

Nome: **Avaliação e Controle de Poluentes na Indústria Madeireira**

Código: IF-1344

Créditos: 3

Carga horária: 60 horas

Ementa

Efluentes da indústria madeireira, emissão de formaldeído e outros compostos orgânicos voláteis (VOC) da madeira e de materiais de madeira (chapas, compensados, MDF). Eliminação térmica de materiais de madeira na indústria. Preservativos em ambientes interiores. Madeira impregnada utilizada em áreas de recreação. Emissões durante o processo de secagem artificial da madeira. Reciclagem de materiais de madeira na indústria. Sistema de gerenciamento ambiental.

Bibliografia

BERGLUND, B.; BERGLUND, U.; JOHANSSON, I.; LINDVALL, I.

Formaldehyde - absolute odor threshold and perceived odor intensity.

Proceedings: 3rd Int. Conf. On Indoor Air Quality a. Climate, Vol.3, Stockholm, 1984

BÖTTCHER, P.; SALTHAMMER, T. **Umweltverträglichkeit als**

Qualitätskriterium. In: 9. Holztechnisches Kolloquium Braunschweig, Schriftenreihe des IWF, Vulkan Verlag Essen, 1994

BLOCK, M.R. **Identificación de aspectos e impactos medioambientales.** Madrid, AENOR, 2000

DE ANGELIS, D.G.; RUFFIN, D.S.; REZNIK, R.B. **Preliminary characterization of emissions from wood-fired residential combustion Equipment.** Bericht EPA-600/7-80-040, Environmental Protection Agency, Dayton/Ohio, 1980

FENGEL, D.; WEGENER, G. **Wood chemistry. Ultrastructure. Reactions.** Walter de Gruyter, Berlin, 1989

KHARAZIPOUR, A., ROFFAEL, E. **Recyclingskonzepte in der**

Holzwerkstoffindustrie. Schriftenreihe: Wald, Holz und Holzwerkstoffe. Institut für Holzbiologie und Holztechnologie, Göttingen, 1997

LUKOWSKY, D. Influence of the formaldehyd content of waterbased melamine formaldehyde resins on physical properties of Scotspine impregnated therewith. Holz als Roh- und Werkstoff 60(2): 349-355, 2002

MARUTZKY, R. **Verwertung, Vermeidung und Entsorgung von Rest- und Abfallstoffen in der Forst- und Holzwirtschaft.** Januar, WKI Bericht nr. 22, 1990

MARUTZKY, R. **Alt- und Restholz.** VDI Verlag, Düsseldorf, ISBN 3-18-990018-3, 1996

Mc DONALD, A.G.; DAVE, P.H.; GIFFORD, J.S.; STEWARD, D.; RILEY, S.
Assessment of air emissions from industrial kiln drying of *Pinus radiata* wood. *Holz als Roh- und Werkstoff* 60(3), 181-190, 2002

MÜCKE, W. **Holzschutzmittel – Toxikologie und Technik**. Inst. für Toxikologie und Umwelthygiene der Technischen Universität München, 1994

PIZZI, A. **Wood Adhesives - Chemistry and Technology, Vol. 2**, Marcel Dekker Inc., New York, Basel, 1989

QI, B.; MOE, W.; KINNEY, K. Biodegradation of volatile organic compounds by five fungal species. *Applied Microbiology Biotechnology*, 58: 684-689, 2002

REEVE, R.N. **Introduction to Environmental Analysis**. Verlag John Wiley & Sons, 2001

ROFFAEL, E. **Formaldehyde release from particleboard and other wood based panels**. Malaysia Forest records n° 37, Forest Research Institute Malaysia, Maskha Sdn. Bhd, Kuala Lumpur, 1993

SALTHAMMER, T.; KLIPP, H.; PEEK, R.-D.; MARUTZKY, R. **Emissions from the combustion of wood treated with organic and inorganic preservatives**. The International Research Group on Wood Preservation (IRG), Doc. N° IRG/WP/94-40031, 35 th Annual Meeting, Indonesia, 1994

SHEN, T.T. **Industrial pollution prevention**. Springer Verlag, 1999

SPENGLER, J.D.; ESTABROOK, R. et al. **Indoor Pollutants. Committee on Indoor Pollutants Board on Toxicology and Environmental**. Health Hazards Assembly, National Academy Press, Washington, D.C., 1981

SUNDIN, E.B.; SUNDMAN, M.R., EDENHOLM, K. **Emission of formaldehyde and other organic compounds (VOC) from sawdust and lumber, different wood-based panels and other building materials: A comparative study**. 26th Int. Particleboard composite Materials Symposium, Washington State University, Pullman, USA, 1992

TCHOBANOGLIOUS, G. **Gestión integral de residuos sólidos**. Madrid, 1120p., McGraw-Hill, 1994