

ENGINEERING REVIEW



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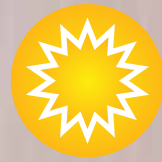


Maiwir
ENGINEERING

**Aiming to Shift
the Mass-Consciousness of the Humongous
CONSTRUCTION INDUSTRY WORLDWIDE**

AN INTERFACE WITH :
SARATH C. PARUPALLI, MANAGING DIRECTOR, MAIWIR ENGINEERING PVT. LTD.
PG. 26 - 30





Maiwir
ENGINEERING

SARATH C. PARUPALLI
Managing Director
Maiwir Engineering

Maiwir Aims to Shift the Mass-Consciousness of the Humongous Construction Industry Worldwide

Hyderabad-based Maiwir Engineering, the brainchild of Sarath C. Parupalli, an alumnus of PSG College of Technology, has made history by introducing a patented composite-steel structure system that would bring a massive reduction in construction time without compromising on strength of the edifice or quality to the Indian Construction Industry. Maiwir is the first company in India to have developed this technology, challenging the age-old conventional methods of construction which are highly dependent on various factors such as uncertainty, local manpower and long execution time. The company has the distinction of having built a 7-storey building for DRDO which houses the R & D facility for the indigenous development of fifth generation Advanced Medium Combat Aircraft (AMCA) in Bengaluru. The building, completed in a record time of 45 days, was inaugurated by the Union Defence Minister Rajnath Singh on 17th March 22. In this interview, Sarath C. Parupalli tells us all about his revolutionary technology and its benefits to the construction industry which is on a growth trajectory due to the unprecedented increase in capital expenditure allocation for the current fiscal to a tune of INR 5.5 lakh crore to propel infrastructure creation in the country. Excerpts:

Q. Could you enlighten us on the genesis of Maiwir and its niche today?

Maiwir Engineering is an innovative steel composite design, fabrication and construction company, headquartered in Hyderabad. Established in 2015, we are equipped with the requisite expertise and wide-ranging experience to undertake projects of all sizes with a single source responsibility from Design, Manufacturing and Execution. Our high quality design solutions and technical innovations help clients to reduce risks, costs, claims, disputes and project schedules. We have accomplished numerous projects at home and abroad which stand testimony to our engineering acumen, capabilities and commitments.

Q. What makes you unique?

We are the only company in the country today that has changed the way we build Infrastructure from Buildings to Bridges with our design & build concept. We make our strongest contribution through collaboration and building lasting relationships.

With the amount of expertise and experience we have on our side, coupled with our vast resources, we provide a solid foundation to our customers, guaranteeing success. Our innate sense of professionalism and eye for quality help us come out with outstanding engineering creations which delight our customers.

Design to delivery from a single source of responsibility, one-stop design and execution

solutions which are bespoke and cost-effective, timely delivery every time, a highly skilled and experienced team, transparency in all our dealings, well-knit communication and coordination, etc. are the main planks of our uniqueness. Using industry standard design and finite element tools, we provide end-to-end design solutions under one roof.

Q. What are the various services you offer?

We offer complete Design, Fabrication and Erection services. Our design related services are: Design & analysis of High-rise Commercial & Residential buildings, airports, seaports, bridges, Hospitals, Schools and industrial structures; Structural design & drafting; Structural fabrication & drawing services;

Structural steel detailing services; structural shop drawing; Pier review services, Structural BIM consulting & design services and Structural Erection Services. Besides, our wide range of advanced services provide detailed information on utilisation of effective material regarding life improvisation, vibration isolation, and other crucial factors that help to enhance the quality

as well as strength of the structures.

Q. Could you take us through your sprawling, well-equipped manufacturing facilities?

Maiwir's manufacturing facility in Hyderabad has a total working capacity of more than 6000 MT per month. This will soon be scaled up to 10,000 MT per month. Maiwir has many Manufacturing Partners across India and in the Middle-East to cater to all Geo-graphical clients.

Our well equipped facilities spread across an area of 4,50,000 sqft. Maiwir is an exclusive Design & Fabrication Partner for a few European-based technologies related to steel-composite structures. Backed by a strong in-house design arm, Maiwir provides inspired solutions for complete structures. We integrate structural design with our composite building systems, giving clients the best value of strength and economy.

Q. Please tell us more about your patented composite technology.

Our Maiwir® system is a patented, highly flexible building system. It is composed of horizontal Composite-Truss/ Hybrid

Beams vertical Columns ones (piers), Lattice Girder Slabs (with or without Styrofoam) which can be used either separately or as a part of a system depending on the required standards. Concrete is cast in-situ monolithically into the entire structure in a single-go, thus binding all the elements together and increasing strength and ensuring Multi-fold benefits over Precast and other similar methodologies of Construction currently existing. It is a global, effective and advanced solution for commercial, residential buildings and industrial, as well as for large works, infrastructures, facilities, renovation and conservative restoration. Maiwir® system is the fastest, and the most flexible and Efficient building system on the market.

Maiwir® system makes the yard as industrialized for optimizing time, materials and human resources. It provides the best planning of materials delivery, structure installation and targeted use of labor.

Maiwir technology helps in maximum utilization of space as compared to conventional construction, is fast and easy to lay, total self-bearing, ensures seismic safety, fire prevention, beams



MAIWIR FACILITY

can be assembled directly on the spot, lower floor is immediately available for other finishing works, less number of columns ensure more carpet area for the same structure, ensures site safety, entails no maintenance and saves money and resources with system.

Q. Can we have a word about your execution of projects?

We work with our clients to apply our best practices and systems at the onset of a project that will impact positive delivery, maximize value and minimize waste. During each and every project, we aim to work collaboratively and transparently with our clients to meet the shared goals by delivering detailed design, procurement services, construction management, project management, construction, commissioning and start-up support.

We have a dedicated team of experts, including senior professionals with specific asset and discipline expertise, ready to be deployed at all stages of project execution from design to start-up.

We focus on developing safe, cost-effective and value added services in the best interest of our customer.

Q. May we know some of the monumental projects you have executed?

Starting from 2015, we have done numerous projects involving complex design, engineering, fabrication and erection of pre-engineered metal building systems for high rise commercial & residential buildings. Our unique system is best suitable for high-rise structures, airports, sea-ports, bridges, hospitals, hotels, schools, data centers and so on.

The Defence Research Development Organisation (DRDO), India's premier defence research organization partnered with Maiwir Engineering as structural steel Design & Build contractor to design and build a 7-storey building which



Flight Control System Integration Facility at Aeronautical Development Establishment, Bengaluru

would be used as the R & D facility for the indigenous development of fifth generation Advanced Medium Combat Aircraft (AM-CA) in Bengaluru. The building, completed in a record 45 days, was inaugurated by the Union Defence.

Minister Rajnath Singh on 17th March 22. Maiwir® System's efficient way of design, manufacture and erection of all the structural elements and interfaces for MEP cradles, Glass-Facade system, etc. prompted other contractors to complete their part of this project with utmost ease.

Our design and execution expertise has helped us accomplish multiple areas of infrastructure like bridges and flyovers. We have also designed and built the most complex bridges of Telangana, 20 metres above the ground, with a longer span of 64 meters for Greater Hyderabad Municipal Corporation without disturbing the flow of traffic.

We have a separate project engineering team to handle overseas projects. Maiwir's Team has done umpteen numbers of prestigious projects, complex in nature, for varied sectors in Europe. Design & Technology

is our core strength, backed by an eminent in-house Indo-European team, approved and attested by IIT Madras.

Q. How do you look at the future of construction and that of Maiwir?

The future of construction in our country has to be a composite way of construction for both Buildings and Bridges. The cost over-run of only 470 Projects took away more than INR 4.46 lakh cr from the allocated budget of INR 5.56 lakh cr to create new Infrastructure in FY 21-22. This can be avoided with an efficient & economical way of construction.

Maiwir with an Intensive R&D of many years, brings forth a technology that is an efficient way of building by saving more than 60% of construction time, saving resources and increasing the life of the structure.

High-rise buildings play an increasingly important role in contemporary architecture. The stimulants are population growth and its concentration in cities. Most high-rises have frames made of steel or steel and concrete. Their frames are constructed of columns and



GHMC, SHILPA FLYOVER:

beams. Cross-bracing or shear walls may be used to provide a structural frame with greater lateral rigidity in order to withstand wind loads. R.C.C. structures account for 63% of structures, while composite constructions in concrete and steel are growing phenomenally, rising from 26% to 32%.

In order to sustain India's growth momentum, the development of country's infrastructure sector is inevitable. Just like our country's Prestigious 'Mission to Mars', the mission to build can now happen with our advanced and efficient system of construction at a much faster pace, optimised budgets using local material

& skill developed man power, saving resources and eliminating the delay & cost over-run.

All this is good news for the construction industry. We at Maiwir are quite upbeat about the prospects of the industry. More than business, we do hope to partake with all enthusiasm, commitment and dedication in nation-building.

Q. Your achievements in a short span of less than a decade are remarkable. What's the secret of your success?

First and foremost is my education I suppose - I am a double graduate

in Mechanical Engineering with Industrial Training from PSG College of Technology, Coimbatore, and I have a Masters in Mechanical Engineering from Canada. Second is my will to win; I just cannot fail in my projects. I am in a business where quality, reliability and timeline are of paramount importance. Third is my positive attitude and ability to lead from the front. After all our business is highly people oriented. I cannot succeed unless my system and people succeed.

Lastly, I always want to be different and do things differently. This is what has prompted me to develop a Hybrid - composite steel structure system to challenge the age-old conventional method of construction. Our new technology helps to slash the construction time by more than 60% and also save resources. So the key to our business is innovation. We aim to change the mass consciousness of the humongous construction Industry in our country and abroad. I am inspired by this famous quote by Albert Einstein: "Try not to become a person of success, but rather try to become a person of value." This is what I am trying to achieve for our country. ■



- Note:**
1. Asia takes second place after North America for tallest building by region.
 2. Office space is tallest building by function, followed by mixed use.
 3. Composite falls in third place after all steel & concrete respectively.



DESIGN, MANUFACTURING & EXECUTION :

- ⊗ STEEL
- ⊗ PRECAST
- ⊗ COMPOSITE-STRUCTURES

HIGHRISE BUILDINGS



BRIDGES



DESIGN



MANUFACTURING



EXECUTION

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