

Lighthouse Metal Energy Carrier

The image features a dark, textured background that resembles a close-up of a rock or a piece of metal. In the upper left corner, there is a lighter, sandy area. A dark teal banner is positioned at the top, containing the text "Lighthouse Metal Energy Carrier" in white.

Project Description

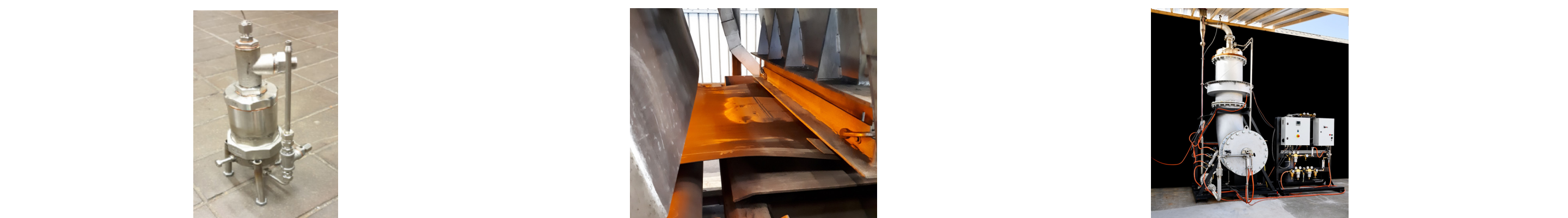
The success of **iron as a circular fuel** cannot be achieved without a method to **cost-effectively regenerate iron oxide** back into iron powder. Reduction has been done for many years, but not yet in a sustainable way and not with the goal of storing sustainable energy.

The **Lighthouse MEC project** focuses on answering the questions:

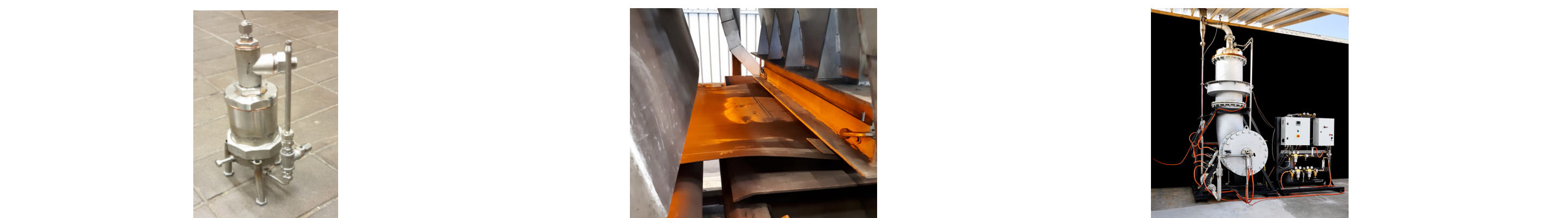
- What is the most appropriate regeneration technology?
- Which business case is most suitable to bring the iron fuel technology to the market?

Three reactor prototypes are being developed that employ their sweet spot in the temperature window for iron powder reduction:

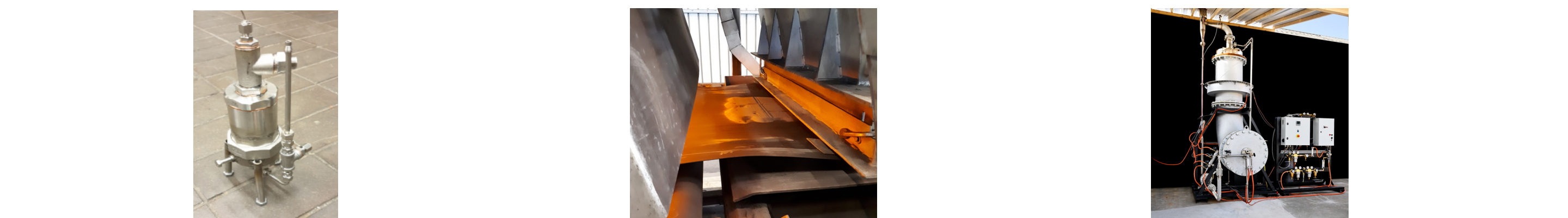
Fluidised Bed	Rotating Drum	Entrained Flow
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Fluidised Bed	Rotating Drum	Entrained Flow
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|----------------------|----------------------|-------------------------|
| ✓ Slow process | ✓ Fast process | ✓ Super fast process |
| ✓ No sticking | ✓ Sticking | ✓ No sticking |
| ✓ Pyrophoric powder? | ✓ Pyrophoric powder? | ✓ Non-pyrophoric powder |
| ✓ Known technology | ✓ Known technology | - New technology |

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Partners



This project has been made possible by financial contributions of Shell and the Province Noord-Brabant.



Provincie Noord-Brabant