METYX COMPOSITES SUMMIT

Conference: May 23 - 24, 2022 Izmir – Kaya Thermal Hotel

Workshops: May 25 - 26 - 27, 2022 Manisa – METYX-Telateks Production Site



About Us

METYX, a manufacturer of high-performance technical textiles, including: multiaxial (e-glass, aramid, carbon, and hybrids), RTM, woven reinforcements, along with vacuum bagging products has been serving marine, automotive, transportation, wind energy, construction and architectural applications, infrastructure, and sports and leisure industries since 2003.

The company's vision is always driven by customer needs. Recognizing the desire for stronger, lighter structures – as well as more competitive end-products in various industries - METYX has invested in different technologies in order to be a "full service provider" and in addition to technical textile products, the company offers mold and plug production as well as kits from foam such as PVC, PET, along with balsa core are also being produced alongside vacuum consumables kits.

Products and services are currently provided through METYX's four state-of-the art facilities located in Istanbul and Manisa (Turkey), Kaposvar (Hungary) and Gastonia, North Carolina (USA). Only certified raw materials are used, and all manufacturing processes strictly adhere to demanding ISO 9001 standards, ensuring the highest quality reinforcements that allow customers to use the perfect product to raise their quality and speed up their production processes.

As an extension of the technical textiles and composites-related products and services, METYX Composites also delivers extensive consulting and technical trainings both in Turkey and abroad.



METYX Fifth Composites Summit is brought to you by METYX Composites and our valued sponsors:



Armacell www.armacell.com

Armacell is the global leader in innovative eco-friendly PET foam solutions for the com-

poites industry. Our portfolio of eco-friendly product solutions with the lowest ecological footprints, contains structural and insulating foam cores, thin flexible sheets for thermoformable micro sandwich solutions and particle foams to produce 3D foam parts. All ArmaPET products are made by Armacell's unique and patented rPET technology, enabling the production of PET foam products based on 100% recycled PET. ArmaPET is used in a variety of applications, such as 90-metre-long wind turbine blades, the body structure of high-speed trains, surfboards, or even the 24-karat gilded roof of an Orthodox cathedral in Paris. As of today, we have used more than 1,5 bn recycled bottles in our ArmaPET production.



Axel

www.axelplastics.com

Axel Plastics Research Laboratories (AXEL) is a US-based manufacturer of mold release

and process aid additives for all types of plastics, composites, rubbers, and urethanes. Whatever you are molding, however you are molding it, AXEL has the perfect mold release solution for you.



Composite Integration Ltd. www.composite-integration. co.uk

Composite Integration provides market-leading and innova-

tive solutions to the composites industry, specialising in Resin Transfer Moulding (RTM) and Resin Infusion processes. The company manufactures a full range of RTM and Infusion machinery, accompanied by ancillary equipment. These products are also supported by comprehensive tooling and training services.



Kompozit Pazarı www.kompozitpazari.com Kompozit Pazarı was estab-

lished in 2021 as a sister company of Plasto Plastik Ltd and

Omnis Kompozit Ltd. It is the E-Commerce site with the widest product range serving the composite industry. In addition to basic composite production raw materials, it also offers workshop auxiliary hand tools, infusion kits, precision measuring instruments. With the motto "From hobby to industry", it allows pallet-based purchases from the smallest amount.



Oxeco

www.oxeco.co.uk

OXECO is an innovative chemistry company with a technologyplatform that controls the way

surfaces behave. OXECO designs, develops, and manufactures surface treatments for composites and engineering plastics used in the transport and clean technology sectors. Privately held, OXECO was born from the University of Oxford's Department of Chemistry.



Scott Bader www.scottbader.com

Scott Bader is an employeeowned global manufacturer of advanced composites, struc-

tural adhesives and functional polymers. Established in 1921, they have a century of expertise in manufacturing high-quality, innovative products for a variety of markets around the world. Scott Bader now employs 750 people across 7 manufacturing sites and 17 offices worldwide.



Şişecam Glass Fiber www.sisecam.com.tr

Turkish Composites

www.kompozit.org.tr

Manufacturers Association

Since 1975, Şişecam Group, the first producer in Turkey, has been operating in the field

of glass fiber, a key input for the composite industry, as the first producer in Turkey. Şişecam Glass Fiber provides inputs to many sectors such as wind energy, automotive, construction, defense, marine, and engineering plastics as a solution partner to sector stake-holders in glass fiber with its 47 years expertise.



KOMPOZIT SANAYICILERI DERNEĞI Turkish composites manufacturers association

TURKISH COMPOSITES MANUFACTURERS ASSOCIATION Composite Manufacturers Association is an association representing the raw material, semi, intermediate and final product manufacturers, suppliers and academic institutions of the Turkish Composite Industry. It aims to foster the use of composites in every aspect of life; to conduct activities regarding its introduction, information sharing, standardization and development for the benefit of governmental and local authorities, users, manufacturers and scientific institutions.



Westlake Epoxy www.westlake.com

"As one of the inventors of epoxy technology and one of today's leading global suppliers

of epoxy resins and systems, Westlake Epoxy offers a wide range of proven, consistently high-performing materials to help our customers succeed. Our R&D centers are constantly innovating with solutions to optimize customers' processes andproducts. And our knowledgeable and responsive technical teams ensure that customers around the globe receive the support necessary to "make it" in today's world, and create an exciting new future." METYX Composites Summit was born out of the belief that ongoing formal training and real-world experience are what make it possible to turn ideas into successful end products. Today, the Composites Summit is the most comprehensive event for high-performance composites in Turkey. The event amasses industry leaders and professionals from around the globe in every sector of the composites industry.

The Summit offers attendees the opportunity to take part in interactive presentations and handson demonstrations; to learn about new products, techniques, and industry advancements; and to network with composites industry leaders.

Due to industry growth and even greater demand for expertise, METYX Fifth Composites Summit promises to be most informative yet. This year it includes two days of composites conference followed by three days of practical training (RTM School and Infusion Training). All sessions have been designed to provide the maximum amount of targeted content, including theory and practice with the goal of teaching, challenging and inspiring all attendees. This year's presenters represent world renowned companies and institutions, including:

- 3AC Core Materials (Switzerland)
- Adapa A/S (Denmark)
- AERO Wind (Turkey)
- Armacell Benelux S.C.S. (Belgium)
- Coats Türkiye İplik Sanayi A.Ş. (Turkey)
- Composite Integration (UK)
- DD-Compound GmbH featuring Westlake Epoxy (Former Hexion) (Germany)
- ENSIA Energy Industrialists & Businessmen Association (Turkey)
- Ferretti Group (Italy)
- Kreysler & Associates (USA) ONLINE
- METYX Composites (Turkey)
- Orsa Design and Engineering Tech. (Turkey)
- Owens Corning (USA)
- Oxeco (UK)
- Pontis Engineering (Netherlands)
- Scott Bader (UK)
- Tenowo GmbH (Germany)
- TPI Composites (USA)
- Turkish Composites Manufacturers Association (Turkey)
- WINDNovation Engineering (Germany)





Composites Conference May 23-24, 2022

Learn about the latest developments in production techniques for the composites industry. Experts from various industries present case studies and best practice.

Event Highlights:

- Adapting 3D Measurement/Desing/Additive Manufacturing
- Adaptive Moulding
- ArmaPET foams Innovation
- Automated Infusion of Large Structures
- Decarbonization & Electrification
- Emobility Market
- Epoxy Infusion Technology
- FRP Applications in Building Facades
- Future Super Long Rotor Blades
- Innovative Solutions in Sport Composites
- Latest Innovations in Balsa & PET Core Materials
- Lightweight Resin Developments
- Nonwoven Structures
- Potential of Advanced Materials
- Pultrusion Market
- Quality Excellence
- Supply Chain Selection Process at Wind OEM's
- Sustainability
- Turkish Composite Industry
- Wind Energy Sector in Turkey

Practical Training (RTM School and Infuson) May 25-26-27, 2022

Get the latest in RTM technology and infusion to enable a quick start for newcomers and advanced techniques for those with experience.

Event Highlights:

- Practical demonstrations and training in RTM and infusion
- See the latest in RTM and resin infusion technology; invaluable for newcomers and experienced molders
- Theoretical training combined with practical demonstrations
- Process techniques and troubleshooting
- Case studies illustrating industrial applications
- Overview of mold design
- Overview of mold construction and mold building materials (full training material available)





Monday, May 23, 2022

09:20 - 09:30

Welcome Speech by Uğur Üstünel, METYX Composites (CEO)

09:30 - 10:00



METYX Composites Composites Reinforcements, Distribution, and Consulting (Turkey) www.metyx.com

Uğur Üstünel , CEO

Recent Developments in Composites

This presentation will review recent developments in the composites industry via new METYX Composites investments and product lines that deliver cutting-edge solutions to manufacturers across different industries.

10:00 - 10:40



ENSIA (Energy Industrialists and Businessmen Association) Clean Energy Cluster (Turkey) www.ensia.org.tr

Alper Kalaycı, President

Wind Energy Sector in Turkey

Wind energy sector started in Turkey at 1998 at Çeşme/İzmir region. At August 2021, total installed capacity has passed 10.000 MW. Year 2021 became the record year with an annual installation of around 1.700 MW. At 2001, Turkey's first composite wind turbine blade factory has been founded in İzmir city. By the beginning of 2022, in Turkey we have total 4 blade manufacturing facilities in Turkey and all are located in İzmir city. This means around 5500 direct employee, just in the blade manufacturing side. Also, Izmir city became a capital for wind energy industry including tower, generator productions. By the help of upcoming offshore wind technology, Turkey can be a production hub for Black Sea and Mediterranean region.

10:40 - 11:20





ORSA DESIGN and ENGINEERING TECH. CORP.

Founded in 2009, ORSA Provides Engineering, Sales and Consultancy Services to Manufacturing Industries In the Fields of 3D Measurement / Design / Analyses and Additive Manufacturing Technologies (Turkey) www.orsaproje.com

Orkun Nuras, Co-Founder/Partner

Adapting 3D Measurement/Desing/Additive Manufacturing Technologies to the Production Field with Composite Technologies

Especially in the last 10 years, based on the developments in materials science, 3D measurement / manufacturing technologies in hardware and software, design development / verification, mold production processes and follow-up, production technologies, etc. holistic use of 3D measurement technologies, design/analysis and additive manufacturing technologies has become possible. The presentation includes new generation approaches and applications in the field of composites industry.

11:30 - 12:10



P.ONTIS ENGINEERING Technology Provider, Delivering Turn-key Solutions to Develop Advanced Composites Products (Netherlands) www.pontis-engineering.com

Pim De Laat, Senior Composite Expert

A Different Approach for Successful Use of Composites in eMobility Market

Composites have been successfully used in the mobility business for decades. Applications range from body panels to load carrying parts. The growing commercial vehicle market (e.g. busses, shuttle busses, last mile delivery vehicles and special purpose vehicles), has set different requirements and challenges for the composite business. Specifically sustainability requirements, in combination with a lower volume (significantly lower than passenger cars) will need a different approach, in order to be used commercially. We developed some concepts to meet these challenges, using significantly lower CAPEX investment than used in the passenger car business.

12:10 - 12:50



OXECO

Innovative Chemistry, Composite Surface Preparation Made Easier (UK) www.oxeco.co.uk

Carl Tydd, Head of Partnering

Unlocking The Potential Of Advanced Materials

OXECO are world leaders in the chemical surface treatment of composite and engineering plastics. Correct surface preparation of composite parts prior to painting or coating is a crucial part of the manufacturing process to ensure that products do not fail in the field. Traditionally, sanding is used for this preparation, but sanding suffers from high manual labour costs, dust generation and is ineffective on non-flat parts. This presentation will introduce the audience to the future of surface preparation, called KOTEFAST[™]. KOTEFAST[™] is a simple to use spray applied chemical treatment which replaces the need for sanding. The background to the novel technology platform behind the KOTEFAST[™] product will be covered. In addition, case studies will be shown, reflecting its effectiveness in real life manufacturing environments, for reducing costs, improving output and quality of painted, coated, or lacquered composite parts.

12:50 - 13:50

Lunch Break

13:50 - 14:30





WINDNovation Engineering Designer of Wind Blades and other Composite Structures (Germany) www.windnovation.com

Dr. Ing-Roland Stoer, CEO

Future Super Long Rotor Blades – Challenges and Potential Solutions

The trend to longer and longer rotor blades is continuing with an incredible pace pushing recent blades beyond the known limits of composite technology. The presentation will show that a deep and trustful cooperation between design and engineering of blades, material suppliers offering their most advanced material developments and a close interaction

with the rotor blade manufactures will be the key to make such super large blades happen at low risk for the investors and operators. Examples and solutions for selected technical aspects based on WINDnovation's recent works and a projection towards the next generation of rotor blades will be given.

14:30 - 15:10





SCOTT BADER

Manufacturer of Resins, Gelcoats, Functional Polymers and Adhesives (UK) .www.scottbader.com

Tom Kugelstadt, Group Head of Technical Support

Lightweight Resin Developments for Fire Retardant Monolithic FRP Components

Sandwich panel construction is a common solution in FRP production where components must deliver both high stiffness and weight reduction versus other construction materials. Cored composite solutions address these challenges, however, many markets have a requirement for composite mouldings < 5mm thick where part complexity and skin thickness requirements mean that sandwich panel construction is not a viable option. Additionally, the requirement for fire protection may also add further weight. Composite designers, particularly in Rail and Land Transport markets, are constantly challenged to find weight savings to improve carry capacity/fuel efficiency for their products.

In this presentation we will showcase new lightweight monolithic composite solutions based around glass microsphere technologies and optimized laminate schedules to deliver weight savings AND fire performance where sandwich construction is not an option. We will share market specific application examples along with corresponding data, processing and design advice to realise the benefits of this technology.

15:10 - 15:50





Adapa A/S Adapa A/S Manufactures Reconfigurable Moulds for the Fabrication of Curved Panels (Denmark) www.adapamoulds.com

Endika Delgado, Technical Manager

Adaptive Tooling in the Composite Industry

Adapa A/S was founded in 2010 and have supplied adaptive moulds that have been used for precast concrete, fiberglass, thermoplastic forming, vacuum and infusion moulding.

The adaptive moulds are delivered to industrial fabricators within construction, interior, shipbuilding, automotive, aerospace. Adapa's technology offers opportunities for fabricators to iterate faster over their designs or deliver customized unique products at rapid speed. Adaptive moulding could also prove a steppingstone towards automation through integration with robotic arms, vision (or scanning) systems, projection for guided layups and other collaborative technologies. The presentation will explore this possibility and briefly introduce use cases from existing customers that have already started including adaptive moulding as part as their process.

15:50 - 16:00

Coffee Break

16:00 - 16:30





TPI Composites Wind-blade Manufacturer (USA) www.tpicomposites.com

Gökhan Serdar, Sr. VP - EMEA Region

Megatrends: Decarbonization & Electrification

As climate change threatens all kinds of resources vital to humankind, after the pandemic and geopolitical issues, this issue is being taken more seriously than before and being addressed in political grounds, besides collective actions such as The Paris Agreement (2015) and UN Climate Change Conference (2021); countries also take independent actions for the prevention of the consequences of climate change. These actions lead us to two megatrends which will grow even further within following decades; decarbonization & electrification.

In this session we will discuss how decarbonization and electrification will evolve, and some opportunities for composites coming from clean energy solutions.

16:30 - 17:10





3AC CORE MATERIALS A Global Leader Manufacturing High-Quality Core Materials (Switzerland) www.3accorematerials.com

Samuele Laffranchini, Project Manager

Novel Thin Core Materials Enabling Innovative Micro-sandwiches & Latest Innovations in Balsa & PET Core Materials Lightweight micro-sandwiches made with foam core materials are gaining attention in automotive and aerospace industries thanks to their very high stiffness-to-weight ratio and their mass-production-friendly manufacturing processes. The first presentation part will be focused on the novel PET and PPSU based foams offering thin rigid core material sheets (thickness down to 1mm) at large format and opening outstanding possibilities for new markets. The second part will be about the latest 3AC innovations for Balsa and PET core materials, with emphasis on sustainability and improvements in total cost of ownership. The second part will be about the latest 3AC innovations for Balsa and PET core materials, with emphasis on sustainability and improvements in total cost of ownership.



Tuesday, May 24, 2022

09:05 - 09:45





Turkish Composites Manufacturers Association To Foster the Use of Composites in Every Aspect of Life. (Turkey) www.kompozit.org.tr/en/

Barış Pakiş , President

Turkish Composite Industry

The Turkish composite industry, within 180 medium and large-scale companies, 700-800 companies partially engaged in composite work, and approximately 12.500 employees, produces high value-added products. Today, the Turkish composite material market has reached 1.62 billion Euros and a volume of 300,000 tons. It is growing by taking a share of substitute materials in Turkey as well as in the whole world. In this presentation, detailed information about the market share, volume, and sectoral division in Turkey will be shared, and estimates of the volume and size that it will reach in the coming years will be presented.

09:45 - 10:25





Armacell Benelux S.C.S. Leading PET Foams Core Manufacturers (Belgium) www.armacell-core-foams.com

Stefan Reuterlov, Marketing Manager

Values Brought by Latest ArmaPET Foams Innovation

ArmaPET is the environmentally friendly innovative core material for sandwich structures. ArmaPET foam core has in the past 10+ years rapidly grown and established a position as the preferred choice for in wind energy blades and other applications. Still compared with most other core materials available it is still a very young material, the development rate for ArmaPET foam core is rapid and the full potential has not by far been reached yet.

Armacell will show how the latest innovation in PET foam development can help improve not only the environmental aspect including recycling but also the cost benefits. The extend high density range of ArmaPET make substitution of end-grain balsa at lower weight and cost possible. Surface treated ArmaPET Struct give lower resin uptake without compromising on adhesion for lower weight and manufactured cost. ArmaPET Shape particle foaming enable full 3-D parts with zero waste for e.g. mandrels.

10:25 - 11:05



Coats Türkiye İplik Sanayi A.Ş.

Leading Industrial Thread Manufacturer for Demanding Applications (Turkey)

www.coats.com/en

Alican Çelteklioğlu,Composite Material Engineer Gökhan K. Çoban, Head of Composite

Innovative Solutions in Sport Composites - Tailored Fiber Placement for Optimized Properties

Sports composite market is a growing area and recent years footwear applications gained quite a momentum. Footwear market pushes itself towards to develop more sustainable, lightweighted and functional shoes .When we think about a shoe; the sole inside the assembly brings most of the performance. By focusing on this; composite solutions is one of the best canditates to enchance properties further. Conventional approach for these products would be the injection molding with fillers and prepreg

layups. But thanks to the tailored fiber placement; performance shoes are now able to harvest superior characteristics from very thin cross sections as well. Being able to aviod monolithic structures and isotrophic material properties; enables designers to meet variable stiffness concepts and usage of continues fibers within a thermoplastic matrix system.

11:05 - 11:15

Coffee Break

11:15 - 11:55





Ferretti Group Motor Yacht Main Manufacturer (Italy) www.ferrettigroup.com

Anna Galasso, Plugs, Molds & Composite Manufacturing Director

Ferretti Group Composite Manufacturing: Quality Excellence

Ferretti Composite Manufacturing Department was created on 29th January 2016 with the clear focus on composite production process and quality excellence in the GRPs focusing on the three production pillars: timing, costs and quality. At the beginning it was started only the production of the F450 hull, deck and superstructure. Currently there are 3 main lines in serial production: Ferretti920, Ferretti720 and Wally58 (brand new) hull and deck everything done with infusion techniques.

In the present article we will describe reason for GRP Manufacturing verticalization inside Ferretti Group, the production grow we faced from 2016 until now, issues and opportunity we faced, and the follow up we are going to implement in the plant with the following goals: quality, new technologies and "marine green economy" outlooks.

11:55 - 12:35



METYX Composites

Composites Reinforcements, Mold and Plug Production, Kitting Services (Turkey)

www.metyx.com

Robert Slettenhaar, Boardmember METYX, (Former CPO at LM Windpower and MHI Vestas Offshore Wind)

Supply Chain Selection Process at Wind OEMs and Sustainability Aspects

All major OEMs of wind turbine generators and blade manufacturers have a strategy to select suppliers and negotiate a price. This presentation gives an idea how the OEMs manage their supply chain on high level. Next to that the sustainability part, with the Carbon reduction goal, will be more dominant in the world supply chain.

12:35 - 13:30 Lunch Break

13:30 - 14:10





Owens Corning

Develops and Produces Insulation, Roofing, and Fiberglass Composites and Related Materials and Products (USA) www.owenscorning.com Juan Miguel Castellano, Key Account and Distribution Manager EU & MEA Philippe Pardo, Customer Technical Support Eu Leader

How Pultruders Can Grow and Thrive in an Uncertain Market?

This presentation will highlight how performance and productivity gains could be achieved for cost effective pultrusion applications. The presentation will be in the form of three real life case-studies. A first case study will focus on structural applications like pultruded ladder profiles, where the combination of High Performance (HP) glass coupled with improved sizing/interface and design modifications result in ~15% gain in performance while providing additional lightweight options. A second case-study will focus on productivity gains to showcase how pultruders could take benefit of high text product to enable higher glass loading while reducing creel space and minimizing operator manipulations. With regulations becoming more and more stringent and CO2 emissions becoming a key element in composite applications, a third case study will present important strides reducing CO2 footprint in EU plants along with optimizing product design through modelling projects reducing waste and offering solutions e.g. local supply and process optimization opportunities.

14:10 - 14:50





TENOWO GMBH

Global Nonwoven Producer – Solutions for Technical Textiles (Germany) www.tenowo.com

Michael Bernegg, Head of Business Development/Tech Ventures

Nonwoven Structures for Alternative Properties and Sustainable Solutions

Nonwoven structures are providing new chances and alternative ways according to established textiles. Especially in combination of nonwovens with established textiles the engineers getting space for new ideas and successful products in terms of cost efficiency, lightweight and quality. Several projects had been realized together with partners, the basic experience can be provided by Tenowo. Part of our material portfolio are carbon- and hybrid-nonwovens, surface veils, spacer materials with interesting properties (EMI shielding, low fiber content, surface quality...) for accelerating new market chances. During the METYX summit we will present this part of our portfolio, additional some first ideas for new applications. Get in touch with us for any kind of brainstorming.

14:50 - 15:30





AERO Wind Wind Turbine Blade Manufacturer (Turkey) www.enercon.de

Serhat Karabağ, Production Manager

Latest Technologies in Wind Turbine Blade Production

The company, which operates in the field of renewable energy and manufactures wind turbine blades, was established in August 2001 as Turkey's first wind turbine blade factory. The facility is located in the Aegean Free Zone on a total area of 32,254 m2, of which 14,400 m2 is closed area. AERO, which has been producing blades for more 20 years, always aims for quality with its experienced and expert team of approximately 400 people. AERO, which has produced over 8,500 blades since its establishment, has supplied blades to ENERCON wind turbines with a total installed power of over 4.7 gigawatts. Producing blades for ENERCON EP1 and EP2 wind turbines, AERO produces blades for E44, E48, E53, E70, E82 and E92 models.

15:30 - 15:40

Coffee Break

15:40 - 16:20





DD-Compound GmbH featuring Westlake Epoxy (Former Hexion) Innovative Company Aims to Make Products and Processes in Infusion Better and More Efficient (Germany) www.dd-compound.com Dominik Dierkes, Managing Director Epoxy Infusion Technology from Wind-Industry to Marine Industry

Vacuum Infusion using epoxy-amine matrix systems is state of the art in the composite wind industry since beginning of year 2000. As one of the system inventors, Hexion / Westlake Epoxy has started to work with customers in this time to implement MGS® RIM products for infusion, combined with MGS® bonding paste and MGS® hand lamination.

DD-Compound has started in the early 2000 years with membrane technology to implement MTI® vacuum membrane hoses and Boat Runner® infusion lines together with Resin Break-Film® for larger surface membrane applications. To create highest speeds in production DD-Compound has created patches of membrane products for easy layup as Resin Brake Film® to keep infusion technology as simple as possible.

Together MGS® and MTI® is reaching higher production speeds and composite laminate qualities. With fiber volume quality raised and compatibility to lightweight cores, such as PET and even Polystyrene, weight of the composite can be reduced. A cost reduction out of the elements given is the result of the production combination of Westlake Epoxy and DD-Compound.

16:20 - 17:00



Composite Integration Innovation in RTM and Infusion Technology (UK) www.composite-integration.co.uk

Richard Bland, Managing Director

Automated Infusion of Large Structures

Composite Integration have developed market leading automated infusion technology in conjunction with multiple end user partners over the past decade. This presentation will demonstrate the processes and equipment used to deliver high quality, automated infusion of large structures, reducing waste, labour content and risk, whilest also improving quality, repeatability, and control. This is applicable to a wide variety of composite structures in a variety of sectors such as marine, wind energy, construction, and aerospace.





Kreysler & Associates Composites Manufacturer (USA) www.kreysler.com

Bill Kreysler, President ONLINE

FRP in Building Facades, a Greener Way to Build Tall Buildings

As architects continue to increase their ability to manage and define complex building shapes through the use of 3-D computer modeling, composite materials will be one of the few materials able to efficiently and economically form these shapes. Also, by creating buildings with 3-D computer programs, the architect is able to provide electronic data useful in controlling CNC routers and mills. The combination of these complex and often compound curves found in new buildings, and the computer data that defines them, has led to the rapidly increasing use of reinforced plastics in construction. But it's not all good news. The construction industry is complex and FRP products need to be carefully integrated into the complex assembly of parts that make up a modern building. Most FRP fabricators are not used to this collaborative and sometimes contentious environment. Bill Kreysler will discuss the opportunities and challenges that face the composite fabricator who chooses to venture into this new and fast-growing market.

RTM School and Infusion Training • May 25 - 26 - 27, 2022

The VRTM school and Infusion training days will be led by Composite Integration, a METYX Composites partner. Composite Integration provides market-leading and innovative solutions to the composites industry, specialising in Resin Transfer Moulding and Resin Infusion processes. The team are able to provide practical assistance and technical support across all aspects of the closed mould processes.

Description of VRTM Course:

The VRTM course will consist of a mixture of theoretical and practical work to provide a comprehensive understanding of the process. The course will cover tooling design and construction, materials, injection, and process control; delivered as a combination of presentation, practical demonstration, and workshops.

Description of Infusion Course:

The Infusion course will follow a similar structure to the VRTM training, covering the key principles of vacuum-bag infusion including material options, bagging techniques, and process control. This will be explained and practically demonstrated, and the attendees will be able to gain an understanding as well as hands-on experience of the process and the various techniques.

Summary:

The principles of the VRTM and Infusion processes will be explained and practically demonstrated on this 3-day training course by Composite Integration; a world leader in providing a market-leading range of infusion equipment and services to a continually evolving global customer base.

Dates and Timings for the Program:

- VRTM Training Days Wednesday 25th and Thursday 26th May 2022
- Infusion Training Day Friday 27th May 2022

Wednesday, May 25, 2022 VRTM Course Day 1

09:00	Welcome Introduction to Composite Integration Introduction to VRTM Process
10:45	Coffee Break
11:00 11:45 12:15	VRTM Demonstration Pattern Design and Manufacture First Half Tool Manufacture
13:00	Lunch
14:00 15:00 17:00	Using Calibrated Wax to Form the Product Wax A Surface Tools Summary

Thursday, May 26, 2022 VRTM Course Day 2

09:00	Mould Inserts
09:30	PVA Release Agent
09:45	Second Half Tool Manufacture
10:45	Coffee Break
11:00	Tool Separation & Commissioning
11:30	Tool Separation
12:00	Seal Fitment to Mould
12:30	Materials 1: Fibres for VRTM
13:00	Lunch
14:00	Materials 2: Resins for VRTM (Scott Bader)
14:30	Mould Release Demonstration (Axel)
15:00	Tool Design, Inserts and Cores
15:30	VRTM Moulding Demonstration
16:15	Injection and Vacuum Equipment
16:45	Summary and Q&A
Eriday N	Any 27, 2022 Infusion Day
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09:00 09:30 10:00	Introduction to Resin Infusion Resin Infusion Examples Key Parameters and Strategy
	Key Falameters and Strategy
10:45	Coffee Break
11:00	Vacuum Bagging and Leak Detection
12:00	Group Infusions -Part 1
13:00	Lunch
14:00	Group Infusions -Part 2
16:00	Large Infusion
17:00	Summary and Q&A









Istanbul Factory

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