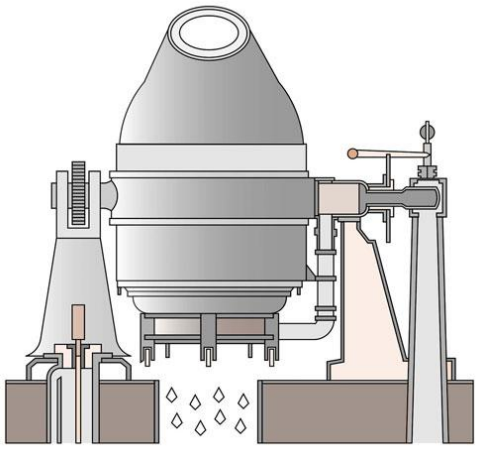
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The Bessemer Process

Zahrádková, Klára

During the industrial revolution, the pace of technological progress increased significantly. Before the 1850s, important inventions were created through trial and error by persistent individuals who frequently worked on their own and spent their time meticulously and continuously making improvements. In time, technological developments became based on scientific methods, and the systematic creation of new innovations became possible. The implementation of empirical methods, which resulted in more exact conclusions, allowed engineers to identify and develop precise solutions for problems in the production of commodities, thereby fueling the developments of essential innovations in the fields of pharmacy, medicine, the food industry and the production of plastics.

An example of this is the Bessemer process, the first inexpensive industrial process for the mass production of steel. Science also led to the publication of Rachel Carson's book "Silent Spring" in the 1960s, thereby giving rise to environmental consciousness. It is hard to imagine life today without these things



Bessemer Process
Klára Zahrádková

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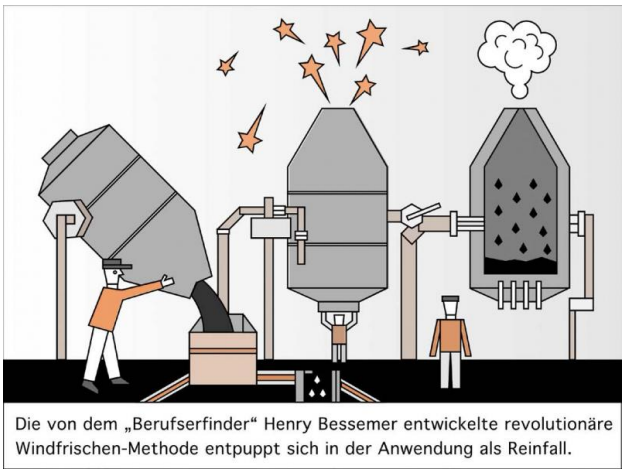
Of Iron and Wind: The Bessemer process

Text and images by Klára Zahrádková
University of the Arts (UdK), Berlin



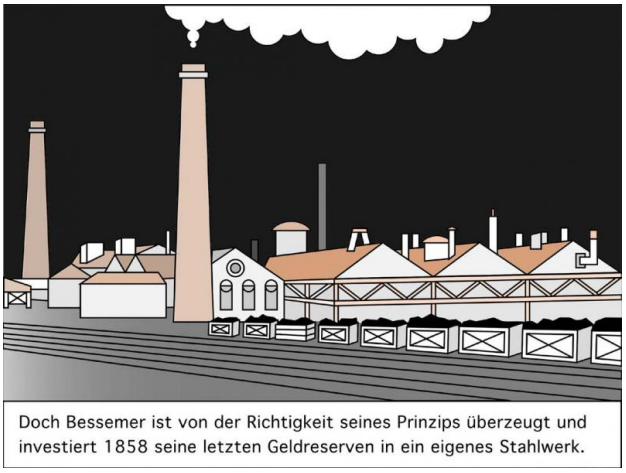
From Iron and Wind
Henry Bessemer and his steel converter
Middle of the nineteenth century: Producing steel is hard work and requires manual labor. The demand for iron is rapidly increasing through.

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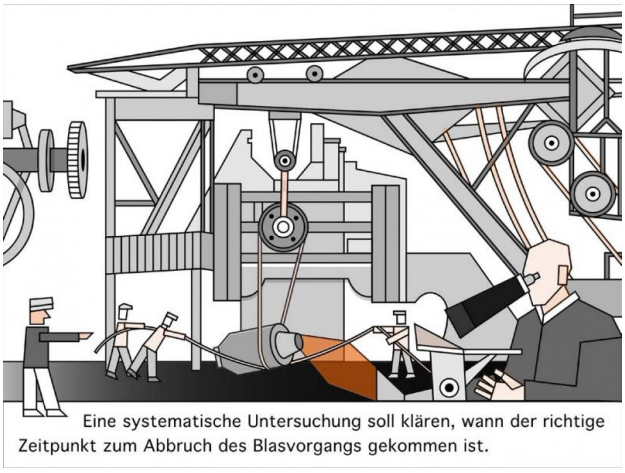
The new, revolutionary Bessemer method developed by “inventor” Henry Bessemer ends up being a complete failure in practice.

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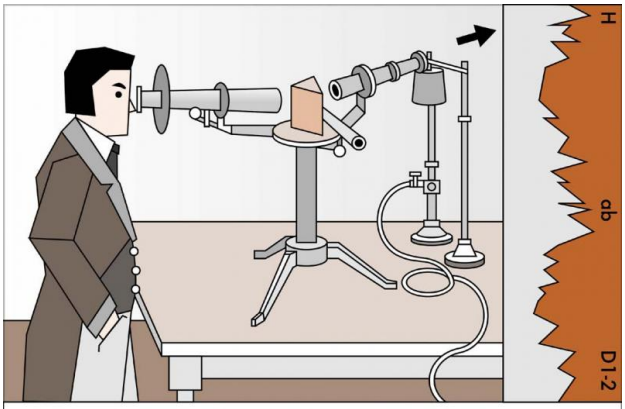
But Bessemer is convinced that his principle is correct and in 1858 invests the last of his savings in his own personal steel mill.

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A systematical analysis should help us figure out when the right moment to interrupt the explosion process is.

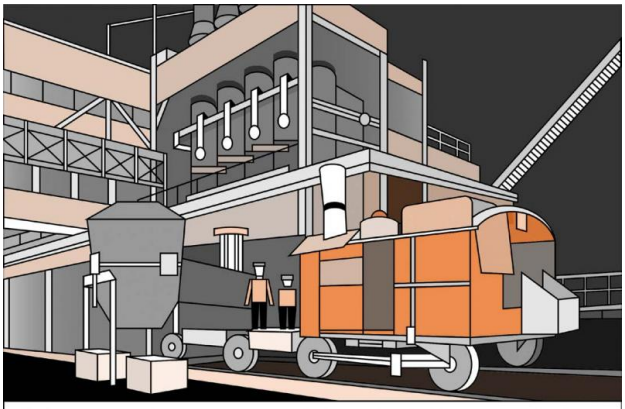
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Mit der Spektralanalyse kann der Chemiker Roscoe die Flammenerscheinungen beim Bessemern erklären und daraus Schlüsse ziehen.

Using spectrum analysis, the chemist Roscoe can examine the flame phenomenon of the Bessemer process and from that, draw conclusions.

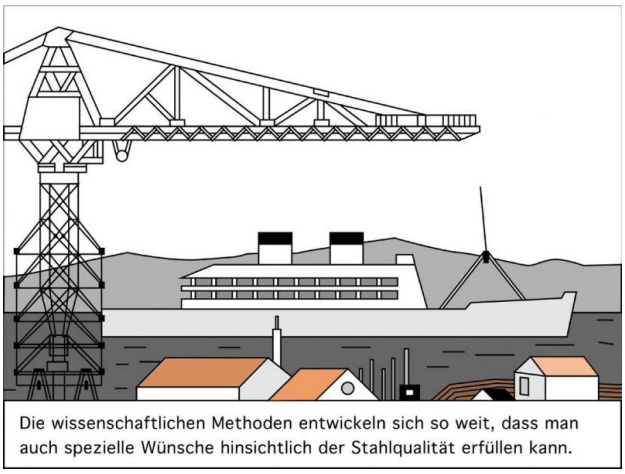
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Die Zusammenarbeit von Wissenschaft und Technik erweist sich als totaler Erfolg. Die Bessemer Birne wird in allen Stahlwerken eingeführt.

The cooperation between science and technology proves to be a great success. The Bessemer converters are introduced into all steel mills.

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Scientific methods develop so much that special requests regarding the quality of the steel can be fulfilled.

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At the world fair in 1862, Henry Bessemer proves himself. Steel takes over the world.

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Artist's comment:

The development of the Bessemer converter was long and complex and is therefore impossible to tell in just eight panels. In the beginning it was a chance discovery, then adapted through a series of coincidences and many favorable circumstances. Will and perseverance also played a major role, as well as the assistance of many people and, finally, good timing. It took so many different steps that the existence of the Bessemer converter seems quite improbable. Yet today it is a common and ubiquitous technology that plays an essential role in everyday life.

How to cite

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The comic also appears in Alexandra Hamann, Reinhold Leinfelder, Helmuth Trischler, and Henning Wagenbreth, eds., *Anthropozän – 30 Meilensteine auf dem Weg in ein neues Erdzeitalter. Eine Comic-Anthologie* (Munich: Deutsches Museum, 2014).



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Further readings:

- Sources and Literature for the Anthropocene Milestone Comics

Related links:

- Welcome to the Anthropocene. The Earth in Our Hands. Special exhibition at the Deutsches Museum http://www.deutsches-museum.de/en/exhibitions/special-exhibitions/archive/2015/anthropocene/
- Welcome to the Anthropocene. The Earth in Our Hands. Virtual exhibition on the Environment & Society Portal https://www.environmentandsociety.org/node/6354
- Bessemer Process (Encyclopædia Britannica) http://www.britannica.com/technology/Bessemer-process
- Comic-Anthology, Deutsches Museum Website http://www.deutsches-museum.de/sammlungen/entdecken/comics/

Websites linked in image captions:

- http://www.deutsches-museum.de/ausstellungen/werkstoffe-produktion/metalle/ausstellung/