



Thermo treatment of wood

Smoke treatment of wood

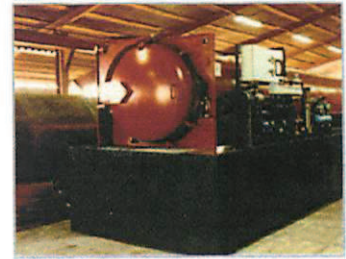
Vacuum/pressure treating

Low pressure treating

Oil and colour treatment

Creosote treating

Vacuum drying of wood



T10 AND T20 VACUUM/ PRESSURE TREATING PLANTS

Simple but efficient treating plants using the full-cell (Bethell) as well as the modified empty cell (Moldrup invention) processes for treatment of wood in hazard classes 3, 4 and 5 (e.g. wood for the garden, fencing material, winery-sticks, agricultural posts and utility posts as well as building timber for decking and outside cladding to name a few examples).

Plants are supplied for small capacities (800 m³/year) up to big industrial use (100.000 m³/year). A typical plant has a capacity of 12 m³ per charge and 9.000 m³ per year in a single shift operation. The autoclave is 1.800 mm in diameter and has a length of 12.000 mm for packs of wood up to 1,20 m x 1,20 m and 12,0 meter in length.

The plants are supplied either in one finish-mounted unit which is operational upon being placed in a concrete foundation and connected to water and electricity. Or if the plants are too big to be supplied in one unit, they are transported in 2 or more finished mounted units, easily and quickly connected at the place of erection. As the preservatives are water-based, the plants must be placed in an insulated building in colder climates.

CR606 CREOSOTE TREATING PLANTS

MOLDRUP has for more than 20 years been in the forefront with new developments for creosote impregnation of railway sleepers and utility poles. Plants are supplied as cost efficient simple plants for the full-cell and empty cell processes and as very sophisticated creosoting plants for the Rüpung process. Plants are supplied with annual capacities from 4.000 m³ up to 40.000 m³. They meet latest environmental requirements including elimination of any waste water.



LOW PRESSURE TREATING PLANTS

MOLDRUP supplied the first plants for treatment with organic based preservatives in 1976 for window manufacturers and has continued development in this area since then. Today plants are supplied for various organic preservatives dissolved in water or in oil used for joinery (windows and doors) material as well as building timber. The plant design ensures high production output and surface dry products ready to use at the end of the process. Plant capacities from 2.000 to 20.000 m³ per year. The plants are designed with extra large pumps and pipes to reduce the time required to flood and drain the treating vessel for preservative solution to only 1-2 minutes to optimize the capacity of the plant and to ensure a uniform absorption of preservative in all parts of the timber stack.



OIL TREATMENT PLANTS AND COULORS

MOLDRUP offers oil treatment plants for extremely fast and gentle drying of wood using heated oil under vacuum. Various additives can be added to the oil to give the wood a pigmented colour or an active organic substance for improved protection against rot and fungi. Capacities from 2.000 to 8.000 m³ per annum.

FIRE RETARDANT PROTECTION OF WOOD

MOLDRUP has designed a number of treatment plants for use for fire retardant preservation of wood for interior as well as exterior use. Unique plant design ensures longer durability of the preservatives and less operational worries and costs.

THERMO TREATMENT

MOLDRUP has developed a process and plant for thermo treatment of softwoods as well as hardwoods. Among the purposes of thermo treatment is a change in the colour of brighter wood to a warm darker colour in order for instance to replace the use of tropical hardwoods with temperate hardwoods. Another purpose is to increase the durability of soft- and hardwoods for use outside in hazard classes 3 and 4. Also a substantially increased dimensional stability is among the advantages of heat treatment.

The process uses superheated steam under light pressure and is called MOLDRUP-SSP. It is an efficient treatment that only lasts between 6 and 10 hours for each process. As the process takes place in a fully controlled, closed environment, a uniform result of the heat treatment is obtained in each process.

MOLDRUP operates own plants for thermo treatment - trusting the future of this type of treatment of wood. The own production units are also used for research purposes to improve on process and engineering design on plants sold to others. Plants are supplied for annual capacities between 2.000 m² and 6.000 m³.

SMOKE TREATMENT

MOLDRUP has introduced a plant for smoke treatment of tannin containing species like oak and acacia. The main purpose of the treatment is to obtain a very dark, almost black, colour on the wood to replace the use of tropical hardwoods with European species from renewable and easy to access resources.

The standard plant has a capacity of 10 m³ per charge. Each cycle lasts from a few days to 2 – 3 weeks, depending on the thickness of the wood to be treated. Annual capacity up to 500 m³.

As part of the cycle, the gas used to colour the wood is removed during the actual process making it possible to work and handle the wood shortly after the process is completed.

MOLDRUP operates a number of own plants for smoke treatment to increase the



MOLDRUP SSV VACUUM DRYING PLANTS

The drying system using superheated steam under vacuum to accomplish a fast but gentle drying of wood was developed by MOLDRUP and introduced on the market in the middle of the 1980. Since then, several hundred plants have been installed and work all over the world with many different species of hard- and softwoods.

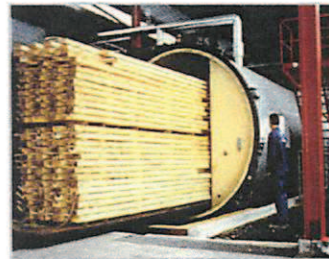
Plants are sold with capacities from 10 m³ per charge up to 100 m³ per charge. One model is a low cost unit that is interesting also for smaller wood industries wishing to have the possibility to dry wood in the own factory with a simple, reliable unit.

The standard plant has capacities from 20 m³ per charge and upwards and is supplied in stainless steel and is equipped with sophisticated computer controls.

MOLDRUP-CV

Drying of wood using Superheated Steam under Vacuum has proven to be a gentle and very fast process for permeable hardwoods such as beech, ash, and birch as well as many tropical hardwoods when drying from freshly cut to 8-12% final moisture content in any dimension. The process has also proven to be superior for resistant species like oak going from freshly cut to furniture dry in thicknesses up to 30 mm.

A new process called MOLDRUP-CV is now being introduced for drying of oak, eucalyptus and other difficult to dry species when going from freshly cut to 8-12% final moisture content even for bigger thicknesses of 50 mm and more.





SPECIAL PLANTS AND PLANTS FOR RESEARCH PURPOSES

MOLDRUP has designed and supplied a large number of impregnation and vacuum drying plants for special treatment requirements and research institutions.

Take contact with us for a confidential discussion about your needs and requirements.

AFTER SALES SERVICE

MOLDRUP offers a comprehensive after sales service and keeps a stock of spare parts. Service requirements are attended 24/365 via e-mail.

In line with customer demand for cost effective operation of treatment plants, MOLDRUP has re-engineered the plants to make it possible for our customers to execute most service work themselves or using local companies. This is by far the fastest and cost-effective solution for our customers.

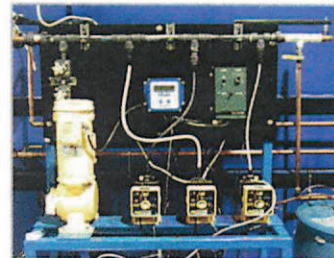
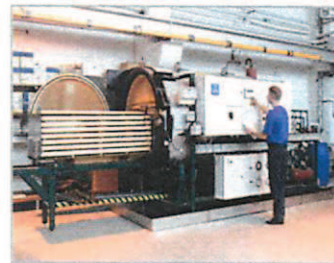
Programming is mostly done in an open environment which makes it possible to have changes to programmes made locally.

MOLDRUP

The MOLDRUP family has been active in industrial wood preservation since 1957 with research activities, operation of own treating plants, and the manufacture of plants for industrial wood treatment and drying.

Many design details used on most treatment plants today were originally introduced by MOLDRUP, such as the hydraulically operated rapid closure door, tilting of the autoclave to improve the surface drying of wood after treatment, the square treatment tank inside the cylindrical autoclave to eliminate unnecessary chemicals during the process, and many more.

In the area of wood drying, MOLDRUP on the basis of several patents is the forefront in the introduction of fast but gentle wood drying using superheated steam under vacuum (MOLDRUP-SSV).



24/365 contact info@moldrup.com, with any question related to industrial wood treatment and drying.

We will be happy to assist you!

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