SYSTEM HERBORN

Lamp Recycling
Environmental
Technology

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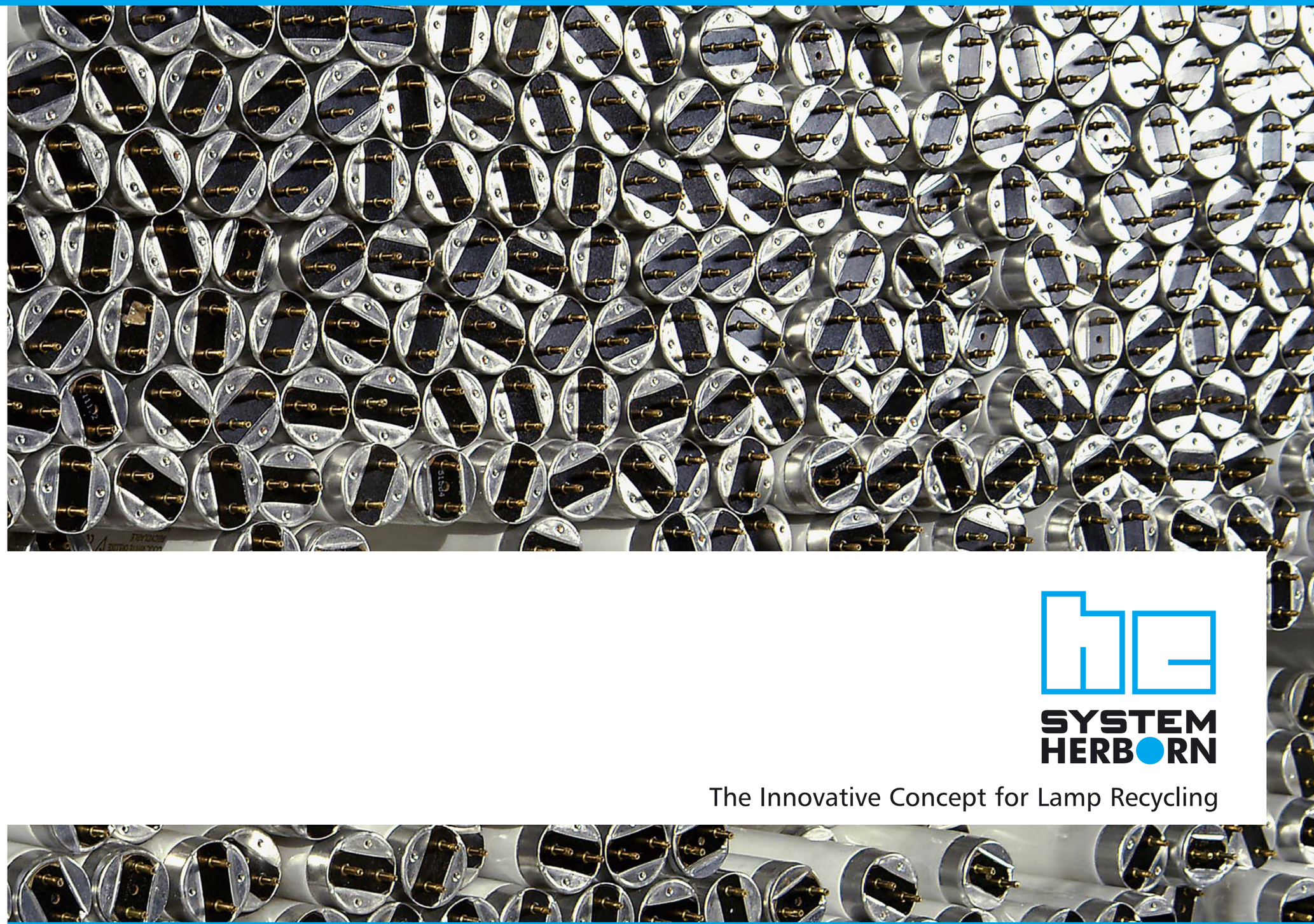


SYSTEM HERBORN

The Innovative Concept for Lamp Recycling

Lamp recycling
“system herborn“

Mobile units “system herborn“

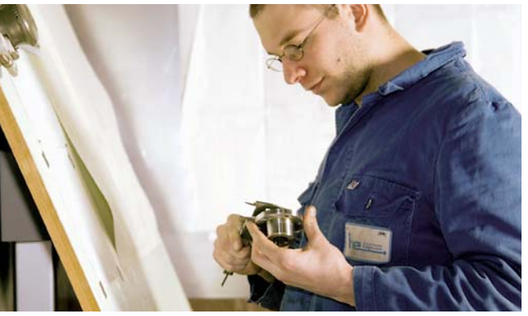
Thomas Herborn,
Managing
Director

Main Office Herborn GmbH
(Ginsheim-Gustavsburg, Germany)

Who we are

Herborn GmbH was founded in 1985 by graduate engineer Paul Her-born at the company's first base in Schlangenbad. In 1991 the enterprise was moved to our current base in Ginsheim-Gustavsburg, Germany.
Since the foundation we have been developing and producing mobile and stationary systems for recycling discharge lamps containing harmful substances at our German site.

Beginning with the development of the first generation of our lamp-recycling method “system herborn“ between 1985 and 1988 we have used “system herborn“ to safely and efficiently process over 150 million lamps containing mercury. During this period we have become one of the leading providers in this sector – on a national as well as international scale.



Engineering, manufacture and maintenance
(Ginsheim-Gustavsburg, Germany)

Our philosophy

The construction, manufacture and maintenance of our patented system technology by ourselves enables us to respond in a flexible way to customer wishes.

The experience we and our subsidiaries gain from the application and maintenance of our recycling systems is thoroughly applied in the further development of our systems. In this way we ensure constant state-of-the-art technology and guarantee safe, economical and high-grade recycling.
In order to demonstrate our high quality standards, our enterprise and our recycling method are subject to regular certifications by independent evaluators.

Due to our in-house development and manufacturing as well as our exclusive focus on lamps we are:

- Competent partners for the development and delivery of environmental technology for the recycling of lamps for international markets.
- A full-service provider for the recycling of discharge lamps on the European market by using stationary and mobile systems.

The “system herborn“

The fluorescent tubes are fed to the reception system of the recycling unit, are counted by sensors, and their processing measurements are imported into the controller.
In the 3rd generation recycling-system types (cap-separation method “system herborn“)(pat.), the metal caps are separated from the glass body mechanically in a dry process at rated break points, the lamp glass is broken and the fluorescent powder is sucked off.

In 4th generation system types (cap-separation/air-push method “system herborn“)(pat.), the caps are thermally separated from the lamp body and the tubes blown clean. If necessary, this technology can be complemented by optical detection of the fluorescent powders through image processing (pat.). With this method, it is possible to allocate the lamps to their manufacturer and to extract the different fluorescent powders separately for later reutilisation in new lamps.

After the separation of materials, the main components undergo a thermal treatment in order to minimise the adhering amounts of remaining mercury. In order to ensure a high quality of the lamps´ end caps, they are cleansed in a single processing step from still adhering material and from the remaining mercury-infected material of the lamps´ bases.

The technical conception and computerised control of the system working under negative pressure ensure that no harmful substances can get into the environment at any time. The entire process air is fed to the working section, led through filter systems and, after undergoing a sophisticated process, cleansed by an activated-carbon filter.

This technological principle is groundbreaking for the recycling of lamps and is used successfully by Herborn in several countries.

Herborn provides an overall concept for the disposal of discharge lamps, designed to meet the individual demands of the customer and the respective country. Please get in touch with us.

High quality glass Metal caps Fluorescent powder