

Milestones: Iron oxide production in Krefeld

Iron oxide pigments have been manufactured in the world's largest production plant in Krefeld-Uerdingen for 90 years. This plant is the heart of the global inorganic color pigment business. Specialty chemicals company LANXESS has been in charge of the business since 2005 and has continued to expand it. A look at its historical timeline:

- 1926:** Chemist Julius Laux begins producing synthetic iron oxide pigments in Krefeld-Uerdingen using the process to which he gave his name – the Laux process. This is the start of the success story of pigment production under what will later become the Bayferrox brand name. Production in Uerdingen really takes off. While sales of the pigments in the first year are just 1,200 metric tons, the current production volume of the Krefeld-Uerdingen site totals approximately 280,000 metric tons per year.
- 1928:** Production of inorganic pigments in Krefeld-Uerdingen is expanded. It is now also possible to manufacture green pigments based on chromium oxide.
- 1937:** Two new manufacturing processes – the precipitation process and the Penniman process – make it possible to produce iron oxide yellow pigments and the precursor for magnetic pigments.
- 1964:** Production of intensively ground – i.e. micronized – color pigments starts in Krefeld-Uerdingen. These are characterized by excellent dispersability (mixing behavior). They are first available in red, but also in black and yellow from 1966.

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Background Information

- 1973:** Annual production of color pigments in Krefeld-Uerdingen passes 200,000 metric tons for the first time.
- 1976:** The Bayferrox brand name is registered as a trade name for iron oxide pigments.
- 1987:** Low-silking pigment is launched onto the market. Unlike previous needle-shaped iron oxide yellow pigments, this is almost spherical.
There is therefore no possibility that the pigment particles can orient in a preferred direction during processing and thus cause differences in color depending on the angle from which they are viewed.
- 1988:** Colortherm is introduced as a new brand for heat-stable pigments.
- 1991:** Free-flowing, low-dust granules are introduced as a new supply form.
- 1995:** The product portfolio is expanded to include pigments for technical applications (in airbags, for example). Coloration plays a subordinate role in these applications.
- 2002:** The new product Bayoxide E 33 enables the removal of arsenic and other pollutants from (drinking) water.
- 2005:** On January 31, after a strategic realignment of the Bayer Group, LANXESS is launched as an independent, publicly-listed company.
- 2008:** Colored Concrete Works – a new initiative aimed at architects – is introduced at the Ulmer Betontage.
- 2010:** The LANXESS Inorganic Pigments business unit launches a global sustainability campaign.

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The Krefeld-Uerdingen site sets a new monthly production record of 25,000 metric tons in May.

- 2012:** With Bayoxide E 16, LANXESS develops a highly effective synthetic iron oxide for lowering the hydrogen sulfide content of biogas. It can be added directly to the fermentation reactor. The new product is a cost-efficient alternative to conventional desulfurization processes, such as the use of activated carbon.

The Inorganic Pigments business unit presents the first Colored Concrete Works Award. It is won by the distinguished architect David Chipperfield for his “Ciutat de la Justícia” project in Barcelona.

- 2016:** LANXESS celebrates 90 years of iron oxide pigment production at its key Krefeld-Uerdingen site. Since its launch in 1926, more than 13 million metric tons have left the world’s largest color pigment plant in Krefeld-Uerdingen.

For detailed information on products from the LANXESS Inorganic Pigments business unit, go to www.bayferrox.de.

Cologne, September 2016
(fgr)

Forward-Looking Statements

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