

Environmental Strategy of Japanese Digital Printing Industry

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Abstract

Japan has little domestic energy resources and relies on overseas energy resources for the bulk of its needs. The energy consumption of Japan in 2000 became approximately nine times larger than in 1955, just after the end of the Second World War. Expectations for the role of energy conservation are increasing, due to the exacerbation of global environmental problems. These suggest that we need not only the reduction of electricity consumption but also the reduction of environmentally-unfriendly materials and the adoption of product recycling.

Some consider environmental conservation to be a burden on the economy. For a corporation, in order to sustain effective environmental conservation activities, the activities themselves must be part of a system that yields profits and enhances the corporate structure. In business processes, environmental conservation activities and profit yielding activities must be oriented in the same direction, and for this reason, these can be achieved at the same time by sharpening our ingenuity. We defined our environmental management as a "management that conserves the environment while creating economic value". By setting a high level of environmental target, and accelerating process innovation and development of environmental technologies for products, the environmental loads and costs will be reduced by saving energy and resources while enhancing the product competitiveness.

I will show an environmental management system and some typical environmental technologies developed in the Japanese digital printing industry.

Biography

Koji Hirakura joined the RICOH Reprography Research and Development Center of Tokyo in 1970. His initial studies focused on stabilizing high spectral sensitivity of photoreceptors, especially of Cadmium Sulfide, under repetitive exposures. He also worked on measuring technologies of toner charge to mass ratio. He invented original technologies of measurement for the toner developability, and applied them to the output image density control systems of electrophotographic (EP) engines. In 1985, he started to work on a number of projects for the Digital Color EP Systems as a project manager. In 1991, he published "Four Drum Digital Color EP System" at IS&T 7th International Congress on Advances in Non-Impact Printing Technologies, and proved the realization of the Four Drum Tandem Digital Color Laser EP System for the first time in the world. This paper presented the original architecture of Tandem EP engine system and subsystems, and also suggested the desirable way to optimize the halftone dot density according to the types of printed matters. For these contribution, he received in 2003 IS&T's Chester F. Carlson Award and 2004 ISJ's Technical Award. At present, the Four Drum Tandem System makes the main stream of versatile color MFPs and printers including digital production printing systems.

Currently he is an associate director of RICOH Research and Development Group, and the executive engineer for the marking technology of RICOH. He also is serving as a president of the Imaging Society of Japan. He received his BS degree in Physics from Saga University.