The Design within the Contexts of National Policy for Solid Waste, Cleaner Production and Sustainability

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Abstract

The awareness about the natural resource limits and the effects of mankind activities over the atmosphere and planet climate are increasing among countries government, industries and societies, provoking reflections in a worldwide basis and are generating new concepts and compromises, such as Sustainability, as defined by the 96th General Assembly of the United Nations in 1987, Cleaner Production as the Declaration of Seoul in 1998, Agenda 21 from Rio 92 among others, creating a fertile field for public policies addressing of environmental subjects, aiming for conscious consumption of goods, better management of production resources, reduction of residues generation, post consumed goods recycling or its final disposition in a proper way as well.

Above trend early leaded mostly by developed countries, is being followed by others and, in the Brazilian case, after more than twenty years of discussion at the Congress, the National Policy for Solid Waste (NPSW) was published and covers: principles, objectives and instruments for solid waste treatment and its correct final disposition, aside of addressing responsibilities for all parts involved, such as: government, industry, commerce, importers, service providers and consumers. Enforces the polluter-pay principle, introduces the provider-receive concept, as well as the shared responsibility for end of life products with implementation of Reverse Logistic System (RLS) mechanism for several goods, aiming, at the same time, for material and energy recovery, social inclusion of waste pickers cooperatives, subject to act as partners in the RLS processes, aside of showing important synergies with CP Compromises, Life Cycle Thinking and Sustainability concepts either.

Thus, the NPSW combined with the CP Compromises, creates a challenging new endeavor for designers, engineers and managers in charge of products, processes and management models conception as they have to consider; aside of the Quality Function Deployment (QFD) tool for better understanding of consumers demands; other tools and strategies to address properly the economic, social and environmental aspects, such as: the Design for Environment (DfE), Design for Manufacturing (DfM), Design for Recycling (DfR), Life Cycle Assessment (LCA) among others briefly discussed in this work of exploratory and deductive survey on applied social sciences and production engineering. Therefore, this work is lacking of pretension to exhaust these themes, but mostly intend to generate reflections on above provocative and creative subjects and, at the same time, provide a broad view on concepts, models, standards and references for beginners and, perhaps, some hints for peers deeper researches.

Keywords: *design. public policies. life cycle thinking. cleaner production. sustainability.*