

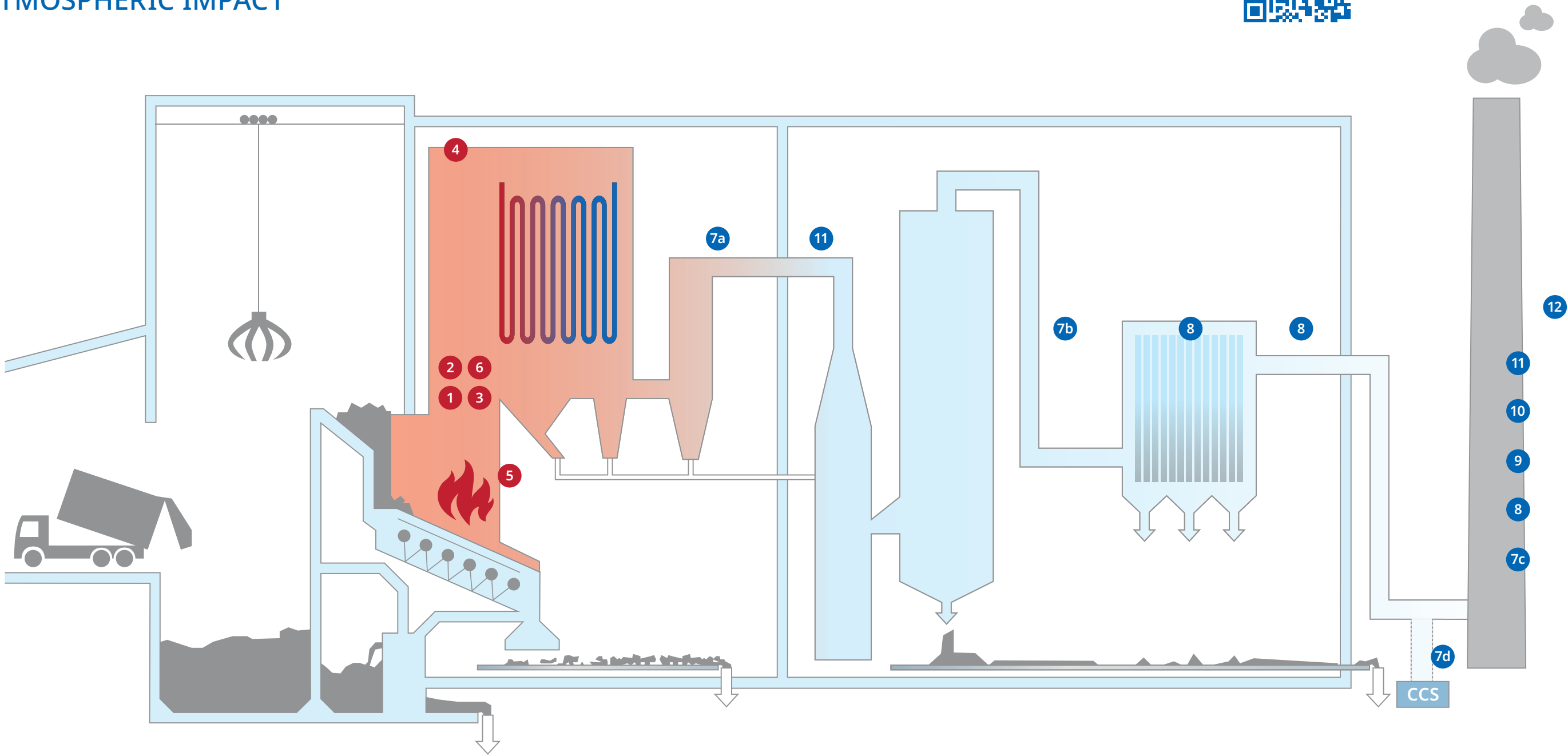
**SOLUTIONS FOR
WASTE INCINERATION**



A COMPREHENSIVE SOLUTION FROM THE FIRST SPARK TO ENVIRONMENTAL COMPLIANCE AND ATMOSPHERIC IMPACT



Scan here to find out more about our solutions for waste incineration.



- 1 IGNITION + PILOT BURNERS OR INDUSTRIAL BURNERS
- 2 HIGH ENERGY IGNITION DEVICES
- 3 COMPACT FLAME MONITORS

- 4 VIDEO + THERMOGRAPHY SYSTEMS
- 5 FURNACE CAMERAS
- 6 BURNER MANAGEMENT CONTROL

- 7 RAW GAS, STACK EMISSION GAS MONITORS
 - a) HCl, NO_x, SO₂, CO, O₂, H₂O, NH₃, Hg
 - b) NO, NH₃, CO, SO₂
 - c) HCl, HF, CO, O₂, SO₂, NO, NO₂, NH₃, CH₄, H₂O, N₂O, CH₂O, Hg
 - d) Impurities in CO₂: H₂O, SO₂, H₂S, NO/NO₂, NO_x, CH₂O, NH₃, O₂

- 8 DUST FILTRATION PERFORMANCE MONITORS

- 9 FLUE GAS FLOW MEASURING SYSTEMS
- 10 DUST AND OPACITY MONITORS
- 11 PROCESS AND CEMS MERCURY ANALYZERS
- 12 DATA ACQUISITION, PROCESSING AND REPORTING

SOLUTIONS FOR COMBUSTION: IGNITION AND FIRING, CONTROL AND MONITORING



IGNITION AND PILOT BURNERS OR INDUSTRIAL BURNERS

Pilot burners and firing systems for gaseous, liquid fuels (incl. H₂) with a pilot burner capacity of up to 10 MW or a burner capacity of up to max. 4.5 MW. Modular design including the associated system components such as controls, gas valve sections and combustion air supply.



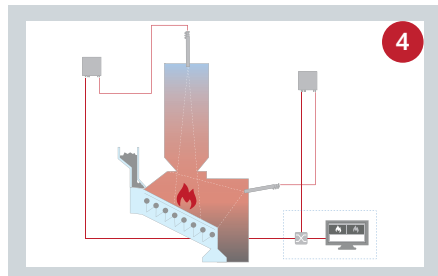
HIGH ENERGY IGNITION DEVICES

High energy ignition devices eliminate the need for fossil fuels, offering an environmentally friendly ignition solution. They are perfect for very humid and dusty environments and offer easy and economical installation (no fuel train required, low energy consumption).



COMPACT FLAME MONITORS

Robust, safe design; individual monitoring of flames of all fuels, even in complex multi-burner systems or boxer arrangements. Compatible with gaseous, liquid and dusty fuels; minimization of environmental and safety risks (up to SIL 3).



VIDEO AND THERMOGRAPHY SYSTEMS

By using video and thermography to monitor combustion, you can ensure optimized SNCR injection and homogeneous burning while minimizing the risk of furnace damage, reducing residues and emissions and optimizing maintenance and operating costs.



FURNACE CAMERAS

Furnace cameras with air or water cooling for visualization of the out burning zone and combustion on the grate. Available a fixed installation or optionally with retraction unit. Offer reliable information on the burning process and its efficiency.



BURNER CONTROL

Compact self-monitoring and fail-safe burner controllers for gas and oil burners. They ensure safety and efficiency and help you adhere to start-up safety time limits and regulatory compliance.

1 BAT-AELs: Best Available Techniques – Associated Emission Limit
2 CEMS: Continuous Emissions Monitoring System

SOLUTIONS FOR PROCESS AND ENVIRONMENTAL MONITORING



CO₂ PURITY ANALYZERS FOR CCS (CARBON CAPTURE + STORAGE)

Using trace gas analysis for purity control in carbon capture and storage (CCS) ensures high CO₂ quality, preventing pipeline corrosion and enhancing storage integrity. ProCeas detects impurities precisely, optimizing capture efficiency and reducing maintenance costs.



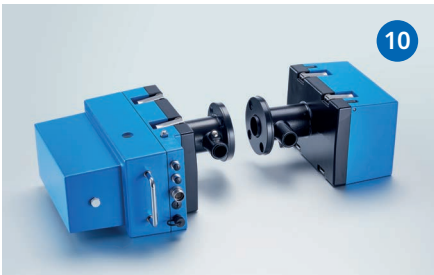
DUST FILTRATION PERFORMANCE MONITORS

Continuous monitoring of filter particulates offers valuable feedback, detecting leaking or broken bags in fabric filters, reducing maintenance time and costs, enhancing emission control and anticipating faults at an early stage for efficient operations.



FLUE GAS FLOW MEASURING SYSTEMS

Simply measuring the pollutant concentration does not clearly indicate the impact of emissions on the environment. It is important to measure both the composition and concentration of flue gases and their 'volume flow' in order to calculate pollutant mass release and determine their total discharge to the atmosphere.



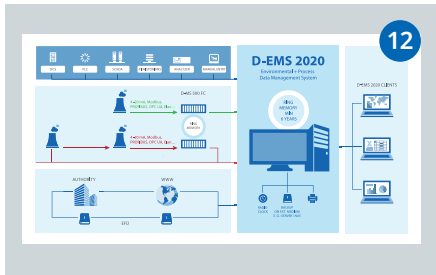
DUST AND OPACITY MONITORS

Monitoring particulate emissions in flue gas streams with dust and opacity monitors ensures regulatory compliance, protects the environment and improves operational efficiency. Real-time data enables proactive maintenance, reduces downtimes and promotes sustainable practices for industries.



PROCESS AND CEMS MERCURY ANALYZERS

Continuous monitoring of mercury in stack emissions for incinerator operators to meet BAT-AELs¹ and control Hg emissions. Hg process monitoring enables precise adjustment of neutralizer injection, vital in reducing pollutant concentrations and adhering to regulatory standards.



DATA ACQUISITION, PROCESSING AND REPORTING

D-EMS 2020, one of the world's very few certified DAHS systems, ensures precise emission data acquisition, handling and more than regulatory reporting. With real-time value visualization, reports for e.g. legislative compliance and optimized CEMS² performance, customers benefit from reduced emissions risk.



RAW GAS, STACK EMISSION GAS MONITORS

Certified and approved gas CEMS² for compliance with stack emission regulations (ELVs), online monitoring of raw gases for combustion optimization, fuel cost savings and precise adjustment of pollutant absorber/neutralizer injection (SCR, SNCR, DeNO_x, FGD) to reduce costs and emissions of pollutants.

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