

Bed of Roses: Material Intensity in Furniture

Furniture also consumes significant quantities of material, whose impact we may lower drastically. One example is office chairs, where "...visible and structural elements are made separately. Foot, leg mechanism, and seat are optimized for comfort ergonomics, robustness durability and easy repair. Cushions and covers and cloth changeable - both money and ecological costs are minor compared to the main parts of the chair - still dematerialized and recyclable -an 80%-95% reduction in materials¹¹⁶."

Eames, and Le Corbusier designed chairs on long these lines. Sedus, Wilkhahn and Grammer have actually added such lines to their collections. Similarly, the Chaos/GEA solid wood shelves are designed to combine minimal construction material use with a long lifespan¹¹⁷. And of course some of the same means that save materials in buildings can save them in furniture. Strawboard panel can substitute for particle board, fiber and composite boards, and even extremely low grades of plywood. Bamboo and Rattan frames can substitute for wood and metal. Hemp can substitute for plastic mixtures in furniture coverings. So we end up with a factor five reduction just from making longer lifespan furniture from lower impact material (and in many cases less material). This is another example of a 60% reduction in energy use before we increase efficiency in a single manufacturing plant.

End Notes

¹¹⁶ **Ibid Error! Bookmark not defined.**

¹¹⁷ Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT) - Austrian Industrial Research Promotion Fund, *Forschungsforum 1/1998 - Development of Evaluation Fields for Ecodesign*. 2002, Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT) - Austrian Industrial Research Promotion Fund, 22/Jun/2004
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