

aixprocess *The ModeliNG Company*

established 2001 from Aachen University of Technology by Dr. Martin Weng, Markus Hufschmidt

located in Aachen / Germany
international partner network

+20
YEARS
EXPERIENCE

+500
CUSTOMERS

+1000
COMPUTATIONAL
ENGINEERINGS



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KILN **AI**xperT

The Digital RealTime Optimiser

Cement Expertise meets **AI**

The KILN AIxperT

...combines cement kiln process expertise with cutting-edge AI and real-time simulation tools to deliver continuous Process Performance Optimisation



The KILN AIxperT Optimisation Philosophy

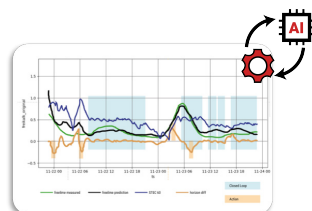
1 KILN Housekeeping Process Engineering

- Process Audit
- Digital Readiness Housekeeping
- Digital Roadmapping



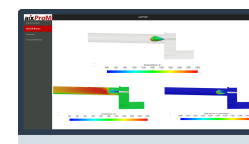
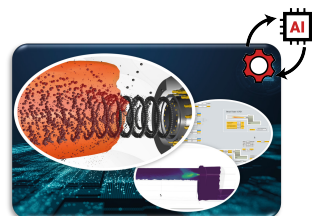
2 FUEL AIxperT Predictive Stabiliser

- Fuel Feed recommendation
- Quick detection of fuel disturbances
- KILN stabilisation



3 KILN AIxperT Real Time Optimiser

- *Closed* or *Open* Loop Operations
- Stable and in-spec clinker production
- Smart Sensor Data



- ✓ Robust and highly adaptive operations by AI and first-principle models combined in aixprocess patented Grey Model approach
- ✓ Targeted, predictive interventions instead of reactive actions - managing the processes effectively without overreacting
- ✓ Transparent soft sensor data and AI setpoint recommendations, giving operators deep insights, traceability, and enhanced process awareness
- ✓ 20 years of process engineering expertise embedded in a smart, always-available AI Tool
- ✓ Online heat and mass balance, updated every 30 seconds
- ✓ RealTime CFD with alternative fuel combustion, updated every 10 Minutes



5%

REDUCTION
in SHC



50%

REDUCTION
in FcaO variability



6%

REDUCTION
in Fuel Cost



10%

INCREASE
in TSR