MASTER OF MEMBRANE

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TENSAFORM ACTIVITIES

TENSAFORM MEMBRAN YAPILAR A.Ş. From the most creative applications of contemporary architectural approaches; <u>PVC</u> and <u>PTFE</u> stretch membrane structures, textile facade applications, ETFE roof and facade systems, interior and seiling textile applications, light installable and removable tent systems, aluminum steel temporary and rental structures.

Tensaform is preferred over textile architecture and membrane shell structures. The most important difference is the turnkey solution approach from design to application. With 300,000 m² of PVC, 150,000 m² of PTFE per year, with technological machinery parks, fully integrated with the

tensaform

needs of today's needs, with fast, creative and professional teams in project consulting, projecting, manufacturing, installation and service and maintenance issues of PVC, PTFE and ETFE membrane constructions and steel and aluminum structures. And 100.000 m² ETFE production capacity, it has become one of the biggest companies in the world not only in Turkey but also in the world.

OUR SERVICE AREAS

In general principles membrar be used a **PROJE** We are caprojects of the target of targe

PROJECT CONSULTANCY

In general, we do designs based on aesthetic, functional, safety and economics principles by guiding project owners who do not have enough knowledge about membrane covers and shapes and reinforced concrete and steel structures to be used as infrastructures.

PROJECTING

We are carrying out all kinds of steel + reinforced concrete + membrane cover projects on behalf of all kinds of stretching architecture with our teams equipped with latest version software and equipments. In our projects we analyze, we generally follow the order of finding forms, ending element analysis, template, designing connection detail.

FABRICATION

Our factory in Tekirdağ / Malkara location is the world's largest textile membrane processing plant with 6.000m2 closed area and 4.000 m² outdoor field. With the most advanced machinery park, experienced engineers and educated personnel, with annual 300.000 m² PVC, 150.000 m² PTFE, 100.000 m² ETFE processing capacity Is a solution to the textile architecture projects that are being carried out not only in Turkey but also in the whole world.

ASSEMBLY

Our experienced and trained teams and our technicians provide all sorts of possibilities in order to produce quality field production in accordance with the installation schedules given to them, in accordance with the required equipment and tools, and in accordance with the construction site rules they are attached.

SERVICE AND MAINTENANCE

We usually provide for the first two years the warranty of manufacturing and installation faults of steel construction and membrane cover for our manufacturing and erection operations. We carry out maintenance and refurbishment and part renewal every 6 months in order to ensure that the steel + membrane and ETFE covering systems can last much longer if desired (especially in ETFE applications) and with our special maintenance and service agreement.

PROJECTING SERVICES

We believe that architects, spatial designers and investors' creative dreams should never be hindered. Instead of telling our customers what to do, we are trying to help them understand how they can fulfill their requests. We are trying to provide the ideal concept solution by working together to realize the best solution for our customers or our solution partners who want to have more information.

We are carrying out all kinds of steel + reinforced concrete + membrane shell projects on behalf of all kinds of stretching architecture with our latest version software and equipments. In our projects that we analyze, we generally follow the order of finding forms, ending element analysis, template, designing connection detail.



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FABRICATION SERVICES

Our factory located in Tekirdag / Malkara location is the biggest textile Membrane processing plant of the world with 6.000 m² closed area and 4.000 m² open area and has the most advanced machine parks (5m and 3m width cnc cutting benches,) Machines, Teflon ironing and pressing machines in every size), experienced engineers and educated personnel, with a capacity of 300.000 m² PVC, 150.000 m² PTFE and 100.000 m² ETFE per year, it is the solution for the textile architectural projects which are being done not only in Turkey but also all over the world.



OUR ADVANTAGES

DESIGN AND ENGINEERING

A "Static Analysis" is made on the selected equilibrium form, having regard to geometric nonlinearity condition of the structure according to available specifications. For calculations, computer programmes, using "Force Density" method and making analysis according to geometric nonlinearity condition, are used. During suchanalyses, limitations stipulated by international standard and specifications and local load combinations are always taken into account.

PROFESSIONAL PRODUCTION

In the facility which we can control all the process from the material procurement until the last production and production is going on under our experts, engineers and technicans control that has a European standard.

CAPACITY AND FACTORY ANALYSIS

Our factory that is located on 10.000 m² area, which has a 6.000 m² closed production area is the largest factory in comparison with the round countries. Our factory has 12.500 m²/month and 25.000 m²/month PVC membraneproduction capacity by using the most developed machines.

QUALITY AND WORK SAFEYT

We are always giving particular importance to quality and work safeyt and we are working with OSGB (safety and quality unit company) and using special equipments while performing a service.

LOGISTIC AND ECONOMIC

Because of that Turkey is in the middle of middleeast, Turkic countries an europe the transportation and custom Works are so much easier than other countries and this provides a good advantage about the costs of transportation and custom Works.

PRODUCTION























PTFE PRODUCTION PROCESS

SURFACE CONTROL



Membranes coming from the producers are passed through surface controls against deformation and deflection which may occur on the surfaces during manufacturing.

STATIC STABILITY TEST



It has the prescribed strengths of the material and in order to obtain static values that are fundamental to our engineering calculations, strength and strength of welds in independent laboratories tests are carried out. The materials that pass the tests are packed in rolls and shipped to our production facilities.

CUTTING



Cutting panels in which the materials coming in rolls are formed are cut according to the accuracy of +/- 1 mm in CNC controlled automatic machines. The cut templates are rolled into a sticking line for gluing.

FEB FILM BONDING



The interrupted PTFE membrane templates are fixed point-to-point with FEP films.

HOT BAR PRESS BONDING



Before the hot bar press paste is applied, the pasted templates are checked for conformity with the project measurements.

IRON



Template lines with FEP film between them are fixed to each other by means of iron bars and they are made ready for bonding with hot bar press machines.

PACKING



The materials to be measured are bonded with hot bar press machine and ready for packing process.

MEASUREMENT CONTROLLING



Template lines with FEP film between them are fixed to each other by means of iron bars and they are made ready for bonding with hot bar press machines.

SHIPPING



The PTFE membrane materials to be packed are transported to the construction site for installation.

MEDINE AIRPORT 2015





PVC PRODUCTION PROCESS

SURFACE CONTROLLING



Inspection of the surface against defects or defects which may occur in the manufacturing process on the surfaces of the membrane collecting surfaces coming from the producers is visually checked on the cutting machine.

CUTTING



Cutting panels in which the materials coming in rolls are formed are cut according to the accuracy of +/- 1 mm in CNC controlled automatic machines.

EDGE SHOULDER AND FOIL



When the cut templates are placed on the production line for gluing, edge packs or wicket construction works are started.

BONDING



The assembled templates are affixed to the High Frequency machines for high weld strength.

SHIPPING



The PVC membrane materials to be packed are transported to the construction site for installation.

MEASUREMENT CONTROLLING



After the HF (High Frequency) welding process, the templates are checked for conformity with the project measurements.

PACKING



Careful packaging in accordance with the membranous cover assembly plan through the measurement control makes.

AŞKABAT STADIUM 2010





ETFE PRODUCTION PROCESS

CNC CUTTING PREPARATION



For the cutting of the templates which are produced according to the form and the air pressure values to be applied, ETFE films are laid in accordance with the cnc machine.

BONDING



Intermediate bonding is done according to the shares given in the interrupted templates. Parts designed by template number and module size, respectively.

MEASURED CONTROLLED SETTLEMENT



A precise size-controlled placement is made so that the cut templates do not go out of the material.

INTERNAL ROPE COMBINATION



Pocket bonding for ropes used to increase the static strength of ETFE film (single-wall applications).

CUTING



ETFE film cut with precision of +-1mm.

BUNDLE BOINDING



Pocket bonding of ETFE film (in singlewall applications) to make the edge ropes pass.

ROPE BONDING



ETFE film (single-wall, two-wall, threewall, four-wall applications) special extrursion aluminum profiles The process in which all the layers of the films of the EPDM wicks placed on the edges of the module are glued together at the same time.

PACKAGING PREPARATION



Preparing the package according to module size, size and assembly opening situation

PACKING AND SHIPMENT



After folding the material to minimize the risk of breaking and tearing, the module is packaged and labeled for maximum security and shipment, so as not to be lost over the identification and alignment of the module.

ETIMESGUT CEZERI 2016





FACTORY PRODUCTION

PVC Control Room

PRODUCTION CAPACITY

PTFE 150.000 m² / year 300.000 m² / year PVC ETFE 100.000 m² / year



ETFE PRODUCTION NUMBER OF EMPLOYEES

Production Chief 01 Technicians 06 Employees 08 Quality Control 01



ETFE **MACHINE PARKUR**

Etfe Adhesion Machine : 1

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PVC PRODUCTION NUMBER OF EMPLOYEES

01
04
16
01



PVC MACHINE PARKUR

Hf Machine	: 4 Piece
Hf Machine	: 1 Piece
Cutting Machine	: 24 m T
Wick Weiding Machine	: 1Piece
Ferrari Grinding Machir	ne: 1 Piece
Digital WeldingMachine	e : 9 Piece
Sewing Machine	: 3 Piece

es Fostrom 22 m Table Length

PVC 0

Production Area 2000 m²

- es Uhf Machine 3 m Table Length
- able Length 3 m Width Gerber



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PTFE PRODUCTION NUMBER OF EMPLOYEES

Production Chief	01
Technicians	06
Employees	23
Quality Control	01



PTFE MACHINE PARKUR

Big Iron Small Iron Hot Cutter Controller Big Press Small Press SpecialIron Cutting Machine

: 21 Pieces : 15 Pieces : 23 Pieces : 8 Pieces : 2 Pieces : 1 Pieces : 22 m Table Lenght 5 m width

: 22 Pieces

LOCATION

Tensaform is in a central position because of that it is located betwen europe and asia. The transportation times on the basis of some countries are added on the below:

		ţ -
2	15-20 Days	28 Days
2	5-6 Days	6 Days
2	5-6 Days	9 Days
2	4 - 5 Days	12 Days
2	6-7 Days	7 Days
2	3-4 Days	22 Days
2	2-3 Days	4 Days
2	2-3 Days	3 Days
2	-	10 Days
2	9-10 Days 🛛 🤟	5 Days
2	9-10 Days	5 Days
2	10-11 Days	8 Days
2	10-12 Days	23 Days
2	10-12 Days	25 Days
2	10-12 Days	20 Days
2	10-12 Days	20 Days
2	5-6 Days	23 Days
	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	 15-20 Days 5-6 Days 5-6 Days 5-6 Days 4-5 Days 4-5 Days 6-7 Days 6-7 Days 3-4 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 2-3 Days 3-4 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days 3-10 Days



ONLINE PROSECUTION AND LIVE BROADCAST

The customers can prosecute their order by the passwords that will help them to connect to special ERP.By this ERP programme the customer can check all the process of production, the rest of production and the time for production.

By force of ERP programme all the problems that can ocur about deadlines will be detroyed. The production area can be watched online on Internet.









MASTER OF MEMBRANE



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