

Pressure Impregnated
Wooden Poles



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Ulrich Scheller
Export Manager

For over 100 years – since the time of Werner von Siemens – German Technology is renowned for outstanding innovation and technical leadership. **MERKUR**® Ueberseehandel GmbH is committed to this long tradition.

Under **MERKUR**® German Technology we develop and produce warranted, durable high quality products in the following segments:

- Electrotechnology
- **DUPROLUX**® Lighting
- Metering
- Power Distribution
- Climatisation
- Renewable Energy

MERKUR® clients worldwide can rely on our vast experience. We offer authorised distributors competitive prices better allowing them to compete in the market. We also successfully cooperate with contractors who are bidding for public utility tenders.

MERKUR® utility supplies are a significant part of our business activities, particularly products installed in LV and MV electricity networks, telecommunication networks and railway systems.

MERKUR® specialises in:

- IWW® naturally grown creosoted wooden utility poles (Pinus Silvestris), Made in Germany

- induo® utility pole systems from naturally grown round poles (Pinus Silvestris) with indue® anchoring system, Made in Germany
- induo® engineered timber poles made from FSH (construction wood), Made in Germany

Our IWW® creosoted utility poles are well established in the market and are installed throughout the Middle East for decades in ever growing numbers. They are made to perfection and perform flawlessly remaining the first choice for wooden utility poles in the market.

The induo® utility pole systems were developed in co-operation with leading German power utility companies, establishing a German wooden pole system standard for LV and MV networks. RWE Germany, a major market player in the utility sector, specifies induo® utility pole systems as their standard wooden pole equipment.

The induo® engineered timber poles have also been developed for railway tracks of the Deutsche Bahn (DB) as a cost saving and green technology substitute of concrete- and steel pole systems.

For many years we have been successfully supplying turn-key contractors in African and Arab markets for their tender business. **MERKUR**® supplies other components in this field such as distribution transformers, ring main units, lightning arrestors, power generators and mobile power plants.

MERKUR® is a reliable partner with a tradition of providing individually tailored products and solutions in accordance with customers' needs. Contact us and we gladly assist you with more details about our products and services. Get in touch with us!

Export Manager

Pressure Impregnated Wooden Poles



Wooden poles

We offer you a product which looks "simple" at first sight. But the transformation from tree to pole is a long way.

Wood from northern growth areas

Our wood suppliers select only the best trees for the processing, only the straightest and with the fewest knots. These trees, mainly from northern growth areas, are more than 50 years old .

Characteristic is the slow growth for this wood, in the average 8-10 annual rings per 25 mm of wood. This secures the necessary elasticity, i.e. the compliance of the ultimate load at the top of the pole demanded in the standards.

In peeling condition , with the characteristically smooth surface and with a moisture content less than required in the standards, the poles are ready for impregnation.

Boilerpressure impregnation

We are using the boiler pressure impregnation to protect the wood from pests. In this process we use according to the clients request chrome - copper - salt (CK-salt), chrome - free salt (KSM-salt), creosote (WEI-B, BS 144) and the wood preservative IWW-Woodcare ®, made from a combination of creosote and quaternary ammonia.

To this we use equipment which were modernised 1997 basically and belong now to the most modern in Europe, also under the points of view of the environmental protection, and world-wide spreading methods of impregnation like the RUEPING-process.

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Fields of application

We deliver poles for telecommunication lines (i.e. 7 and 8m) and for low and medium-high voltage lines (i.e. 9- 18m) with butt and top diameter according to

- European standard EN 14229 or to the
- German Standard DIN 48350 or to the
- classes Light, Medium and Stout of the British Standard BS 1990.

We are processing mainly pine (*pinus sylvestris* L.) and spruce (*picea abies* Karst.) poles.

Spruce poles were delivered additionally with perforation in the earth-air-area of the pole to improve the penetration of the wood preservative

Service

According to the customer's requirements the pole will be fabricated ready for the erection, i.e. with holes, notches and scarfings for cross-arms, insulators, kicking baulks, anchor logs etc. and also as a prepared A-pole, including kicking baulks, and bolts.

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The advantages of wood poles

No other pole in comparison to concrete and steel poles contains as many unbeatable characteristics.

The wood pole is light enough to be moved even by hand, a pole for telecommunication lines has a weight of approximate 100 kg, a pole for low and medium-high energy lines in dependence of his dimension 200 up to 400 kg.

This saves costs for transport and handling and additional work like boring holes can be done with ordinary manual on the spot.

Spruce poles were delivered additional with perforation in the earth-air-area of the pole to improve the penetration of the wood preservative

Wood poles are maintenance-free over long years even in areas with high air pollution or salty air. The length of service life of a pressure impregnated pole lies at 15 to 20 years (salt impregnation) respectively more than 40 years (creosote impregnation).

Dry wood poles have low electrical conductivity.

Impregnated wood poles have proved themselves at the most various climatic locations into snow and ice at more than -20 C just like in the driest desert areas at more than 40 C for decades.

Wooden Poles 'Pinus Silvestris'



Branded wooden poles - The rough Scandinavian Poles

Acc. BS 199. Application for overhead power and telecommunication lines

The quality:

- The wood is of highest quality from the slow grown Redwood Pinus Silvestris with optimum strength and lifetime.
- Impregnation is made in plants using the most modern treatment process.
- Our branded wooden poles are manufactured according to international standards such as BS (British Standard) and INSTA (Nordic Standard) following the European Homologation Committee for Wood Preservation (EHC).

The capacity:

- Different plants with vast and increasing capacity of impregnated poles and other wooden products combine a sufficient output to meet even big demands.

- The plants maintain a large stock of poles in different sizes (see next page). Complete stocklists are available on request.
- We have the ability to adapt to customers requirements for small and large deliveries.

Impregnation methods:

- Creosote according to "Rueping Process" for high pressure deep penetration.
- Salt treatment (CCA - Green) for deep penetration under pressure.

Production flow:

- Tree selection
- Debarking
- Drying
- Dressing
- Sizing
- Drying
- Impregnation
- Drying
- Stock

The environment:

- Our plants aim to develop methods and processes to minimize negative effects on the environment.
- Preservation process remain within a closed system.
- Products are fully recyclable.
- Harvesting and re-forestation are closely monitored and regulated.

Wooden Poles Preferred Sizes

Wooden Poles preferred sizes acc. to BSS 1990 (other sizes on request)

Nominal length (meters)	Light poles		Medium Poles		Stout Poles	
	Diameter at top min / max (mm)	diameter at 1,5 m from butt end minimum (mm)	Diameter at top min / max (mm)	diameter at 1,5 m from butt end minimum (mm)	Diameter at top min / max (mm)	diameter at 1,5 m from butt end minimum (mm)
6.00 7.00 8.00	125/150 125/150 125/160	150 160 170	- 140/170 145/180	- 200 210	- - -	- - -
8.50 9.00 9.50	125/150 125/150 125/160	180 180 185	150/180 150/180 150/180	215 220 215	190/240 190/240 190/245	215 220 215
10.00 10.50 11.00	125/160 125/160 125/160	185 190 195	150/180 150/180 150/180	230 235 240	190/245 190/250 190/250	215 220 215
11.50 12.00 13.00	125/165 125/165 130/170	200 200 210	150/180 150/180 160/180	245 250 260	190/250 190/250 190/255	215 220 215
14.00 15.00 16.00	- - -	- - -	160/201 165/210 170/215	275 290 305	195/255 195/260 200/265	215 220 215
17.00 18.00 20.00	- - -	- - -	180/220 180/220 180/230	320 330 360	200/265 200/265 200/265	215 220 215
22.00 24.00	- -	- -	190/240 -	380 -	200/265 200/265	435 470

Note:

Maximum diameters are given only indicate the range of taper to be expected. The a.m. data represent our standard specification. We can also supply according to customers' requirements and specifications. Please contact us for a tailor-made quotation.

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