



“Zero-carbon Industrial heat production by ammonia water absorption heat transformer”

ZIMBA project aims to develop a next-generation heat pump system based on an Absorption Heat Transformer (AHT) using ammonia/water refrigerant, designed for industrial use at 110°C and scalable to 130°C. The system aims to reduce industrial energy consumption and carbon emissions by efficiently recovering waste heat. To advance sustainable industrial heating, ZIMBA will:

- ▶ Develop a compact, energy-efficient AHT system powered by waste heat with minimal electricity
- ▶ Design and integrate a performance-enhancing ejector to boost stability and output at high ambient temperatures
- ▶ Reduce environmental impact by using fewer critical materials (mainly stainless steel and limited copper)
- ▶ Lower greenhouse gas emissions with ammonia, a natural refrigerant with no global warming or ozone impact
- ▶ Enable market uptake through technical optimisation, business model development, and scalability to 130°C

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Actions (RIA)**

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PARTNERS



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AMIRÈS

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