



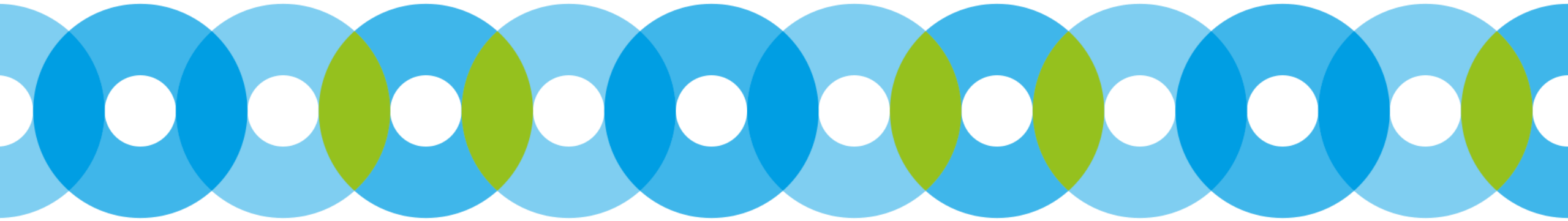
BlueTerra

Energy Experts

Empowering sustainability

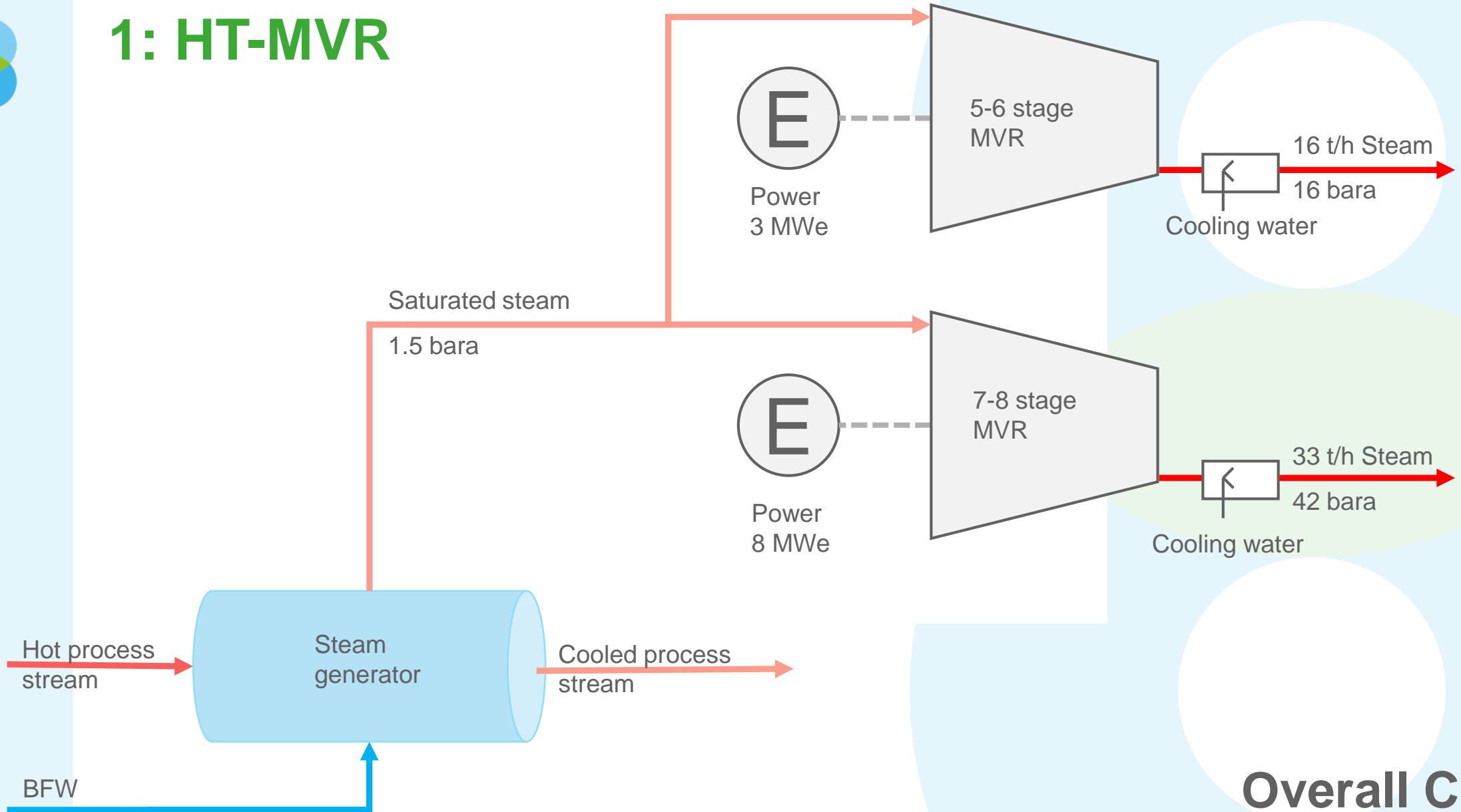
Dinsdag 1 juni

BlueTerra Innovatie Webinar





1: HT-MVR



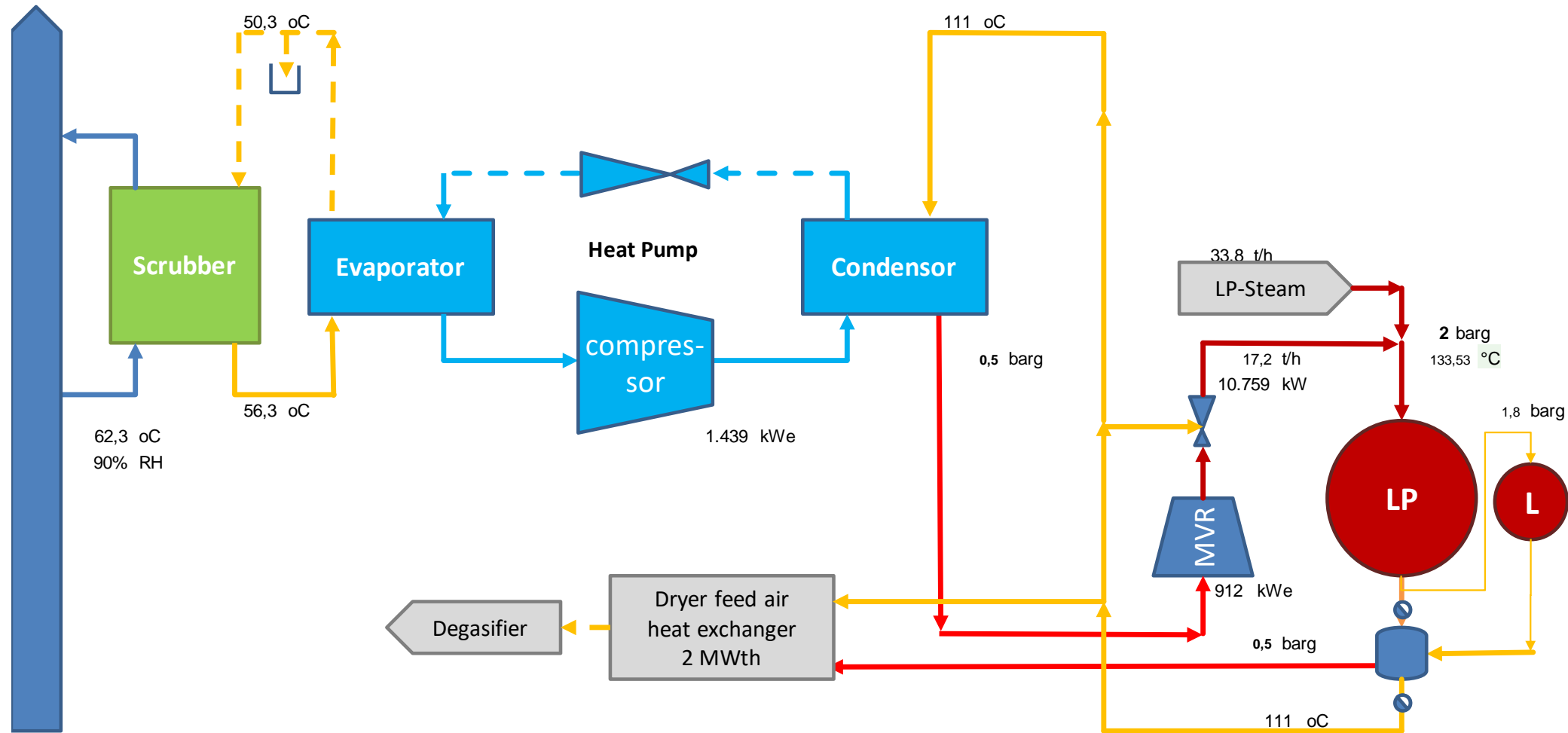
Simplified process overview

**Overall COP
around 3.5**



2: Cascade warmtepomp met MVR

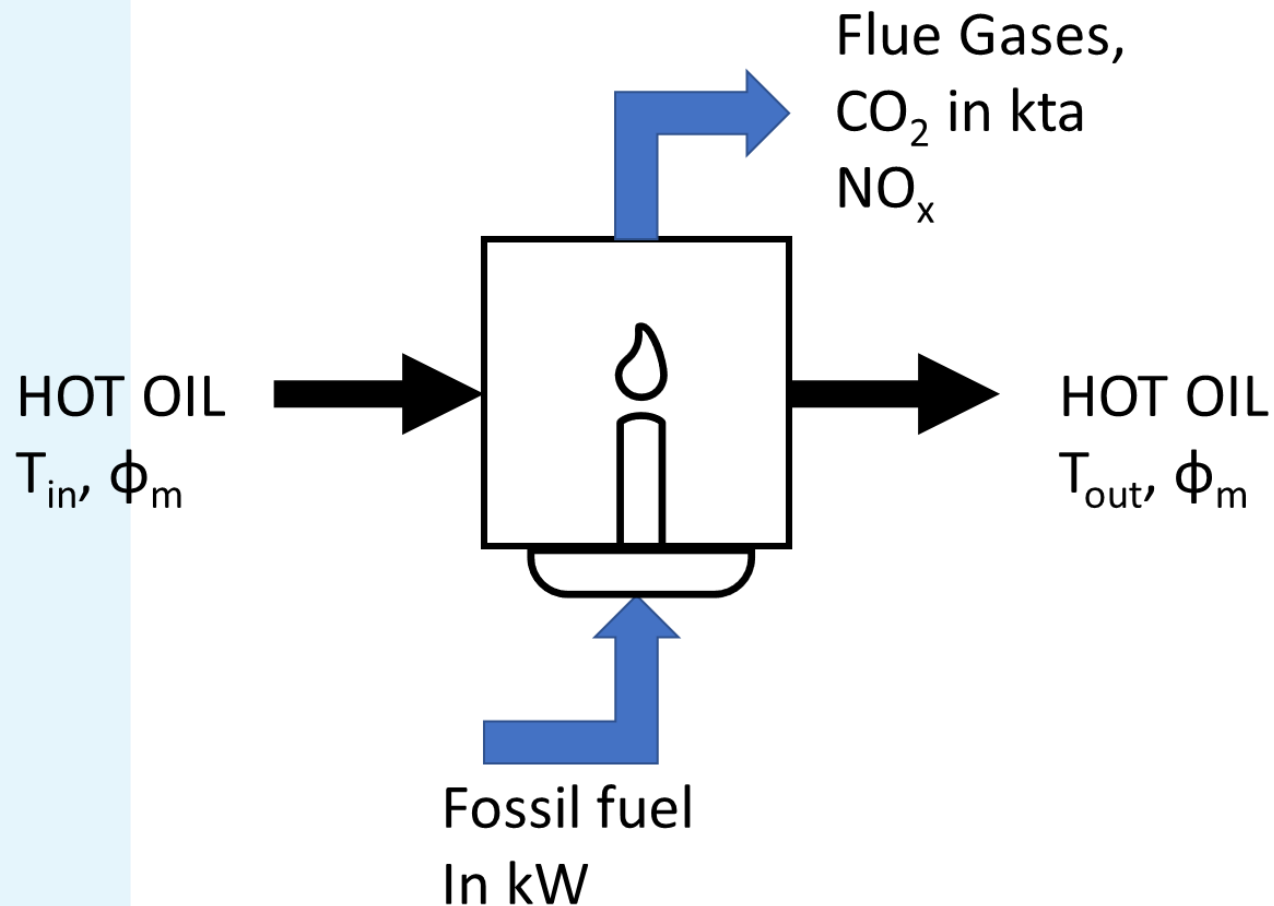
COP 3,55



<https://blueterra.nl/onderzoek-industriële-warmtepompen-en-dampcompressie-maken-restwarmtebenutting-drogers-mogelijk/>



Traditional Thermal Oil Heater



Features:

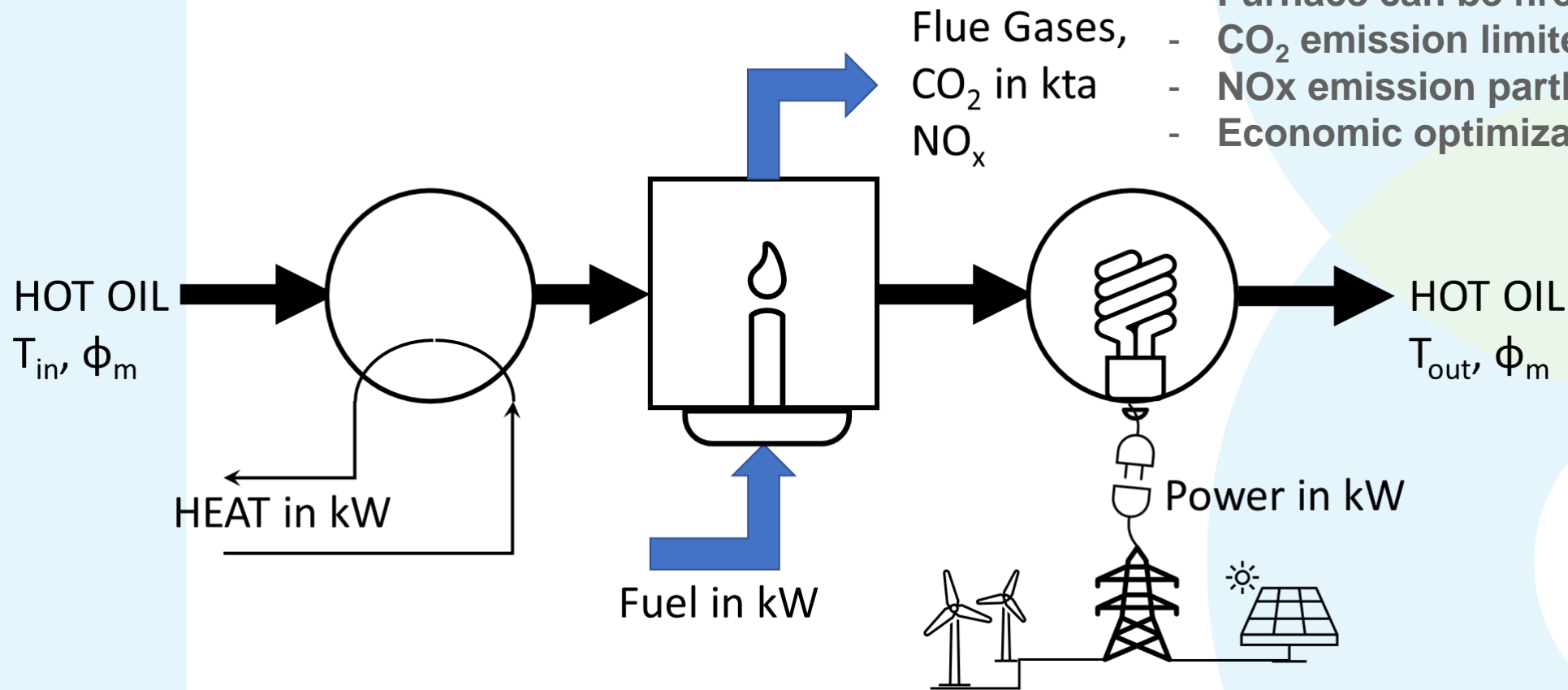
- High T_{out} (~300 °C) required for process
- Furnace fired with natural gas or hydrocarbon
- CO_2 emission equivalent with heat input
- NO_x emission unavoidable



Hybrid Thermal Oil Heater Concept

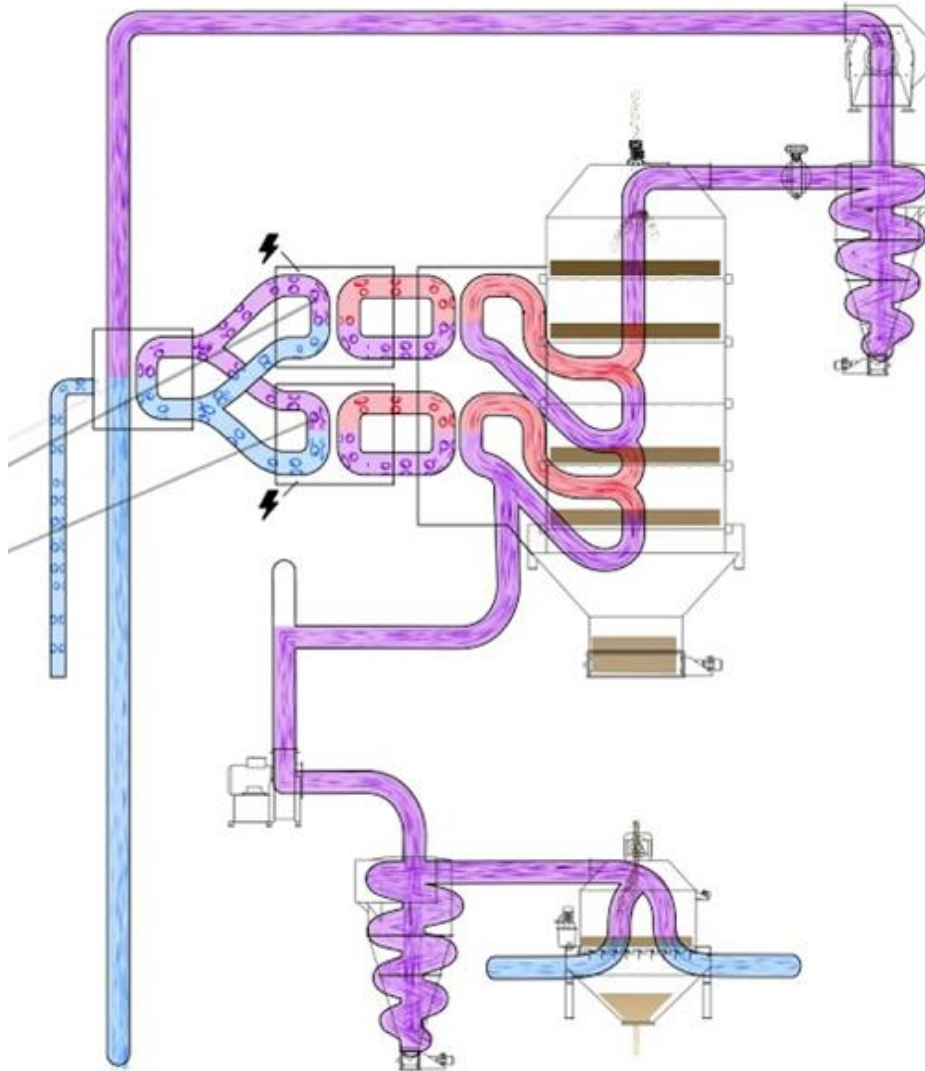
Features:

- Heat integration to lower energy demand
- Green electricity takes over heat load
- Furnace can be fired with mix of green/fossil
- CO₂ emission limited
- NO_x emission partly avoidable
- Economic optimization based on kWh-price





4: Warmtepomp geïntegreerde droger





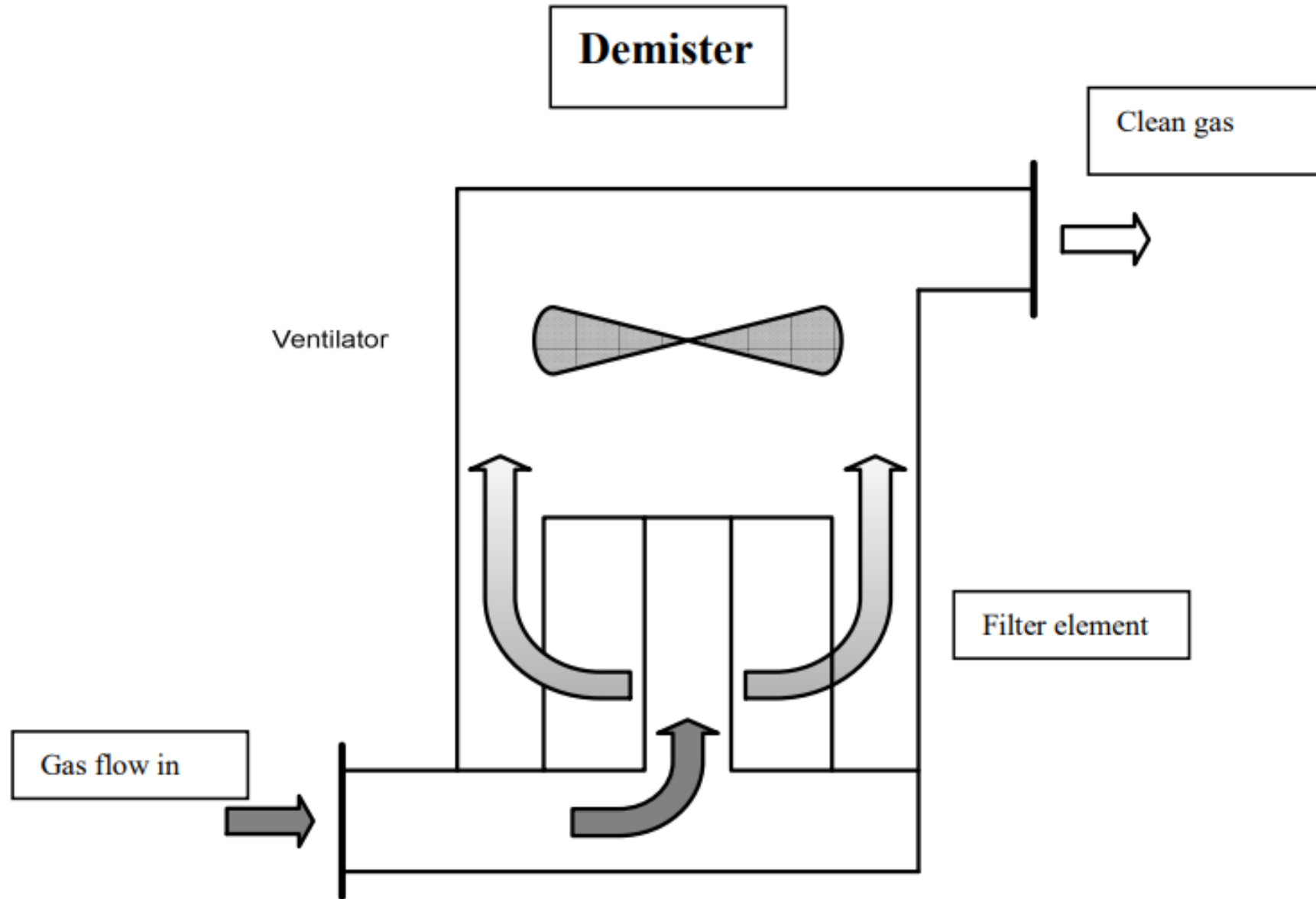
6: Thermische afgasreiniging vervangen door mistfilters

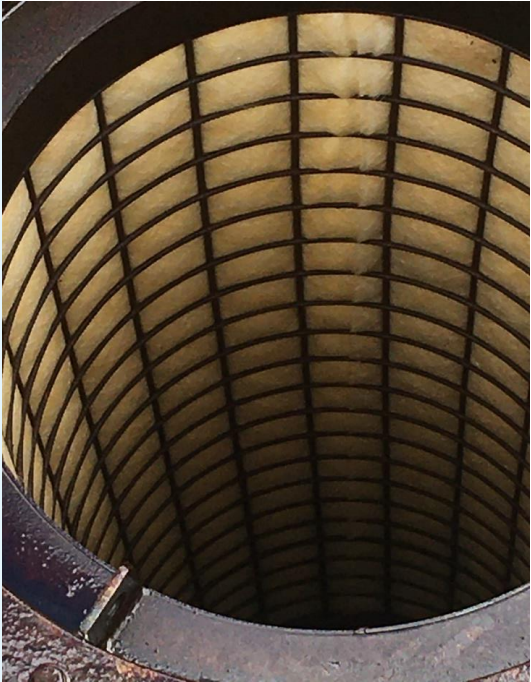
800 gr. C



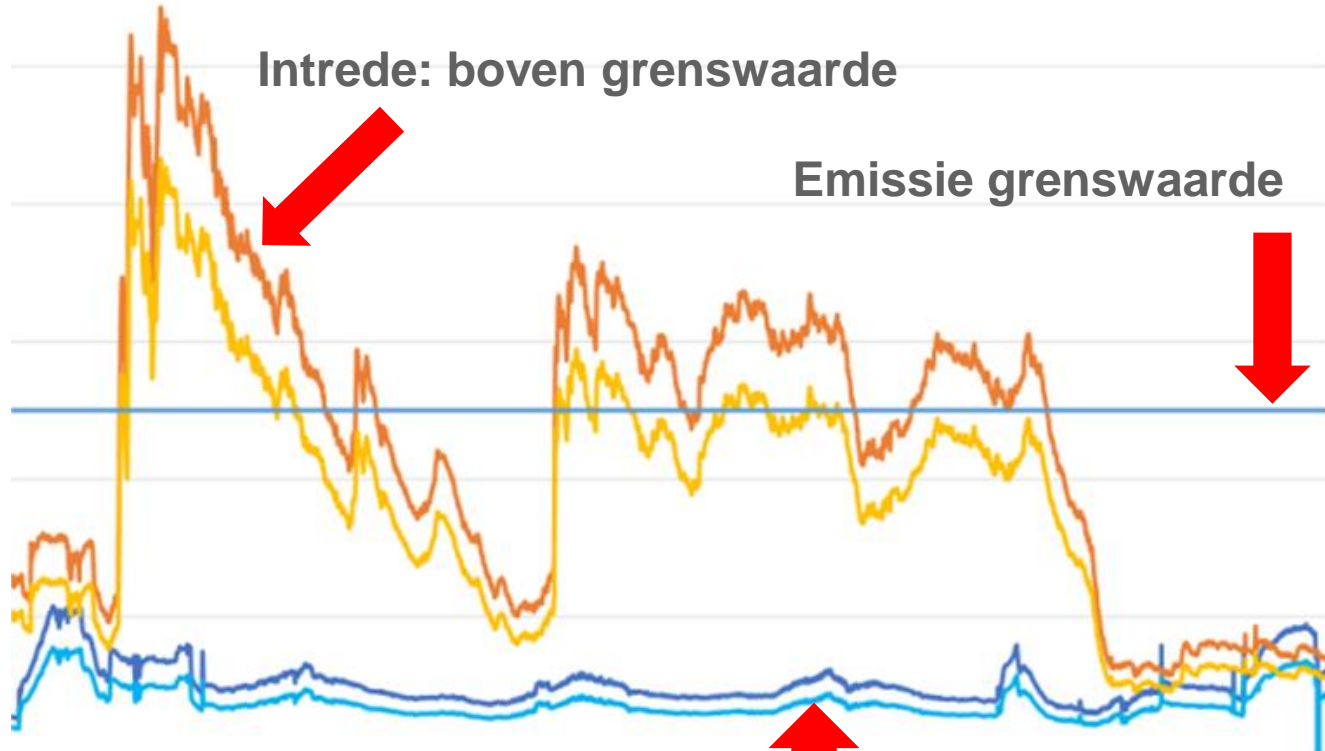
40 gr. C







Mistfilter



Uittrede: ruim onder grenswaarde



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