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Formteile aus Holz und Kunststoff



Technical production data

- Manufacturing of veneer on three rotary-cutting lines
- Moulded parts made of plywood and wood laminates
- Processing of high-grade veneers and other special surfaces
- Multiplex boards
- Variable compression techniques: more than 60 electrically, high-frequency and steam-heated presses
- CNC-processing at around 50 workstations
- Assembly and finishing

Technical data

Development/construction of moulding appliances

- NURBS-modelling
- 3D surfaces and 3D volume models
- Digitalisation of hand models supplied by the customer
- Construction of our own appliances
- FEM calculation



Diversity / ergonomics / aesthetics ■

Production from a renewable resource ■

Design and creation ■

Development and construction ■

MOULDED PLYWOOD PARTS ■

Production to order ■

Assembly and varnishing ■



A family business

Since 1927 OWI, managed in the third generation as family business, is supplier especially to the seating furniture industry. Today the site in Lohr am Main in Germany is the centre for development, sales and plastic injection moulding production. Already since 1993 the OWI Zala BT – a state of the art manufacturing company in

Hungary – is complementing the production of moulded plywood parts. Thanks to its advantageous cost structure, OWI Zala with its employees contributes greatly to ensure your supply of goods in the right quality and cost.

MOULDED PLYWOOD PARTS



Moulded parts made of rotary-cut beech veneer

Beech plywood is a wonderful material to work with. The curved parts produced from it are aesthetically attractive, versatile, and form the basis of many different types of ergonomically designed seating. We process beech from the Spessart forest in Northern Bavaria and from the Zala area in Hungary.

The trunks are approx. 100 to 140 years old and drawn from sustainably managed forests, with FSC or PEFC certification if desired.

Because of its mechanical properties, beech is particularly suitable for the

production of moulded parts. Beech stands out for its hardness, durability, elasticity and strength. Its natural colour and structure make it a versatile material that can be used for many different purposes. Depending on customer requirements, the moulded parts can be stained or varnished, covered with a layer of sliced veneer of another wood species, or with laminates or undercoating films. OWI also process melamine resin laminates (HPL, CPL). With OWI-Thermoformholz®, we have succeeded in taking this material a step further, allowing beech plywood to be

used outside for the first time. OWI-Thermoformholz® is also available in a flame retardant version compatible with B1 DIN 4102, Part 1.

Rotary-cut veneer

In our artificially watered wood stores we can keep up to 20000 cubic metres (solid) of beech logs of a quality suitable for rotary-cutting. In steam heating and boiling pits the wood is prepared for the peeling

process. The still warm trunks are trimmed to the peeling length and de-barked. The peeler blade is fixed in a central position on the rotary cutting lathe, and produces a continuous strip of veneer. The veneer can be between 0.8 mm and 2.1 mm thick; we prefer to use a thickness of 1.2 mm. On the belt drier the veneer is dried to a wood moisture content of $6 \pm 2 \%$, cut to the required width with computerized clippers, and sorted according to quality. The material is then conditioned in the controlled atmosphere of the veneer store.



Compression moulding

In the compression moulding centre the veneer is combined depending on the product to form plywood or wood laminates, and glued with the suitable adhesives. Using pressure and heat, seats, seatbacks, seat shells, armrests, side pieces or frame pieces are pressed into shape on



the single or multi-daylight presses compression moulding machines. The cycle time of the pressing process depends on the thickness of the moulded parts. The pressing tools are made of wood or aluminium and are steam, electrically or high frequency-heated. At this we select a suitable technique for each individual part, depending on the lot size and other technical parameters (dimensions, tolerance requirements, ...), from our machine pool, which also includes presses allowing to exert pressure from the side. The maximum veneer length we process is 2.20m.

For highly sophisticated, visible parts, face veneers are sanded before pressing, an operation that can only be left out for parts which are later to be upholstered.

The processing of moulded parts

After compression moulding the moulded parts are not yet fixed in their contours. The raw products are milled to contour, drilled or sanded at one of our many CNC machines and other special machines. For finishing we have dust-free spraying rooms that provide optimum conditions for accuracy with their modern technology. As a manufacturer producing to order, we take care of assembly and the logistics as agreed with you, such as warehousing and commissioning, as well as delivery – on time and in the numbers required – direct to the address specified by you. Even today, our employees carry out the final quality check for our highly specialised products by hand, according to criteria and statistical values agreed individually with each customer. After packaging the parts are delivered ready for assembly.

We accompany you throughout your development process:

Using state-of-the-art CAD/CAM systems, we can help you progress highly efficiently and with great precision from the design stage to the prototype. Our project managers are not only experts in wood moulding technology: they are equally familiar with the language of designers and developers. We offer the platform you need for well-timed and technologically sound project management for new moulded parts and whole construction series. State-of-the-art technology makes it possible to gauge the potential for distortion. Critical areas can be neutralized quickly and precisely on site. The compression moulding tools are made in house of solid aluminium or wood on our 5-axis CNC machines based on the CAD data provided of the customer. Our speciality is the production of moulded parts of superior optical and mechanical quality, such as seating and seat backs. Our customers are predominantly manu-

facturers of office furniture and furniture for public buildings. We are also familiar with the special requirements of large-scale seating arrangements (multi-purpose halls, congress centres, grandstand seating) and of living rooms. Customer-specific moulded parts are also used in many other applications.



