Cleaning/Decontamination by Plasma: Removing biocide residues from wood surfaces

Transfer offer

Large quantities of wood preservatives that are harmful to health have been used in Germany since the 1960s and 1970s. Today, the use of these substances in prohibited, however hazardous substances such as DDT, lindane or PCP are still present in construction timber from owner-occupied houses, historical buildings such as churches and castles, in furniture and cultural goods and needs to be removed.
INNOVENT tests and analyzes organochlorine compounds and cleans wooden surfaces from volatile, crystalline DDT residues using atmospheric pressure plasma.

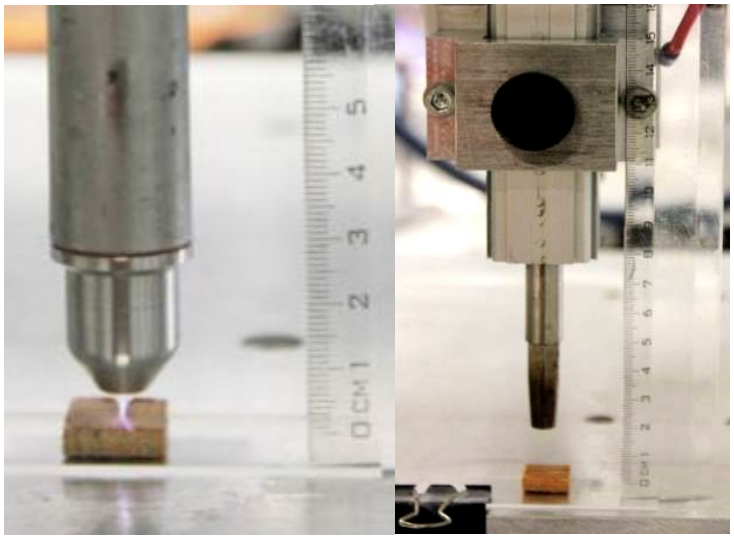
Traces of wood infestation, photo Schlossmuseum Sondershausen

Technical solution

By using atmospheric pressure plasma, DDT residues can be removed from wooden surfaces. Using certain parameters, it is possible to reduce biocides by up to 75%. For testing and analyzing the substances DDT, Lindane and PCP we can use the mobile X-ray fluorescence technology and gas chromatographic mass spectrometry (GCMS).

Advantages

- **Analytics & cleaning from a single source**
- **Non-destructive analysis**
- **Scalable technology from small to large areal application**
- **Mobile use**
- **Mild application for sensitive surfaces**
- **Easy to use**



Plasma-systems für the treatment of wooden surfaces

Non-destructive sampling

Level of development and property rights

The Plasma decontamination technology for this purpose is at the beginning of its development. Further R&D collaborations are intended to provide important insights into the long-term and deep effects of plasma treatment. Due to the massive use of wood preservatives in private and public facilities, there is a high need for decontamination processes. The same applies to restoration, archives and depots.
No property rights have been acquired so far.

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