company, we are both answerable and accountable to the shareholders. We should strive towards maintaining the brand image and brand equity of SS Infrastructure and further heighten it.

Let's plan a future where we achieve new milestones with each passing moment and surge forward in our endeavors.

Jai Hind!

Satyanarayana Sundara
Chairman & Managing Director

COMMEMORATION

Engineers and Architects have been the most instrumental characters for the development of any nation. India is achieving great recognition as a developing nation in the international world and this has been possible due to the significant role of Indian Engineers and Architects.
Sir Mokshagundam Visvesvaraya was one such engineer who changed the face of irrigation system, water resource system and several other things. In order to remember his significant contributions, people of India celebrate **Engineers' day on his birthday i.e., September 15th every year.**

Sir Mokshagundam Visvesvaraya
(15.9.1861 to 12.4.1962)

SSIDC - AES - Advanced Engineering Solutions

An unparalleled business vertical!

As part of the company's growth plan, SSIDC starts an exclusive business vertical as SSIDC-AES in Bengaluru for providing Advanced Engineering Solutions to its existing customers and new clients. AES prioritizes innovation, cost effectiveness, sustainability and environmental compatibility. SSIDC-AES provides wide range of engineering services to various Domains and Sectors – Automotive, Aerospace and Defense, Civil Engineering, Heavy Engineering Industry, Industrial Machinery and Advanced Simulation.

Aerospace and Defense

- Explosive safety analysis
- Fluid Structure interaction, underwater and surface shock analysis
- Seismic and wind load analysis
- Composite optimization
- CFD, Thermal and Flow simulation
- Static, Dynamic, Non-Linear, Buckling, Transient, Modal, Vibration.
- Shock analysis for underwater structure.
- Bullet penetration analysis
- Explosive safety analysis

- Sheet metal forming simulation
- Meshing and FE setup

Automotive

- Static, Dynamic, Non-Linear and Non-linear Dynamic, Buckling, Modal, Transient simulations
- Occupant safety, Crash, Impact as per standards like FMVSS
- Product optimization and weight reduction
- Product validation using alternate materials
- External vehicle aerodynamics and HVAC using CFD
- Thermal, Modal, Vibration analysis on components like headlamps, tail lamps, radiators, mounting brackets etc.
- Durability, Vehicle stability, NVH, Rollover simulation
- Mechanism simulation
- Moldflow and Sheet metal forming simulation for tool design validation

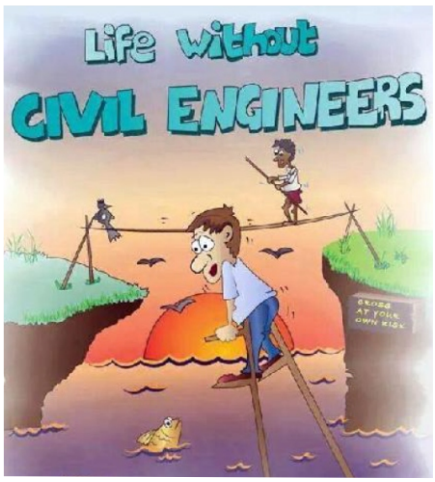
Civil Engineering

- Soil sampling
- Foundation design/ repair plans and inspections
- Wind bracing designs
- Additions to structures
- As-built floor elevations
- Specific member designs (Beams, Columns, Roof systems, Structural repair designs)
- Retaining walls
- Consultations for construction
- Remodeling/renovation evaluation
- Forensic investigations
- Site drainage evaluations/ designs

Industrial Machinery

- Weight reduction and optimization studies of components frames etc.
- Vibration, thermal and cooling system analysis for sensitive parts and electronics
- Validation of loading conditions for equipment like mining, boring and other abusive use
- Calculations for equipment like pressure vessels, heat exchangers etc., to comply with codes and standards
- Seismic, wind, fluid structure interactions for large frames
- All Finite element analysis studies including Static, Dynamic, Non-Linear, Buckling, Transient, Modal, Vibration, Kinematics etc.
- Styling and enclosure design for medical equipment, design and prototyping of moving mechanism and optimization
- Weight optimization for industrial castings

Just Imagine!!



Heavy Engineering Industry

- Validation of large structures as per standard code calculations
- Analysis of large structures for Wind, Snow and Seismic loading conditions
- Large Fluid Structural analysis
- Weld joint analysis
- Modal, Fatigue and Durability analysis
- Failure mode analysis and what-if scenarios
- Calculation of safety compliance of structures for codes like ASME, DIN, EN etc.
- Analysis for transportation loads and lifting conditions
- Analysis for Vacuum and pressure conditions for vacuum and pressure vessels

Advanced Simulations

- Structural optimization methods
- Explicit Dynamic Simulations
- Fluid-dynamics
- Crash analysis
- Heat transfer studies
- Acoustic Simulations
- Thermal Analysis & Modelling
- Welded and bolted joints analysis

GREEN BUILDING - A REQUISITE, NOT A CHOICE!

Green building or sustainable building refers to both a structure and the application of processes and technologies which are environmentally friendly and energy efficient throughout the building's lifecycle.

Green buildings aim to build a sustainable environment through efficient use of energy and conservation of natural resources.

IGBC Green Building Certification for the Projects executed by us!

LEED India V1.0 New Construction **Platinum** for IMGEOS & NDEM Facility, NRSC, Shadnagar.

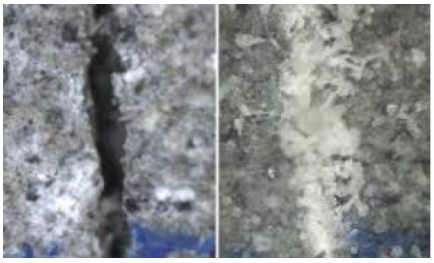
IGBC's LEED India New Construction **Gold** for Antrix Corporation Ltd. (Department of Space)

LEED India for New Construction **Gold** for Infotech Enterprises Ltd., Tower II, Hyderabad.

IGBC **Silver** Rating for Pratt and Whitney India Training Centre, Hyderabad.

The efficiency of a green building can be maximized by the use of innovative construction materials and cutting-edge technology. Some of the notable technologies are:

Biomimicry: Also known as biomimetic, this is a concept of imitation of the various models, systems and elements of nature and incorporating them into buildings' design and architecture. Eastgate Centre in Zimbabwe, with its biomimicry of termite mounds, is a great example.



Self Healing Concrete: This material is in its early stages, but once it's commercially viable it opens up many sustainable possibilities. Everything from roads to walkways can benefit from concrete that heals itself. Concrete has an autogenous healing capacity as unhydrated cement is present in the matrix.
Cracks can be healed by using calcium carbonate precipitating micro-organisms, Super absorbent polymers (SAP), hydrogels, or encapsulated polymers.

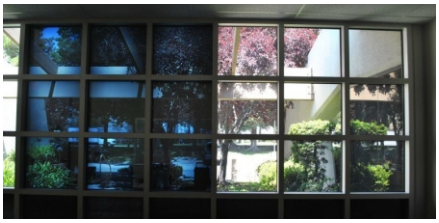
Green Roofs: Also known as the living roof technique, the roof of the building gets fully or partially covered with vegetation and soil on a waterproofing membrane. This moderates the heating and cooling of the building along with improving the air quality.

Vertical Gardens or Living Walls: In this technique, the plantation is done vertically on either side of the walls. This technique helps in degrading the pollutants and enhancing the air quality.

Glass Fiber Reinforced Gypsum (GFRG) Panels: This is a very cost-effective and durable technique of development which can be deployed fairly quickly. This consumes less raw materials such as sand, cement and other products. Buildings which use GFRG panels have a better lifespan and do not require beams and columns.

Monolithic Concrete Construction: In this method, all structures such as walls, floors, beams, columns, slabs etc. along with window and door openings are cast in a single operation with the help of modular formwork made of aluminium. It conserves natural resources.

Rain Gardens: This concept helps in enhancing groundwater absorption by reducing the amount of rain runoff. This technique allows more time for water to be absorbed in the ground that leads to an increase in groundwater levels, low soil erosion and reduced water pollution.



Electrochromic Glass: This glass shifts from clear to opaque based on external stimuli such as an electrical current or UV rays. It eliminates the need for shades and other window treatments, while adapting to current conditions passively. Additional benefits include blocking the vast majority of UV rays.

Solar thermal cladding: This is a passive solar building method designed specifically to hold heat during the winter. The sun's energy is stored within this material and passed through to the building for heat retention purposes.

Point to Ponder

"What is the use of a house if you don't have a decent planet to put it on?"
- Henry David Thoreau

Non Destructive Testing:

An indispensable pre-repair assessment of any type of structure!

The deterioration of concrete structures in the last few decades calls for effective methods for condition evaluation and maintenance. This resulted in development of several nondestructive testing (NDT) techniques for monitoring civil infrastructures. NDT plays an important role in condition assessment of existing structures. There has been an urgent need for developing standards for performing NDT methods and for interpretation of NDT results. Combination of different NDT methods available is a better way to assess the structures.

SSIDC has been involved in nondestructive testing of various structures using some of the NDT techniques and has bagged several works over a period of time. The major works undertaken by SSIDC for repair, testing and evaluation of strength of foundations, structural stability analysis and remedial measures are numerous; naming a few:

Our men at work! Performing Core test, Half Cell Potential test, Ultrasonic Pulse Velocity Test, and Rebound Hammer Test at NAVAL DOCKYARD

- **Testing and Evaluation** of the strength of foundations before and after drilling of holes for installation of Generator Sets for *A.P. Rayons At Kamalapur, Warangal District (A.P)*
- **Structural Stability Evaluation** of Cement Mill foundation at *Larsen & Toubro (L&T) Cement factory, Tadipatri, Anantapur District (A.P)*
- **Non-Destructive testing, Structural stability analysis and Remedial measures** for Diesel Generator set foundation at *J.K. Industries Ltd, (Rajasthan)*
- **Non-Destructive testing** for *Chemico Sulfuric acid plant at Coromandel Fertilisers Ltd., Visakhapatnam*
- **Non-Destructive testing & Strengthening schemes** for a building at *Dr. Reddy's Laboratories, Hyderabad*
- **Non-Destructive testing & Remedial measures** for *Timpany Schools, Visakhapatnam, (A.P)*
- **Structural Stability Analysis** of factory buildings of *Hindustan Zinc Ltd., Vishakapatnam, (A.P)*
- **Non-Destructive testing & Structural stability studies** for various buildings for *Tata Tele Services Ltd. at Hyderabad & Secunderabad*
- **Non-Destructive testing for Cooling Tower** nos: 1& 2 at *National Thermal Power Corporation (N.T.P.C) Simhadri, Paravaka, Visakhapatnam(A.P)*
- **Non-Destructive testing & Structural stability studies** for various buildings for *NAVAL DOCKYARD at Visakhapatnam.* Out of 58 buildings, 18 (11 in 1st phase + 7 in 2nd phase) buildings are awarded to SSIDC Pvt. Ltd., Hyderabad through open tender.

Work-Life Balance

"Most people chase success at work, thinking that will make them happy. The truth is that happiness at work will make you successful" *- Alexander Kjerulf*

Striking the balance right continues to be an ongoing challenge. Being more balanced does not mean dramatic upheaval in our life. With the smallest investment in the right places, we can radically transform the quality of our relationships and the quality of our life. Striking the right chord is incredibly important for happiness, productivity and effectiveness at work. Achieving the right balance between career and lifestyle will not only give us the best chance of strong performance at work, but also help us to maintain the health of our relationships. Following are few ways through which you can seek out the right work environment which will eventually help you out to maintain a balance with work:

Work with Integrity - We need to make sure that when we are at work, we should give our best and demonstrate sound moral and ethical principles. Honesty and trust are central to integrity. People who demonstrate integrity draw others to them because they are trustworthy and dependable. They are principled and you can count on them to behave in honorable ways even when no one is watching or even knows about their performance.

People at work are much more likely to respect and support boundaries around family and faith when they see us demonstrate a commitment to working hard and getting the job done.

Communicate well and often - Boundaries are much more cut through when the people around us know and understand them-be it at work or at home. Life has a way of getting chaotic sometimes and boundaries can be twisted when needed. The key is to make sure those occasions are few and far between. By communicating clearly in both directions, we will eventually help everyone to understand and support our priorities.

Manage commitments - As we probably know, that our work alone can consume us especially when we are just starting out. Add in family responsibilities and volunteering to do everything- we are more than spent. If we say 'yes' to everything, we will get burnt out. In order to make our commitments count, we must learn to say 'no' to lot of worthy causes and endeavors and instead, pick a few key areas of focus that provide the most value.

Be a good curator of self - Our health and sanity are resources that have been bestowed upon us, and they should be stewarded accordingly. Maintaining balance requires energy, creativity, determination, and a healthy dose of optimism. We must guard our physical, emotional and spiritual health if we want to succeed. A little investment in "us" will yield huge dividends. We will have more energy, a clearer head and the emotional capacity needed to balance all that life throws at us.

Quick tips to get started

Whether our steps toward balance are big or small, remember that everyone is worthwhile. When we have a strong sense of identity, a workable financial situation and a sustainable vision for the future, it is easier to make choices that respect our balance-building values. And as we begin enjoying a more balanced life, we will find more fulfillment and satisfaction in everything we do.

Giving Back to the Community!

SS Infrastructure Development Consultants Limited endeavors at working for the benefit of underprivileged sections of the society through its Corporate Social Responsibility (CSR) activities.

One step in that direction is contributing towards Inspired Indian Foundation for Project Pathshala which is the foundation's endeavor to add quality, life-skills and values into the lives of school children – to enable and empower them to chase their dreams, through education.

Through Project Pathshala, Inspired Indian Foundation wants to make a difference to the lives of these children. Their focus is to adopt and empower a government school and to impart social and life-skills to groom them to become confident individuals. They identified a government Primary School in Bangalore's New Thippasandhara.

The money contributed by SS Infrastructure towards Project Pathshala is being spent on medicines, hygiene, notebooks, and bags.

The innocence written on the faces, the sparkle in their eyes on receiving the new possessions (bags and stationery), the camaraderie among them, the questioning looks and finally a sense of satisfaction and gratitude is something which we rarely get to see - makes your heart go out to them!

We look forward to your feedback:

Your opinion, suggestions and ideas to further enhance the newsletter are most welcome.
Mail us your views to: **karuna@ssidcon.org** (Corporate Communications).