2019 Activities Report







Table of Contents

Company News

Executive Letter	1
Continuous Improvement	2
TURQUALITY Brand Support Program	3
Trade Shows	4
TYCOR®	5
SAP	6
Deloitte's Best Managed Companies Turkey	7
C-Sphere: An Innovative Art Interpretation	8
METYX Composites Summit 2020	9
New Distributors in US	10
larine	
OPTITUR	11
dustrial	
AŞUT	12
Onur Fiber	13
ailway	
Sazcılar	14
ponsorships	
Fish Contest in Hungary	15

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Executive Letter

Dear Customers, Colleagues, and Friends,

I would like to begin by thanking our committed team members who have been working hard to reach our goals. The passion and professionalism we see every day is certainly one of the things that makes METYX special. Working with great team members, customers and business partners helped to make 2019 very rewarding. Every economy has its own challenges, this one is no different. We cannot choose the economic environment we operate in, but we will face each challenge with a positive outlook and we feel very good about where we are currently and what is ahead of us.

Like previous years, we again strove for improvement and growth in 2019. We had successes to be proud of as well as mistakes from which to learn. We are proud to say we finished the year above our expectations for sales. Over the last 18 months, we primarily focused on making efficiency gains and innovations to our plants worldwide. We succeeded in taking on several projects and adding new customers from Europe, Asia and North America to our portfolio. We are on the brink of a new year filled with excitement, passion and determination which align with our objectives of sustainable growth and development.

It has been a rewarding year...

In 2019 we succeeded in being the 836th largest exporter in Turkey according to the study of "Turkey's Top 1000 Exporters in 2018" by the "Turkish Exporters Assembly (TEM)" and "Turkey's Top Industrial Enterprises" report by the Istanbul Chamber of Industry (ICI). Additionally, we were ranked as the 959th in "Turkey's Top 1000 Industrial Enterprises Survey". We were rightfully honoured to find a spot on these two lists made up of the top companies in Turkey. This year our success story has also been recognized in the "Deloitte Best Managed Companies Turkey."

METYX now part of the TURQUALITY Brand Support Program!

METYX has been accepted to TURQUALITY Brand Support Program which is the first and only brand-building program initiated by the Turkish government. The program will help our brand lead the industry in global manufacturing branding standards and provide significant contributions to the advancement of our company.

ERP Transformation Will Help Increase Our Efficiency!

In order to connect our global operations and to increase the quality of our services and form a sustainable system, we made the decision to utilize SAP, one of the most powerful ERP solutions in the world. In 2019 we put significant efforts forward to adapt the system to our organizational requirements.

Continuous Improvement Projects - Plan X

We are taking tremendous steps towards leading the industry in quality and continuous improvement projects. We are striving to set the example for our peers to follow and strongly believe in our commitment to spread this success to all parts of the organization.

Continuous Improvement Projects - Plan X

In 2020 our top priorities will be improving efficiency and quality. We are focused on identifying opportunities and creating action plans to this end. Quality is of utmost importance to meet our partner's expectations and the high standards we have set for ourselves. I believe we will continue to grow and develop in 2020 with the continuing efforts and loyalty of our employees and their belief in our company.

We thank you, our valued partners, for your loyalty and support received in 2019.



Besim Uğur Üstünel CEO METYX Composites



Continuous Improvement: Diversity Of Opinion "KAIZEN"

"Kaizen" is the word used by Japanese for the efforts of improvement in whatever it is that you do, be it an activity at the workplace or some other activity at home or in your daily life. Kaizen aims for continuous improvement in anything that we do. The Japanese name is derived from the combination of "KAI" (change, improvement) and "ZEN" (for the better) and corresponds to "permanent and unending improvement" in Eastern philosophy. The Japanese have for years been implementing this philosophy in their lives in a meticulous and tenacious manner. It is this philosophy that has made them one of the giants in the world.

Continuous improvement activities can be utilized in all aspects of our daily lives, as well as in every area of an organization. There may be points to improve in every department of a company such as Sales, Logistics, Planning, Quality, Maintenance, Finance or Accounting





Is The Key For Improvement

"Respect for people" forms the foundation of Kaizen studies. Everyone has opinions which are very valuable to propel us forward. Attaining diversity of opinion provides great opportunities for finding the right solution and improvement. Hence, teamwork is also of critical importance.

A problem is not always necessary for a Kaizen, anyone can see opportunities in what they do. Striving to be better at an already problem-free activity is a great opportunity for him/ her as well as the organization

Taking Action With Plan X

At METYX, the set of activities leading the employees to put continuous improvement opportunities into action is called as "Plan X". Considering the current sector dynamics, the situation of the world, and the not-so positive economic status; continuous improvement efforts are among the inevitable activities that METYX should be pursuing. The objective of these activities should be working for improvement.

The definition of "Plan X" stems from the Plan in the Planning stage of the PDCA (Plan, Do, Check, Act) cycle which is the most important step enabling the team to define the problem/opportunity. The "X" denotes teamwork, unity-solidarity, unending improvement and the desire for perfection.

The problems/opportunities will be transformed into benefits via pre-determined continuous improvement activities. Certain formats will be used for this, teams will be set up and the activities will be mentored. "Open Gate" trainings will first be provided for supporting these activities. The participants shall be informed of the methods and the functioning of Plan X. Department based Plan X coordinators will be determined, interdepartmental improvements will be collected by these coordinators and a continuity will be attained with a flow towards the Plan X champion. While the individuals included in this process improve the organization, they will also be making significant contributions to their self-improvement as well.

METYX is taking effective steps for being an exemplary company in the line of work by way of successful continuous improvement projects. The company believes that they should focus on development and improvement for the better. Perfection in what they do should be METYX motto. There is always room for improvement



METYX now part of the TURQUALITY Brand Support Program!

TURQUALITY is the first and only brand-building program initiated by the Turkish government to establish a positive image on Turkish brands. The initiative promotes Turkish products to be branded within Turkey and worldwide. The process ensures participating companies acquire the necessary administrative knowledge, institutionalization and advancement in all aspects of the product lifecycle. Embedding quality in all steps of production, marketing, sales and services in order to become a global player in international markets. The project started with fifteen companies and is currently supporting more than one hundred brands. METYX is proud and privileged to be part of this program. In the first stage, METYX will be a part of the brand support program of this project. Our main objective is to take important steps to ensure full participation in the next stage of TURQUALITY. The program will help METYX lead the industry in in global manufacturing branding standards and provide significant contributions to the advancement of the company









CAMX 2019

Trade Show Activities 2019

JEC EUROPE 2019 March 12-14 // Paris, France

SAMPE 2019 May 20 – 23 // Charlotte NC, USA

IBEX 2019 October1-3 // Tampa, USA

CAMX 2019 September 23 – 26 // Anaheim CA, USA

IZMIR WIND SYMPOSIUM 2019 October 3 - 5 // Izmir, Turkey

COMPOSITES SUMMIT October 10 - 12 // Istanbul, Turkey

METS 2019 November 19 - 21 // Amsterdam, Netherlands

WIND TURBINE BLADE MANUFACTURE 2019 December 9 – 11 // Düsseldorf, Germany



JEC 2019

Planned events for 2020

JEC EUROPE 2020 March 3 - 5 // Paris, France

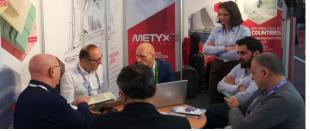
METYX COMPOSITES SUMMIT 2020 September 8 - 11 // Istanbul, Turkey

IBEX 2020 September 29 - October 1 // Tampa FL, USA

CAMX 2020 September 21 – 24 // Orlando FL, USA

METS 2020 November 17 - 19 // Amsterdam, Netherlands

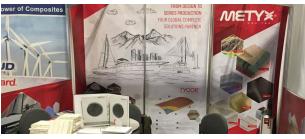
WIND TURBINE BLADE MANUFACTURE 2020 December 7 - 9 // Düsseldorf, Germany



METS 2019



Türk Kompozit 2019

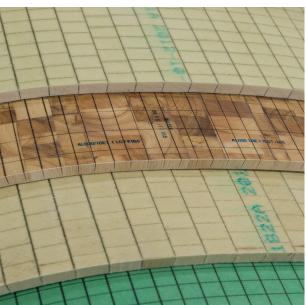


IBEX 2019



WIND TURBINE BLADE MANUFACTURE 2019





METYX Newest Product: TYCOR[®] Fiberglass Wrapped Core

METYY USA has started to produce its newly acquired TYCOR® fiberglass wrapped core for various customers in US. The TYCOR brand, product range and technology were purchased from Milliken & Company by METYX Group in the second half of 2018. The addition of TYCOR strengthens METYX's high performance technical textile product offerings to North American customers in Wind, Marine, Automotive and Industrial markets looking for lightweight composite material solutions.

TYCOR is a dry fiber with a heat resistant foam core. It is a rigid and semi-flexible sandwich preform which achieves its end use properties though a closed molded process, such as VARTM or RTM (RTM-L). TYCOR fiber reinforced cores provide design engineers and convertors with an alternative reinforcement material to balsa and conventional foam cores. The core material used in TYCOR is flexible, nonstructural, fine closed cell PIR foam, designed to minimize resin absorption, with excellent temperature stability and compressive and shear strength. Significant overall part weight savings in excess of 30% can be achieved from a combination of TYCOR having much less core foam volume and taking up far less resin during infusion compared with a conventional cut Balsa core, yet still providing the desired mechanical properties.

The complete range of METYX TYCOR fiber reinforced core material options are being produced by the METYX USA manufacturing facility in Gastonia, North Carolina. The standard sheet range available has five grades, offered in a choice of thickness from 12mm to 75mm (15/32 inch to 2 61/64 inch), with four drapable contour grades and a rigid sheet option. Depending on the end use application, each TYCOR grade offers a choice of bulk density, resin pickup and infused core properties







SAP

All global companies must excel at internal business practices. METYX recognizes superior performance in these areas will support our global sales and service initiatives. This is the primary reason we selected SAP as our new ERP (Enterprise Resource Planning) software. We felt it would meet our needs today as well as supporting growth in the future. SAP was developed by a German company and is a powerful Enterprise Resource Planning system which will strengthen the following areas: Data Analytics and Reporting, Efficiency, Productivity and Consistent Business Operations.

SAP system is an entirely integrated business synchronized system which allows nonstop communication process and removes data discrepancies between sub-systems. It will remove the duplication, gaps, and redundancy in data. It will provide information across all departments in real time. It will help us to standardize all the processes and improve the coordination between business units. METYX will have an inclusive set of integrated, cross-functional dealing processes which is the main benefit of the SAP system. SAP will develop process consistency, efficiency and flexibility as well as Corporate Authority.

Financial and executive accounting functionalities combined with business analytics will provide us deep visibility into our businesses. This in turn will enhance productivity, cost control, improve financial management, and risk management. Most importantly- all METYX stakeholders' satisfaction will improve in a significant way in the mediumlong term.

It has been a challenging journey to establish the SAP system in Turkey. After consulting with business intelligence professionals our internal Metyx Project Team was created, consisting of different module teams (SD-MM-PP-QM-EWM-FI-CO) and key users. First, the conceptual design and development items were prepared, then detailed work on these items were completed and integration tests were realized twice before going live.

Now after successful implementation in Turkey, we plan to roll it out in Hungary and then USA





METYX is among Deloitte's "Best Managed Companies Turkey"!

In 2019 METYX's success story was celebrated with recognition as one of Deloitte's "Best Managed Companies Turkey." This program began in 2018 and is based on an evaluation of various criteria. Recipients are evaluated on management structure; participatory sales strategies, monitoring of key business targets at all levels of the company, having a strong financial structure and reporting infrastructure, investing in R&D and innovation, giving importance to corporate values, talent and company culture and demonstrating an advanced awareness for giving back to the community.

METYX was awarded this prestigious prize by a jury led by Ümit Boyner including notable businesspeople such as Ebru Özdemir, Zeynep Bodur, Batu Aksoy, Buğra Koyuncu, Orhan Turan and Umran İnan. CEO of METYX Group, Uğur Üstünel, accepted the award at the ceremony and he later commented: "I would like to thank everyone who contributed to our success to become a global brand with a global customer portfolio. This was achieved by our board structure, strategic planning, internal audit activities and ERP transformation as well as rapid, sustainable and profitable growth. And most importantfocusing on adding value and solution-oriented production, increasing our global customer portfolio from various sectors and taking solid steps forward has led to our strong global brand"













C-Sphere: An Innovative Art Interpretation

In 2019 the METYX team was approached by world renowned Turkish artist and architect Professor Guvenç Ozel of UCLA (University of California, Los Angeles) who was awarded by NASA in 2015 for his Mars colony design. Professor Ozel was working on an art project (Deep City) where a robotic arm needed to rotate a large but light-weight object which needed a mirror-like surface finish.

METYX used all that composite material technology had to offer in order to achieve the challenging requirements for this project. Tooling was designed by METYX Manisa team with the idea that this interesting geometry could not weigh more than 30 kg and for this reason it needed to be a follow structure with 10+ m3 of volume. A very unique tooling concept was developed which allowed the production team to create the hollow structure. The reinforcements were selected based on the structural calculations developed in house within the METYX Group's central engineering department. Reinforcement of choice was a light-weight NCF produced via fiber spreading technology at METYX' Istanbul production facilities. Vacuum infusion with epoxy resin system was chosen as a production method.

A very difficult step of the project was to obtain the surface finish required. For this mirror-like finish, the METYX team selected a very novel coating technology and adapted this technique to perform on a composite substrate. Surface finish requirement and the success our team had in creating a mirror-like finish can also open up different uses where composites can be considered in the future.

From start to finish, this unique project was completed in a record time of 4 weeks where our team was challenged with "never done before" criterias which succesful completion required.

This project which was succesfully displayed at Istanbul Contemporary Art, will be on display at other major Art Galleries in New York and other metropol cities.

About the art project: Deep City

The Deep City art display creates awareness in the society we live in. People understand facts better by seeing them versus reading about them. Many modern thinkers feel life is not random and everything moves according a plan and once awareness takes place, people can make changes in their lives.

Professor Ozel creates a one-of-a-kind immersive environment through media and robotics where the audience experiences algorithmic and optical modes of surveillance and control in contemporary urban environments. The work allows the audience to occupy a fictitious space between the mind and the body of machines where artificial intelligence and robotics intersect. The work is based on the creation of a surveillance database consisting of four world cities with different socioeconomic, demographic, architectural and urbanistic identities: Istanbul, Hong Kong, Rome and New York. Hours of drone footage, CCTV videos, animated 3D models, maps and other visual data from these cities are used to train deep-learning algorithms to generate a "metacity," a fictional urban environment that is the result of how artifical intelligence (AI) perceives and interprets the various urban characteristics in its dataset. The images created by this AI are then composited into a continuous video and projected in a panoramic configuration to the walls, immersing the audience in an artificial urban environment envisioned by machines. Positioned between the projection and the robot, the audience can see their own reflection on the moving sculpture; altered, distorted and composited into the synthetic landscapes of the "Deep City." Through this spatial setup, the project allows for developing speculative and experiential approaches toward seeing our cities as machines do in the world of surveillance

METYX Composites® Summit 2020 September 8-11, 2020 Istanbul, Turkey

To become the very best at what we do is a goal we all share. To help bring this objective to fruition, METYX Composites proudly invites you to attend its **Fifth Composites Summit in Istanbul, Turkey September 8-11, 2020**. It is the most comprehensive event for high-performance composites in Turkey and amasses industry leaders from across the globe.

Join us to get the industry expertise and hands-on training you need for your business

The event includes one and a half day of composites conference followed by a half day of infusion school and two days of RTM school.

At the composite conference, the stories of the companies and industry leaders that draw attention with their global success will be as a roadmap for you, while schools are designed to provide the maximum amount of targeted content, including theory and hands-on practice. It is an excellent opportunity to learn about the latest techniques and innovations in the composites industry and get the practical training you need.

This year's event will be jointly sponsored by METYX Composites and world renowned composites industry leaders. Don't miss this key event highlighting the latest techniques and innovations in the composites industry!

Join us to see these industry leaders demonstrate the latest composites techniques and discuss how advancements in the rapidly evolving composites industry can benefit you. It's a simple, fast way to get you up and running and on your way to a competitive advantage.

Who Should Attend

The event is appropriate for newcomers to composites as well as those who want to enhance their current results with the latest proven industry techniques.

Composites Conference

Learn about the latest production techniques in the composites industry. Experts from various industries present case studies and best practices. The full program will be announced soon.

To pre-register you can send an email to info@ metyx.com and our colleagues would contact you as soon as possible

Looking forward to seeing you at the event!



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Superior Oil and Core Composites – Welcome on board!

METYX has extended its global distributor network, appointing Superior Oil and Core Composites as the distributors in the US for METYX USA, Inc. high performance technical fabrics and TYCOR product lines. These new distributor agreements will significantly improve access, supply chain service and local technical support for composites manufacturers in the US.

Superior Oil has been a leading composites distributor in North America since 1932. Superior Oil provides technical support for our full line of RTM glass reinforcement fabrics, along with other products from METYX USA, Inc., including E-glass, carbon fiber, hybrid multiaxial and woven fabric reinforcements, and TYCOR. Their customers now also benefit from access to the added value core and fabric kitting as well as tool making services offered by METYX USA, Inc.

Core Composites, a division of ROM Development Corporation located in Bristol, RI has been distributing advanced composite materials for over 30 years. A recent agreement with Core Composites and METYX USA, Inc., will strengthen our sales in the US. Core Composites has had hundreds of leading-edge advanced composite projects across various industries and applications, such as marine, submarine, industrial, automotive, structural, medical, aerospace, and defense







MENGI-YAY's Sea Star On The Horizon - Composite Construction by OPTITUR

After delivery of the award-winning 44m M/Y Virtus, custom yacht builder Mengi-Yay Yachts of Turkey turned their focus to another challenging yacht project. A wooden hull and composite superstructure motor yacht called "Sea Star" is now being built at their facility in Tuzla, Istanbul. This 35.5 meter yacht was designed an Italian company VYD and engineered by Notilus Yat Dizayn.

Sea Star has composite superstructure and is the largest yacht ever built in their facility. It is unique due to the carbon-hybrid reinforcements used. Production of composites for this yacht began in January 2019 and was completed before year-end by OPTITUR.

"As METYX is our composites solutions partner, we worked in great accord with them during every step of production. METYX is our designated comprehensive supplier for all turnkey composites needs," concluded Mr. Mustafa Bektas

"METYX supplies the full package of the exceptional performance GRP materials for this project, including a large quantity of biaxial and carbon-glass hybrid reinforcements, Airex core materials, and all vacuum consumables. These advanced materials have long-term cost benefits of lower weight, lower maintenance, higher durability of the product," commented from Shipyard Manager İrfan Başar







AŞUT Fiberglass investments continue...

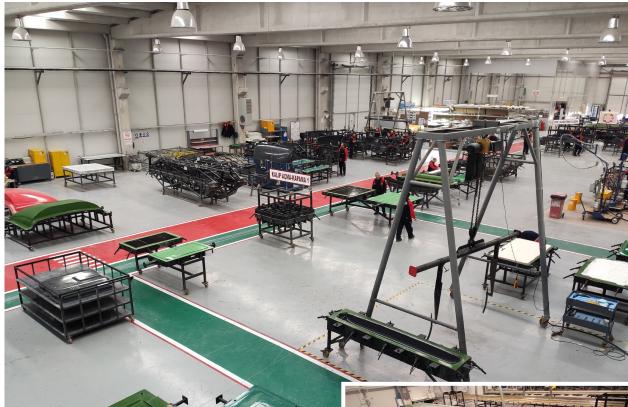
AŞUT Fiberglass has been producing fiberglass pipe, fittings, tank, duct, chimney, scrubber and equipment for nearly half a century in Mersin. In the near future they will continue to grow by investing in production capacity with new pipe process and building infrastructure.

AŞUT Fiberglass Technical Works and Project Director Fatih Aşut explained that they started their business life with the production of fiberglass boats in 1966 and then they switched to industrial chemical pipes and tanks production in 1973. More recently they have focused on chemical production facilities, power plants, petrochemicals and the mining industry.

The company operates in Mersin Tarsus Organized Industrial Zone in a large facility employing 145 workers, exporting their produced goods. In 2019, recognizing opportunity with global projects, the company started to work with rehabilitation and investment projects in Latin America, North East Europe, Balkans, Kazakhstan, Middle East and other countries. The biggest feature that distinguishes AŞUT from other Industrial Fiberglass manufacturers is its wide production range. Mr. Aşut stated that they can produce from 25 mm to 8.000 mm (8 m) inner diameter at Mersin Plant and produce products with larger diameters at construction site. With the new projects, at Balkan site, they will be producing Ductwork with 9,6 m diameter. All their products are designed with ASUTLAM before production and Fluid, Stress and Strain controls are made in ANSYS-FEA and CAESAR-II on software. By conducting detailed R & D studies, they make sure that their product is of higher quality and cost-effective.

AŞUT and METYX work together on unidirectional, biaxial, triaxial and quadriaxial non-crimp fabrics. Mr. Aşut stated: "METYX products were chosen by our company because of a combination of the outstanding product performance and the fast, high quality, reliable service provided. We are very pleased with support of dedicated METYX Team and delivery good quality products in very reasonable timing"





Onur Fiber: Strong Partners Equal Global Success

A business relationship forged at a trade show over two decades ago, endures today. Since 1996 Onur Fiber as been manufacturing fiberglass parts with Hand Lay UP, RTM and pultrusion methods for delivery to automotive, heavy machinery and rail systems industries. They operate at their 12.000 sqm facility with 6.000 sqm closed area in Ankara, Turkey with 200 experienced employees who always strive to offer the best to the customers.

Over the years Onur Fiber has expanded their international Customer portfolio through the partnership with METYX who provides RTM reinforcements, pultrusion mat and surface veils, release agents, core materials for their projects.

Cem Urans, Project Manager of Onur Fiber commented: "Working with METYX provides us sustainable quality, innovative products and technical support. Those are three advantages why we prefer METYX"













"Working With METYX Increased Sazcılar Competition Strength In The Industry"

Founded in 1987 in Bursa, Turkey, Sazcılar continues its productions with about 800 staff members at five production plants covering a total closed space of 30 thousand square meters. They manufacture for the sectors of rail transportation vehicles, automotive, construction and heavy-duty machinery. The company exports about 50% of its production and produces many different composite parts including those for Internal and external CTP parts. Manufacturing is carried out using many different composite technology methods such as; Hand Lay-Up, L-RTM, RTM, SMC, BMC, Pdcpd (RIM).

Sazcılar Composite Material and Processing Manager Ilker Sazcılar stated: "The primary reason for our preference of METYX is the dynamic team that can rapidly provide solutions. Moreover, its glass fiber variety for the sector and the fact that it is an active distributor of world renowned raw material and machinery brands is also a plus."

The significant textile expertise of METYX and customerfocused fiber development work has been advantageous for the company. Localization of special raw materials by METYX paved the way for the advancement and recognition of the composite sector. Sazcılar also said that working with METYX increased their competition strength in the sector. They have been able to meet the demands of their customers much faster thanks to the significant variety of their product portfolio and the fact that they keep on adding new technologies to their offerings







METYX continues to support the local community!

At METYX we believe our strength lies in our people. This means being involved in the communities in which we live and work are an important part of our business philosophy and organizational culture. In Hungary we provided financial sponsorship of a fishing contest in which an employee was competing with his team. There were 20 teams in total and the contest in May of 2019, was an exciting act of endurance at over 72 hours long.

In the US we have partnered with Gaston Literacy Council to offer English as a Second Language (ESL) twice in the last year for all team members and their families.

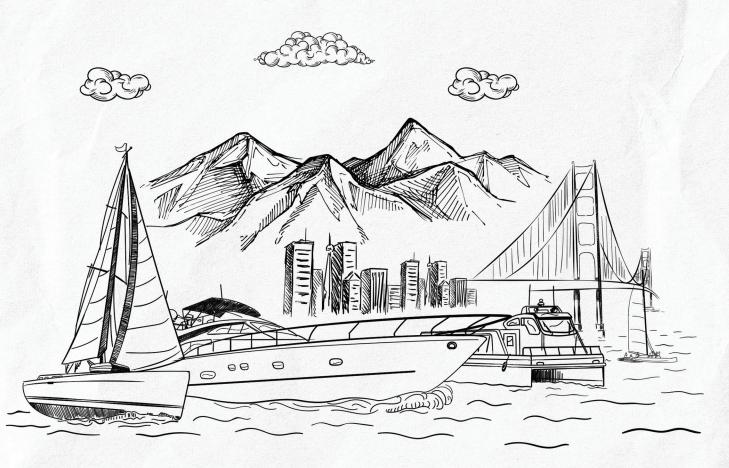
We remain committed in support our local communities in Turkey, Hungary and USA







for lighter, stronger, more competitive composite structures



FROM DESIGN TO SERIAL PRODUCTION YOUR FULL SERVICE PROVIDER

LET'S REDUCE YOUR BOAT WEIGHT UP TO 30% with TYCOR.

TYCOR is a semi-flexible, structural fiberglass wrapped core that is designed to minimize resin absorption, while providing excellent process temperature stability. You can save up to 30% using TYCOR by absorbing less resin during the infusion compared to conventional balsa core, while achieving the desired mechanical properties therefore saving you both weight and resin cost.









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