NITROGEN OXIDES
CONTROL TECHNOLOGIES
STRATEGIES OF NOX EMISSIONS CONTROL

I. Primary methods - modification of combustion processes

II. Secondary methods - treatment of flue gas after the boiler
STRATEGY OF PRIMARY METHODS

Low-NOx Combustion Systems

The combustion technologies with low emission of NO$_x$

- the combustion processes are organised to reduce NO$_x$ emissions,
- hence the name: low-NO$_x$ combustion systems,
- therefore the offer: low-NO$_x$ burners
PRIMARY METHODS OF NO\textsubscript{x} EMISSION CONTROL

This group of NO\textsubscript{x} abatement control technologies are based on modification of the combustion processes to minimalise NO\textsubscript{x} emissions.

Major factors applied in combustion NO\textsubscript{x} control technologies are:
- control of flame temperature,
- control of air excess,
- flue gas recirculation,
- air staging,
- fuel staging.
STRATEGY OF SECONDARY METHODS

✓ DENITRIFICATION OF FLUE GAS AFTER THE BOILER

✓ COMBUSTION SYSTEMS USED IN A BOILER:
  - CONVENTIONAL
  - LOW-$\text{NO}_x$
SECONDARY METHODS

Postcombustion Denitrification Methods

Postcombustion denitrification methods of flue gas are based on:
- catalysis,
- absorption

The denitrification processes undergo in flue gas after the furnace or combustion chamber.