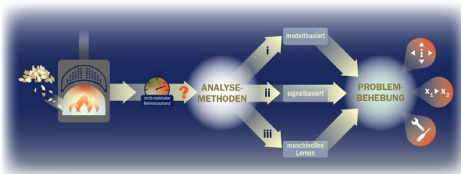


IdDiaPro

Identification of methods for diagnosis, prognosis and correction of non-nominal operating conditions in biomass-based combustion systems



Key Facts



Funding Agency

Federal Ministry for Economic Affairs and Energy (BMWi)



Project Call

Energetische Nutzung biogener Rest- und Abfallstoffe



Duration

03/2021 – 08/2022



Coordinator

Deutsches Biomasseforschungszentrum gemeinnützige GmbH (DBFZ)



Partners

Synostik GmbH (associated)



Website

<https://www.energetische-biomassenutzung.de/en>

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Gefördert durch:



aufgrund eines Beschlusses des Deutschen Bundestages



Project Objectives

The abridged project IdDiaPro searches for ways to diagnose and prognose plant-related or combustion-related, non-nominal operating states by

- (i) model-based analysis methods,
- (ii) signal-based analysis methods,
- (iii) machine learning methods

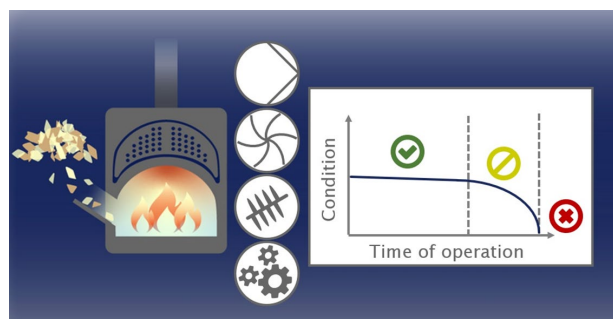
and possible combinations of them. The result will be a feasibility study, which includes a review of the methods and their evaluation regarding the implementation in commercial systems during a potential follow-up project.

EIFER's Contribution

EIFER contributes to the project with its expertise in wood combustion plants for heat production and in signal-based, system-independent diagnosis/prognosis algorithms. The core contributions are:

- Identification of methods for plant-related problems
- Application of signal-based methods for detection of non-nominal states* and diagnosis
- Exploitation of the results

*e.g. more than the triple standard deviation (based on the signal noise) from the system behavior defined by the system producer



Plant-related, non-nominal operating states are caused by failing or strongly aged components. Failures of safety or operationally relevant parts of the system usually lead to shutdown, heavily aged components increasingly hinder the regular system operation.

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