



HESS
TIMBER LIMITLESS

TIMBER ARCHITECTURE
INDUSTRY CONSTRUCTIONS
GLUED LAMINATED TIMBER



The plant grounds of HESS TIMBER



Heavy load transport

HIGH-QUALITY GLULAM TIMBER MADE IN GERMANY

2

HESS TIMBER, a member of the HASSLACHER group, stands for more than 140 years of tradition, innovations and outstanding achievements in timber engineering.

The timber structures of HESS TIMBER can be admired in modern architecture all over the world. With our customers we realize outstanding and creative ideas. HESS TIMBER produces exceptional quality - using special technics, latest production machines and first-class timbers. The fascination of the unique is at the same time the motivation for the team to constantly push every limit of timber engineering design and art.

In addition to standardised services for timber construction, such as roof and industrial building structures, HESS TIMBER has particularly specialised in the planning and implementation of customised and architecturally demanding roof structures with individual and complex geometries.

In the last years, HESS TIMBER successfully carried out some of the worldwide most spectacular timber construction projects: the D1-Tower in Dubai, the Museum of the Louis Vuitton Foundation in Paris, Europe's longest pedestrian timber bridge in Georgia and the Waste-to-Energy-plant in Leeds, UK's tallest glulam project so far with a construction height of 42 m.

HESS TIMBER is in a position to offer products and solutions which are unique on a global scale due to the most varied in-house product developments like HESS HYBRID or the innovative connector solution for beams HESS LIMITLESS.

HESS TIMBER probably is the only manufacturer of glued-laminated timber to combine both, its own carpenter's/joiner's workshop and decades of experience in timber construction and carpentry/joinery.

The unique combination of planning office + glued-laminated timber manufacturing + CNC-machining + carpentry/joinery, allows the company to realise the most complex and high-grade timber projects of excellent quality starting from planning through to assembly – and so worldwide.

With its top-modern and innovative manufacturing possibilities in combination with state-of-the-art CAD/CAM technology, HESS TIMBER now ranks among the most modern glulam construction companies in Europe and around the globe. This high technological level allows the company to realise limitless constructions and to implement all of its clients' requirements at top-grade quality.



Rensteph Thompson,
CEO of HESS TIMBER



Fully automated CNC-press



Cross-conveyor

A COMPANY WITH TRADITION

The company HESS TIMBER GmbH & Co. KG looks back on an impressive company history.

In 2005, the former CEO Mathias Hofmann of the wohnwerk GmbH took over the business of the company Hess Holzleimbau Technologie, which relies on a 140-year company tradition and founded the new HESS WOHNWERK GmbH & Co. KG.

In 2010, the company received the new name HESS TIMBER GmbH & Co. KG. With the intention to bring the timber engineering on a common next level and in the view of further expansion, HASSLACHER NORICA TIMBER took over 75% of the shares of HESS TIMBER GMBH & CO. KG in 2017. From January 1st 2017, Rensteph Thompson took over the board of management, together with the proven management team. Mathias Hofmann himself maintains 25% of the shares and continues to advise the company.

The company based in Kleinheubach (Germany) is proud of making a positive contribution to the regional labour market situation with its current 100 employees.

About HASSLACHER group: Established in 1901, the family enterprise employs more than 1,500 people. With its eight production sites in Austria, Germany, Slovenia and Russia, HASSLACHER is one of Europe's largest and most prominent timber industry companies, operating as innovative supplier

of sawn timber, solid wood material, laminated timber, cross-laminated timber and solid structural timber for modern timber constructions. True to its maxim "From **wood** to **wonders**."

PHILOSOPHY

HESS TIMBER is dedicated to creating a modern wood construction without any limits and to overcoming existing limits – with regard to technological and territorial aspects.

The company's vision is to further promote wood construction in many countries throughout the world.

Innovations and developments in manufacturing engineering and material development present an ongoing challenge to HESS TIMBER.

Thanks to the decades of experience, all of the HESS projects, despite their diversity and novelty, rest on a solid basis made up of the company's experience and reliability.

The partnership-based cooperation between HESS TIMBER and its customers is characterised by openness. The customers can perfectly rely on the company HESS TIMBER that assumes responsibility for what it does.



Structural Engineering

SCOPE OF SERVICES

HESS TIMBER is able to implement all of its clients' requirements at the highest quality by combining customised engineering planning, state-of-the-art technology for production, and the quality of its carpentry services.

4

Structural Engineering

The highly qualified HESS TIMBER experts will plan any conceivable constructions on the basis of the Euro codes and the related national standards or their annexes. In addition, they are also used to work with non-European standards and if required, will speedily immerse themselves in new standards.

For many years HESS TIMBER has been working with state-of-the-art statics and design software made by Dlubal and PCAE.

Design/CAD

Each project processed in the HESS TIMBER CAD-department is designed in 3D and in this way it is transferred to the CNC-machine. The clear advantage of this design is that the designers are able to detect and eliminate possible element collisions early in the design construction.



Production

The CAD designers use different CAD programmes, so in most cases, they are able to easily take over existing customer CAD data and process them for the further work. Depending on the project, the suitable CAD system is chosen to ensure a smooth workflow, like for example Cadwork, AVEVA bocad and Rhinoceros.

Project Management

HESS TIMBER realizes complete "Design & Build" projects on a world-wide basis. A team of CAD design and structural engineers, construction and project managers will be on hand with help and advise to secure a successful project realization. The project management focusses both on the project's technical elaboration and the communication with the customer. Our international project team speaks German, English, French, Spanish or Italian.

In addition to the personal structure, HESS TIMBER has developed special data base systems for project execution. An IT specialist was specifically employed to ensure that these are further developed on a continuous basis.

Production

HESS TIMBER products, such as HESS HYBRID, HESS LIMITLESS, HESS PREMIUM or HESS FREE FORM are unique and can be produced only with special machinery and equipment.



Transport

HESS TIMBER manufactures all products and projects by means of state-of-the-art production engineering. In some cases, the company even uses machines which are unique and which to a significant degree have been developed by HESS TIMBER.

HESS TIMBER production at a glance:

- X-ray scanner GOLDENEYE 702 from Microtec
- Finger Joint Systems from WEINIG
- 2 CNC-6-axis portalmachines of 40 m length
- High-frequency press for straight glulam beams
- CNC controlled glulam press for single and double-curved beams (unique in the world)
- 3D-glulam press for the production of double-curved beams
- Glulam press for components of a length of up to 36 m
- Hydraulic press for straight glulam beams of a length of up to 25 m
- Double-layered press for straight and slightly curved components of lengths of up to 28 m
- Block press machines with a high pressing force covering the whole area and suitable for cross-sections with a length of up to 1.2. x 1.2 x 36 m

Assembly

Logistics / Transports

HESS TIMBER projects are installed all over the world. For this reason, the company has in-house specialists who prepare the best transport solution according to the respective project's requirements. HESS TIMBER cooperates with different logistics experts who have been supporting the company as partners for many years now.

If required, HESS TIMBER also organizes dispatches including customs clearance and insurance. The company assumes responsibility for the preparation of the required packing lists, the presentation of the goods to the customs and export declarations involved with the goods transport.

Assembly

HESS TIMBER's experienced and well-trained assemblers and partners have already proven their reliability in countries such as United Arab Emirates, Georgia, UK or Lithuania. The company knows how important the on-schedule assembly is. Therefore it plans the assemblies very accurately and coordinates all significant steps with the customer.



A special look: Glulam made out of HESS HYBRID (Spruce/Oak)

THE BENEFITS OF GLULAM TIMBER

6

Glued laminated timber, often shortened as glulam, is an industrially fabricated timber product, consisting of glued timber elements of approx. 4 cm thickness, the so called lamellas. This procedure enables the fabrication of bigger and longer timber members, which can be both, curved or straight.

Good Looking

The natural appearance of glulam is sufficiently attractive to make it eminently presentable with no cladding – indeed, used as exposed beams, glulam adds to the aesthetic appeal of a structure.



CEPL logistics centre

Chemical Resistance

Timber and the synthetic adhesives used in bonding glulam have a remarkable resistance to chemical attack. Therefore glulam is often chosen as the preferred structural material for buildings such as salt barns, water treatment plants, etc. Glulam is resistant to most acids, rust and other corrosive agents.

HESS TIMBER has manufactured and installed many glulam timber projects where steel could not have been used due to aggressive chemical environments like swimming pools, coal storage buildings or salt storage buildings.

Even the harsh salty environment of the UAE is not an issue for glulam structures. The timber canopies of the D1-Tower in Dubai will show the advantage against steel which often needs to be a special grade of stainless steel.

Strength to Weight

A structural steel beam may be 20% heavier and a concrete beam even 600% heavier than an equivalent glulam beam.

Increased strength due to the laminating process – glulam is stronger than solid timber as it has fewer natural defects and a wider distribution. It is also comparable to steel in strength but is much lighter.

Great Fire Resistance

When subjected to fire, large timber sections have greater resistance to loss of structural integrity than steel or pre-stressed concrete. This resistance is provided by a layer of charcoal which forms around the surface of the section during exposure to fire. The rate of charring of different species of timber is known and therefore the performance and endurance of timber in fire is predictable. The strength of the residual, unburnt core of timber can readily be calculated, thereby allowing a realistic assessment of safe resistance to fire to be made. The method of calculation is given in DIN 4102 and the Eurocode 5.

As, on average, wood burns down at a rate of 0.7 mm per minute, the cross section of the material is reduced by approximately 20 mm in 30 minutes and by 40 mm in 60 minutes. This is why the load bearing potential of the remaining cross section is of major importance. The respective fire resistance grades R 30 and R 60 refer to the fire endurance of these wooden members. It is interesting to note, after all, that R 30 and R 60 can be obtained without additional flame-retardant treatment. Due to the inherent material properties of this natural building material, the fire-resistance characteristics of wooden structural members are excellent.

As professionals know about the excellent fire behavior of wood, many fire departments are timber constructions.

The Renewable Source – FSC® and PEFC

A small percentage of materials used in building construction can be recycled but timber is the only renewable building material. The planting rates are controlled to ensure growth exceeds harvested quantities. This cycle of felling and planting is very beneficial to the atmosphere as it is only during growth that a tree absorbs CO₂ and gives off vital oxygen. One cube meter of glulam absorbs approx. 1 ton of CO₂ and hence detracts this greenhouse gas from the atmosphere.

HESS TIMBER is FSC®/PEFC certified and is entitled to use the trademark FSC® and PEFC.



Sculpture fabricated by HESS TIMBER

Environmentally Friendly

A 305 mm x 165 mm steel 'I' beam has the equivalent performance of a 550 mm x 135 mm softwood glulam beam but requires six times the energy cost to produce.

A comparable 400 mm x 250 mm reinforced concrete beam requires five times the energy cost to produce. Add to this the pollutant by-products of these wasteful processes and steel and concrete structures are even more environmentally undesirable.

Energy Efficient

Glulam is also energy efficient in use. The well-known insulation property of timber eliminates the risk of cold bridging where the frame may penetrate external elements of the structure. Its low thermal mass helps reduce fuel bills by absorbing little space heating energy.

Variety

Glulam can be used in almost every kind of construction for roofs, door and window beams, columns and rafters.

HESS TIMBER PROJECTS...

...range from innovative and award-winning prestigious projects as well as artistic and customised roof structures, to very high-performance roof structures for industrial and commercial buildings in Germany and abroad.

Bunjil Place // City of Casey, Australia

Timber species: Spruce and Birch (roof cassettes)

Details: Glulam timber gridshell for a cultural, community and civic facility in Melbourne's south eastern suburbs. Preassembled soffit roof cassettes incl. steelwork and connectors

Products: HESS BASIC, HESS FREE FORM



© Francis Jones Morehen Thorp





EDEKA // Göttingen, Germany

Timber species: Spruce, Beech

Details: Glulam roof construction including the fascia timber elements. Footprint ca. 11,300 m², total volume ca. 680 m³ glulam.

Products: HESS BAUBUCHE XL, HESS BASIC



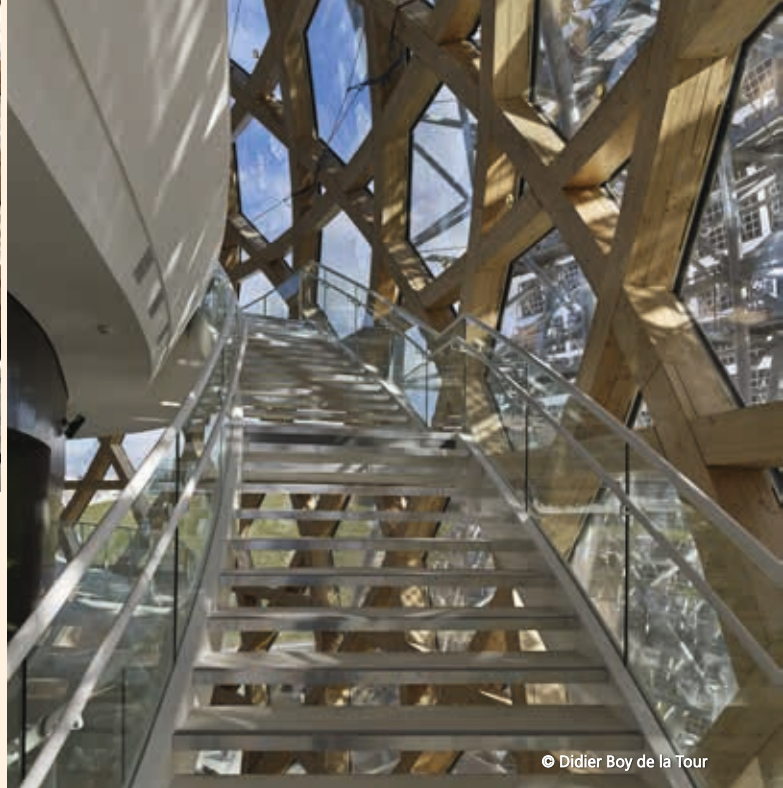
© Laurent Blossier

La Seine Musicale // Paris, France

Timber species: Spruce, Beech

Details: Glulam grid construction with more than 1,700 unique timber elements. Total volume: approx. 900 m³ double curved glulam.

Products: HESS FREE FORM, HESS PREMIUM



© Didier Boy de la Tour



© Laurent Blossier





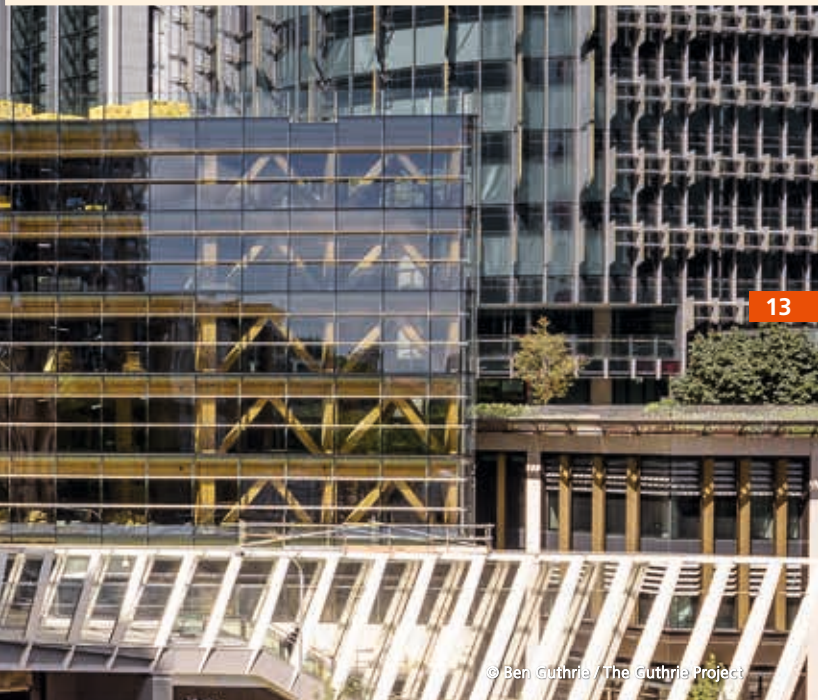


International House // Sydney, Australia

Timber species: Spruce, beech

Details: Timber construction for the first commercial office building in Australia built from timber. Total volume 950 m³ glulam. Product innovation by HESS TIMBER: composite beams enabling for the first time large openings in a glulam beam without losing load-bearing capacity or clear height, and with no need of further reinforcement.

Products: HESS BLOCK, HESS BASIC



© Ben Guthrie / The Guthrie Project



© Ben Guthrie / The Guthrie Project



© Ben Guthrie / The Guthrie Project

Lord's Cricket Ground – Warner Stand // London, Great Britain

Timber species: American White Oak
Details: Beam lengths up to 25 m,
cantilever lengths up to 12.2 m.
Total volume: approx. 50 m³ glulam
Products: HESS HARDWOOD, HESS BLOCK



© Jon Cardwell

14



© Jon Cardwell



Museum Fondation Louis Vuitton // Paris, France

Timber species: European Larch

Details: 222 single and double curved glulam beams, coating with rod-lamellas, beam length up to 28.2 m. Total volume 779 m³ glulam.

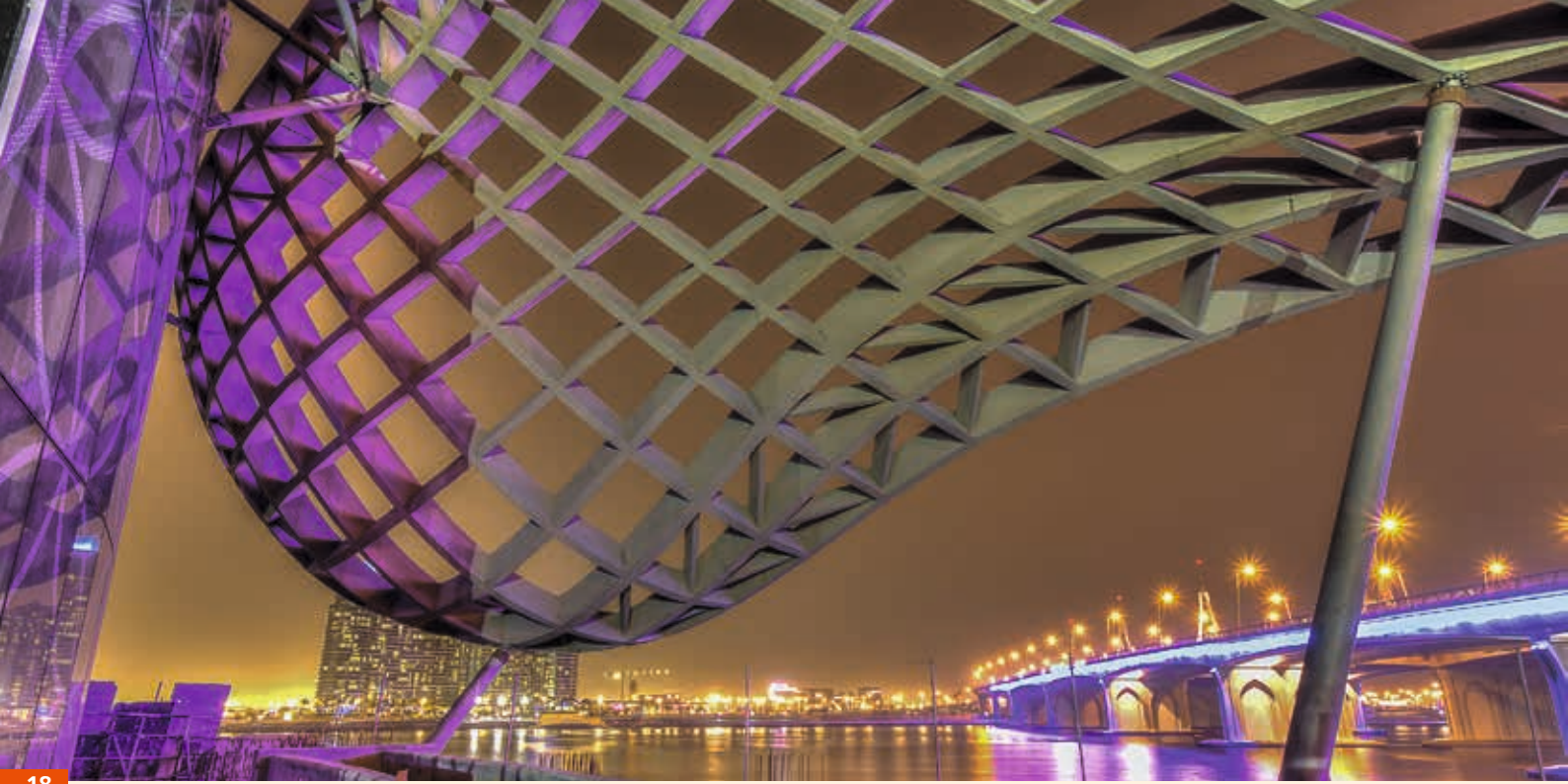
Products: HESS PREMIUM, HESS FREE FORM

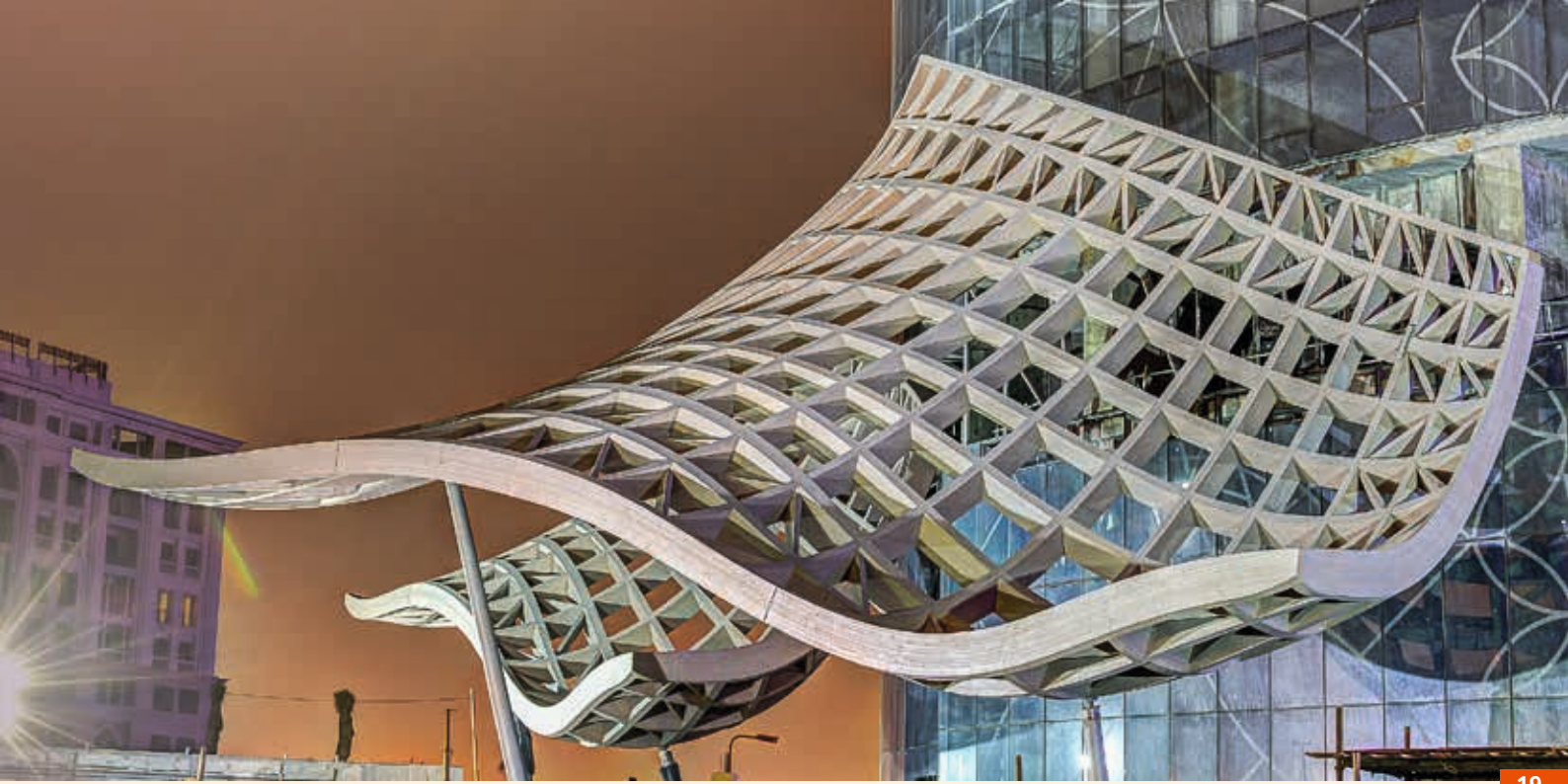


16









D1-Tower Timber Canopies // Dubai, UAE

Timber species: Fir

Details: 4 free-formed canopy constructions with complex roof geometry and a total area of approx. 1,700 m². Total volume: approx. 350 m³ glulam.

Products: HESS PREMIUM, HESS FREE FORM

Waste-to-Energy Plant // Leeds, UK

Timber species: Spruce

Details: Partially block-glued beams with 400 x 760 mm cross-sections, total volume 2,600 m³ glulam. This timber construction is UK's biggest and tallest glulam project so far.

Products: HESS BASIC, HESS BLOCK



© Mitch Duncan







Sculpture "Fingers", De Groot // Rijssen, Netherlands

Timber species: Accoya® (modified Pine)

Details: 10 identical beams, cross sections glued of lamin-lamellas. 11 m span, 8 m height, single curved

Products: HESS FREE FORM, HESS PREMIUM

© De Groot



© De Groot



© De Groot

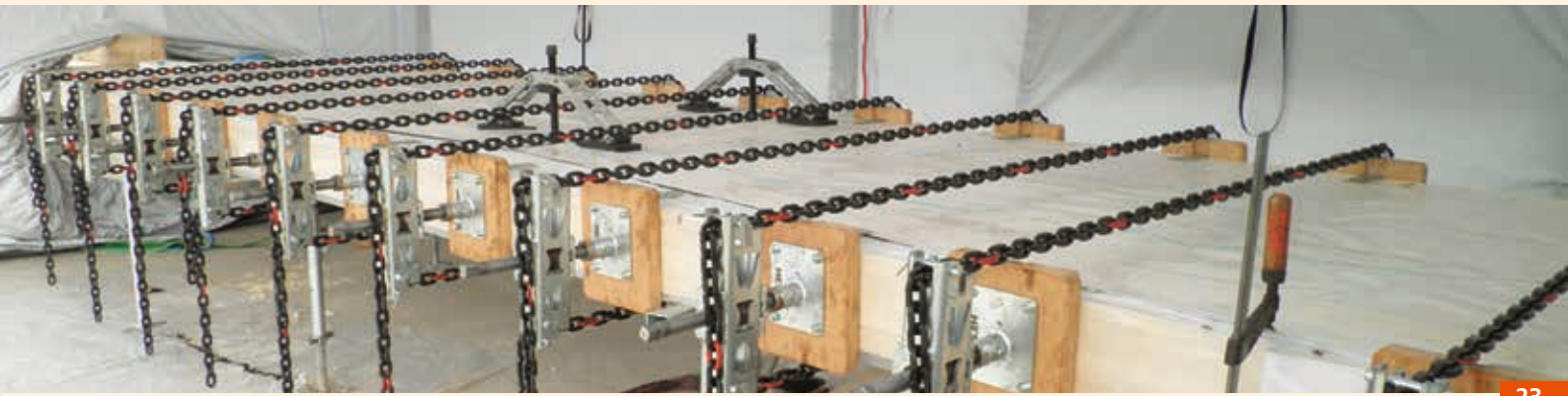


Pedestrian Bridge // Anaklia, Georgia

Timber species: Spruce

Details: 505 m total length with spans up to 84 m, comprising 141 HESS LIMITLESS joints. Longest pedestrian timber bridge in Europe.

Products: HESS BASIC, HESS LIMITLESS



King Abdulaziz Center // Saudi Arabia

Timber species: Spruce-Oak

Details: 42 twisted beams, lengths up to 26 m, cross-sections: 240 x 2,000/1,000 mm

Products: HESS HYBRID



© seele_austria





MobiVersum, Autostadt Volkswagen // Wolfsburg, Germany

Timber species: Multiplex Beech B1

Details: Playground in complex 3D free form geometry with accessible inside areas. Height 14.2 m, footprint 15.5 x 21.5 m

Products: HESS FREE FORM





Toskana Thermal Bath // Bad Orb, Germany

Timber species: Spruce

Details: Freeform grid shell with 8 edge beams, 682 timber ribs and 682 individual acoustic elements. Double-curved and twisted beams, total area 2,200 m²

Products: HESS FREE FORM





Flagship Store Peek & Cloppenburg // Cologne, Germany

Timber species: Siberian Larch

Details: Glulam timber support structure for glass cupola facade of ca. 11,000 m²

Products: HESS PREMIUM (veneered)



Tennis and Bowling Centre // Pétange, Luxembourg

Timber species: Spruce

Details: Longest beam up to 55 m, volume:
ca. 420 m³ glulam

Products: HESS LIMITLESS, HESS BASIC



(Bottom edge of beam highlighted for better understanding)

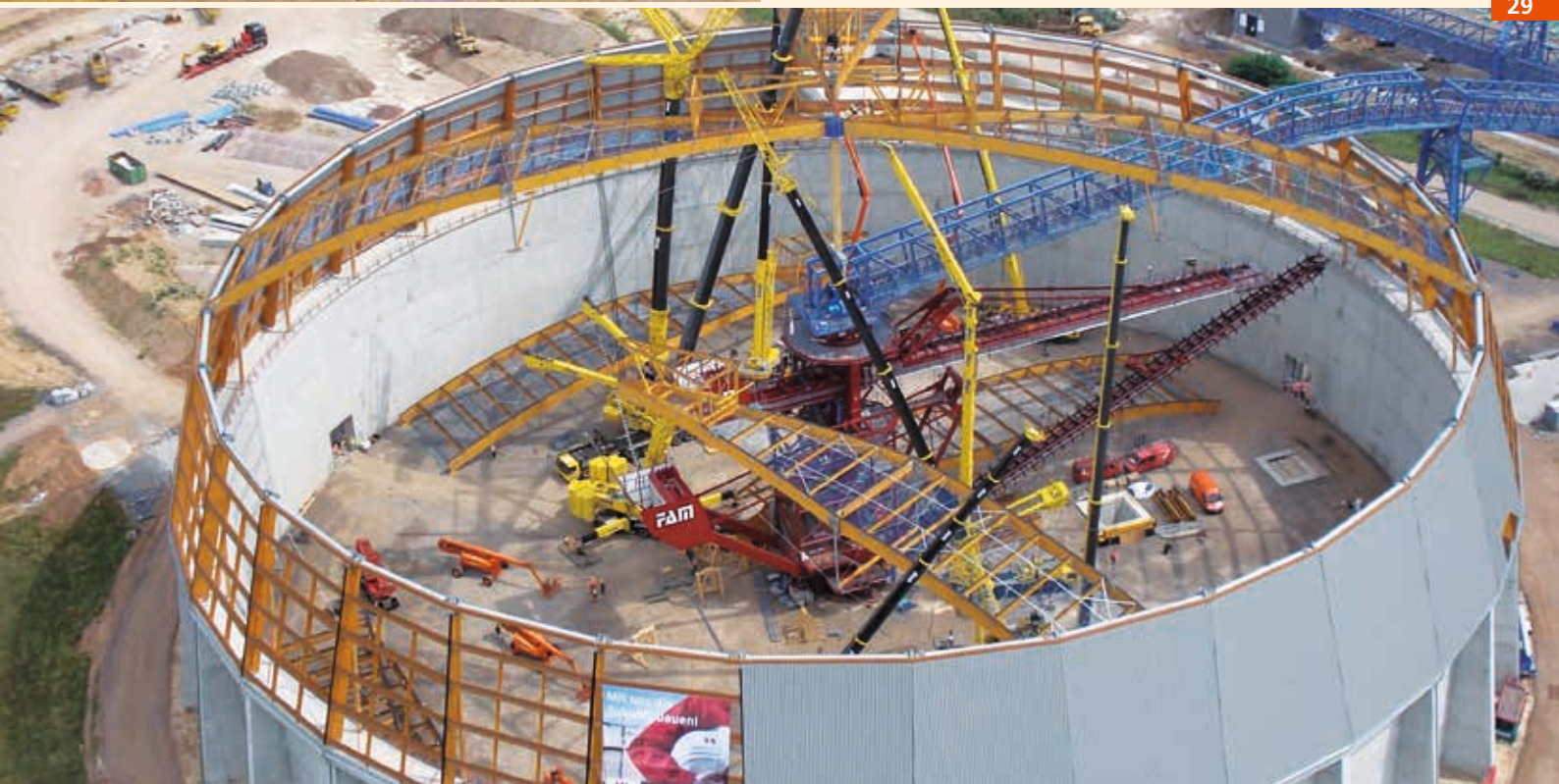


Staudinger Coal Storage // Großkrotzenburg, Germany

Timber species: Spruce

Details: Trussed timber construction, 132 m
in diameter, 52 m height, roof area approx.
20,000 m²

Products: HESS BASIC





HESS BASIC

OUR GLULAM TIMBER PRODUCTS

HESS TIMBER is offering a wide range of glulam products that can be adapted to the specific needs of our customers.

HESS BASIC

HESS BASIC is a reliable and quickly available product which for many years now has successfully been used in wood construction. The most frequent applications of the standard cross-sections are roof structures, framing and supports in residential and commercial construction as well as purlin courses and wall beams in hall construction.

- Glulam timber according to EN 14080:2013
- Timber species: Spruce/Fir and European Larch (other species on request)

- Standard strength classes according to EN:
 - for Spruce: GL24h, GL28c or GL30c (GL32c and other strengths on request)
 - for European Larch: GL24h or GL28c
- Waterproof melamine resin adhesive or resorcinol resin adhesives as needed
- Glueing of the finger-joints with PU adhesives
- Possible visible qualities (according to the Studiengemeinschaft Holzleimbau e.V.): industrial, natural and visible
- Long edges chamfered, cleanly planed on four sides
- Width: from 8 to 28 cm (European Larch until 24 cm of width)
- Height: from 8 to 248 cm
- Max. length: 36 m or endless in Spruce with use of HESS LIMITLESS

HESS TIMBER is the only producer that is able to produce glulam – even without joint – in the strength classes GL 35c and GL38c.



HESS BLOCK

HESS BLOCK

Due to the available raw material dimensions, glued-laminated timber is normally limited to a component width of approx. 280 mm, but HESS TIMBER offers a solution: Individual glued-laminated beams are glued to composite sections, which are also referred to as “block gluing”. Due to this interesting composite solution it is possible to produce a large number of very different forms and profile variants. Even arches and twisted beams are possible with this product!

HESS TIMBER has focused on the production of composite sections. This is reflected in the company's innovative products such as HESS HYBRID or HESS PREMIUM which it offers as separate products due to their uniqueness.



HESS PREMIUM

HESS PREMIUM

The classic glulam product is composed of lamellas with a thickness of approximately 40 mm and already is a very efficient product. HESS PREMIUM even goes one step further: With specifically developed machines HESS TIMBER produces special rod-lamellas, which in a second production stage are glued to become HESS PREMIUM.

What do you get out of it? HESS PREMIUM is the appropriate product if you want your beams to be especially **dimensionally stable, attractive and three-dimensional**. Moreover, this product has a minimum cracking susceptibility while at the same time due to the three-dimensional components there will be no loss of strength.

The rod-lamellas exactly comply with the components' geometry. HESS TIMBER troubles itself about it, because just cutting a three-dimensional wooden component out of a block would nullify the quality requirements that you surely expect from three-dimensional wooden components.





HESS HYBRID

HESS HYBRID

HESS HYBRID is an innovative product by HESS TIMBER: The perfect symbiosis of two different wood species that generate an economic product of high quality.

- The core's cross section of the glued laminated timber beam generally consists of spruce – a standard wood species that has been granted technical approvals up to GL 32c
- The 1-2 cm thick coating can be made of precious and firm wood species e.g. Oak, Western Red Cedar or Accoya®
- The proportion of the beam's layer with regard to the total cross-section is approx. 10 to 12 % depending on the cross-section's size and thus constitutes one of the key elements for the technical and economical effectiveness of HESS HYBRID. Positive side effect: Due to the production process a considerable increase of strength can be achieved
- New possibilities for architects regarding the visual appearance, durable solutions for engineers
- HESS HYBRID is a protected product



HESS HARDWOOD

HESS HARDWOOD

HESS TIMBER has longstanding experience with the processing of hardwood. The company has already used the following hardwood types in construction projects:

- Beech
- Oak
- American Tulipwood
- Chestnut
- Iroko
- Padouk

HESS BEECH

Due to the high solidity values of beech wood as opposed to coniferous timber it is possible to realise filigree bearing structures from beech wood. Moreover, the surfaces obtained with this deciduous timber stand out for their high-grade and smooth appearance.

HESS OAK

Oak is a very popular type of wood with superior visual and mechanical properties. Glulam made of oak is ideally suitable for visible wooden indoor constructions, but if you want to use it as a load-bearing element or to put static load on it, an individual case approval might be necessary. In this case, HESS TIMBER offers a good alternative with the product HESS HYBRID: Its core is made from an approved type of wood (such as Spruce), and only the outer layer of approx. 10 mm is made of Oak, so no special approval is required.



HESS LIMITLESS

HESS LIMITLESS

Glulam beams of endless length with worldwide delivery! Scan this QR code with your mobile phone to see our web-site with the HESS LIMITLESS movie!



The patented high-strength beam joint (up to GL38c) named HESS LIMITLESS was developed to enable a cost-efficient use of long glued-laminated timber without complicated prior transport planning. The beam joint is glued on the building site by the skilled specialists of HESS TIMBER. All the necessary tools will be made available and the company will take care of the complete process.

- Approved building product: Approval Z-9.1-775 HESS LIMITLESS
- Strength classes: GL35c until GL38c
- Higher strength (GL38c) as for a comparable (GL32c) continuous glulam beam
- Short beam lengths guarantee flexible and economic transport to the construction site: lower total costs at verifiable equal or even higher technical performance
- Higher profitability compared to alternative construction materials and construction conceptions
- Multiple application possibilities – flexible constructions
- No steel parts are used – high fire safety
- HESS LIMITLESS is almost not visible and meets highest architectural demands



HESS FREE FORM

HESS FREE FORM

Whether twisted or curved or formed, HESS TIMBER enables you to realize free formed glulam bearing structures without any limits.

As not all free forms are created equal, HESS TIMBER produces the three-dimensional glued-laminated timber in such a way that the wood fibers exactly follow the component's geometrical shape. It is an absolute must for HESS TIMBER to maintain the aesthetically demanding bearing structure's geometry which would be spoiled by simply cutting the components out of a block.

Therefore, HESS TIMBER uses a unique production technique, such as self-developed 3D-CNC-presses which the company combines with its innovative products like HESS LIMITLESS, HESS HYBRID or HESS PREMIUM.

HESS FREE FORM offers clear advantages:

- Cost-efficient solution, due to less waste
- No and/or minor solidity loss of the component, as the wood fibers are not cut
- Aesthetically appealing as there are no cut glue joints or wood fibers visible in the component



© Pollmeier

HESS BAUBUCHE

HESS BAUBUCHE

BauBuche is a highly efficient wooden building material made by the company Pollmeier.

HESS TIMBER disposes of the qualification and gluing certificate issued by the MPA-Stuttgart (Material Testing Institute) authorizing to glue beams made from BauBuche according to the general approval and the ETA (European Technical Assessment) that the company Pollmeier received in 2015 for cross sections up to 300 x 600 mm.

BauBuche Beam GL70

BauBuche GL70 is made from 40 mm thick BauBuche S laminations, bonded parallel to the grain. Its high strength allows BauBuche GL70 to be used in slender structures for heavy loads and large spans. The side surfaces of BauBuche GL70 show the attractive veneer layers, while the top and bottom show the hardwood surface.



HESS BAUBUCHE XL

Finishing

As the straight BauBuche beams up to a length of 18 m are produced by Pollmeier without machining, HESS TIMBER takes care of all the remaining processing steps to refine the product as desired by the customer.

Special forms – HESS BauBuche XL

If you require BauBuche beams of a length > 18 m or a height > 1,360 mm or special forms, HESS TIMBER offers the appropriate solutions by gluing the individual BauBuche panels:

- precambered beams
- curved beams (radius > 8 m)
- special widths/block-glued
- variable cross sections

Shortly the company will receive the ETA authorization for dimensions of up to 300 x 2,500 x 36,000 mm.



HESS COLUMNS

HESS COLUMNS

HESS TIMBER has produced wooden columns for more than 25 years and knows about the customers' quality requirements. This is why the company sands the surfaces and is in a position to precisely manufacture the columns by applying state-of-the-art CNC technique. No matter if you require classical columns made from fir or columns in semi-monocoque construction – the HESS TIMBER experts will provide the respectively suitable solutions.

Areas of application and dimensions:

- Wooden columns for indoor and outdoor areas, made from selected woods such as larch or oak wood. In outdoor areas and for static load bearing round columns, we use glued-laminated timber
- For custom-made columns, HESS TIMBER can realize lengths of up to 40 m and diameters of 1.6 m.
- Spiral-columns and/or twisted columns, three-dimensionally twisted turned parts and wooden balls of a diameter of 150 to 1,000 mm
- 6-axis CNC portal processing center for wooden column manufacture and machining



© TINEFOTO.COM | Martin Steinhäler

CROSS LAMINATED TIMBER

CROSS LAMINATED TIMBER

Cross laminated timber (CLT or X-Lam) is a solid plane timber product for load-bearing purposes. It is used as a panel or plate element.

HESS TIMBER cooperates with partners supplying them with cross laminated timber blanks. The company further processes these blanks according to the project's requirement: it cuts or paints them or mounts steel parts on to them. Your advantage: You get everything from one single source with HESS TIMBER being your central contact.

Cross laminated timber consists of at least three layers in sawn timber which are normally glued at right angles to one another, whereby individual sawn timber layers can be arranged longitudinally along their narrow sides or at systematic lateral spacing to each other. Cross laminated timber is currently manufactured exclusively from softwood. Individual layers may, however, also be replaced by derived timber products such as OSB and parallel laminated veneer or plaster materials.

(Source: www.brettsperholz.org)



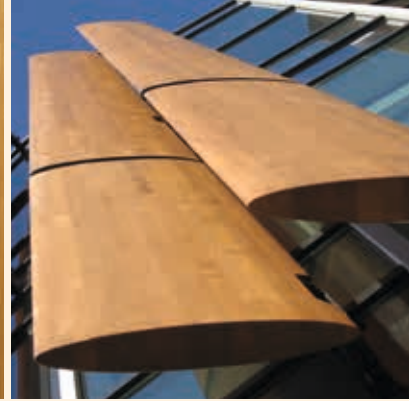
Spruce



Radiata Pine



Western Red Cedar



Facade in Western Red Cedar

WOOD SPECIES USED FOR GLULAM TIMBER

The following species are showing a range of the most typical wood species which we use for our glulam projects. If you are looking for a wood species that is not shown here, please let us know. We are more than happy to offer you solutions.

36

Softwood

Spruce

Botanical name: Picea abies

Spruce is an economically important coniferous species grown in Europe and North America. It is used for most of our products.

Radiata Pine

Botanical name: Pinus radiata

Radiata Pine is a softwood whose availability and ease of use make it popular for all kinds of construction and decorative uses. However, we only use it if specified by the customer due e.g. pressure treatment requirements.

Radiata Pine is also used for the technically modified timber named Accoya®.

Western Red Cedar

Botanical name: Thuja plicata

Western Red Cedar is a large softwood that grows in British Columbia and some of the nearby western states of the USA. A versatile timber, it is commonly used for applications such as cladding, windows and joinery.

However, there is no technical approval available for load bearing purposes.



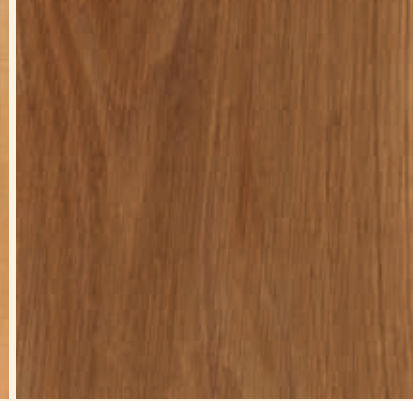
Douglas Fir



European Larch



European Beech



European Oak

Douglas Fir

Botanical name: Pseudotsuga menziesii

Douglas Fir is one of the world's best-known timber species. Douglas Fir is a softwood timber, finding a range of weather-protected applications in heavy construction.

European Larch

Botanical name: Larix decidua

Larch is well-known as a tough and durable timber similar to Douglas Fir (see above). It is also available as a knot-free timber if premium quality is specified.

Accoya® (modified timber)

Accoya® is an acetylated long life wood made out of Radiata Pine (see www.accoya.com). It is mainly used when it comes to high performance requirements that might only be achieved otherwise by tropical hardwoods.

Hardwood

European Beech

Botanical name: Fagus sylvatica

Beech is a relatively strong wood with high bending and compression strength but it is not a durable wood and should not be used if exposed to weather. However, Beech glulam timber has its own technical approval and can therefore be used for load-bearing glulam structures.

European Oak

Botanical name: Quercus

Oak is a hard, heavy wood, and has low stiffness and good overall strength, making it increasingly popular as a structural timber. Very similar in appearance and colour to the American White Oak, European Oak has light-coloured sapwood and a light to dark brown heartwood.

However, there is no technical approval available for load bearing purposes. Despite this fact it can be combined very economically together with our product HESS HYBRID.



Sculpture "Together We Are Strong"
on the plant grounds of HESS TIMBER

OUTLOOK

Because of the enormous opportunities for modern and demanding timber construction resulting from the strong partnership with HASSLACHER NORICA TIMBER and the common product innovations, HESS TIMBER will continue to expand its international activities.

In addition to current projects in Europe and the Middle East, the company is constantly working on developing projects and cooperation opportunities all over the world.

HESS TIMBER cordially invites you to personally learn more about the company's architectural innovation and technical perfection as part of a plant visit.

AWARDS

Winner of the TTJ Timber Award 2017

In September 2017, HESS TIMBER was awarded the "Achievement in Timber Engineering" Award for its project "The Warner Stand at Lord's Cricket Ground, London".

Winner of the Structural Timber Award 2015

In October 2015, HESS TIMBER was awarded the "Project of the Year" Award for its project "Waste-to-energy-plant Leeds".

Winner of the TTJ Timber Award 2015

In September 2015, HESS TIMBER was awarded the "Achievement in Timber Engineering" Award in London for its project "Waste-to-energy-plant Leeds".

Double Winner of the TTJ Awards 2014

In September 2014, HESS TIMBER was awarded the "Innovative Product Development" Award and the "Achievement in Timber Engineering" Award in London for its new glulam product HESS HYBRID.

Second place TTJ Innovation Awards 2013

In 2013, HESS TIMBER was awarded the 2nd place of the TTJ Innovation Award for its HESS LIMITLESS Joining System.

Schweighofer Prize 2011 – European Innovation Prize for Forestry

In 2011, HESS TIMBER was awarded for the innovation and development of the HESS LIMITLESS Joining System.

Timber construction – Outfitter of the year 2011

The editorial department of the timber journal "Holzkurier" awarded HESS TIMBER for the new HESS LIMITLESS Joining System.

CERTIFICATES

Certificate of conformity for glulam strength grades

Certificate for the glulam timber strength grades GL24, GL28, GL30 according to EN 14080:2013.

Certificate of conformity for composite glulam

Certificate for glued composite glulam according to DIN 1052-10:2012.

Technical approval for HESS LIMITLESS

General technical approval for the HESS LIMITLESS (approval no. Z-9.1-775).

Certificate of constancy of performance

Certificate for glulam timber according to EN 14080:2013.

BauBuche Certificate of conformity for glulam made of beech veneer laminated timber

Certificate for glulam made of beech veneer laminated timber according to the general technical approval Z-9.1-837.

BauBuche Glueing Certificate C1

Qualification for the manufacture of Z-9.1-837: glulam made of beech veneer laminated timber according to DIN 1052-10:2012, Table 2.

PEFC™

Chain of Custody (PEFC 04-31-1721).



FSC®

Chain of Custody (FSC-C106169)

Ask for our FSC®-certified products.



More information on HESS TIMBER and our products can also be found at: www.hess-timber.com

CONTENTS

HIGH-QUALITY GLULAM TIMBER MADE IN GERMANY	2
A COMPANY WITH TRADITION	3
PHILOSOPHY	3
SCOPE OF SERVICES	4
THE BENEFITS OF GLULAM TIMBER	6
HESS TIMBER PROJECTS	8
OUR GLULAM TIMBER PRODUCTS	30
WOOD SPECIES USED FOR GLULAM TIMBER	36
OUTLOOK	38
AWARDS	38
CERTIFICATES	39



HESS

TIMBER LIMITLESS

TIMBER ARCHITECTURE
INDUSTRY CONSTRUCTIONS
GLUED LAMINATED TIMBER

HESS TIMBER GmbH & Co. KG
Am Hundsrück 2 · 63924 Kleinheubach · Germany
Phone +49 (0)9371-4003-0 · Fax +49 (0)9371-4003-360
Email info@hess-timber.com · www.hess-timber.com

HASSLACHER
NORICA TIMBER

From **wood** to **wonders.**

A **MEMBER** of **HASSLACHER** group