

Many community and industrial boiler-rooms contend with the necessity of burning a variety of fuels whose characteristics largely differ from the assumed ones. Another problem is incomplete burning of coal beans as well as emission of much pollution.

Adjusting their products to the Polish market of fuels, taking into consideration the quality and composition of Polish types of coal, and out of regard for the quality of air, the SMF Poland Sp. z o.o. offer the new

CAT-ER CATALYSER

which is used as activating factor of the coal burning process in grate, mechanical, dust and fluid types of furnaces. Its application is slag and soot afterburning, eliminating hydrocarbons, as well as sulphur, nitrogen and carbon oxides from exhaust gas. It's non-toxic and inexplusive.

Composition:

Natural or/and synthetic zeolite impregnated with alkaline compounds of transition metals such as CaCO_3 * MgCO_3

Advantages of applying Cat-Er in the process of coal burning:

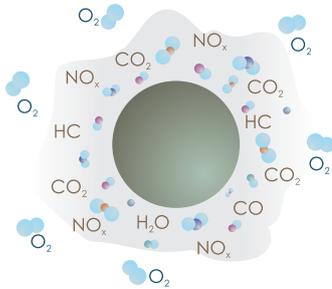
- Increasing efficiency of fuel burning
- Decreasing fuel consumption by up to 10%
- Lowering exhaust temperature
- Increasing boiler efficiency through better heat exchange
- Preventing deposit settling
- Reduction of toxic emission of carbon, nitrogen and sulphur compounds
- Option of burning worse quality fuel without distinct loss of efficiency

Ecology

- Reduction of toxic emission of dust, sulphur dioxide and nitric oxides.

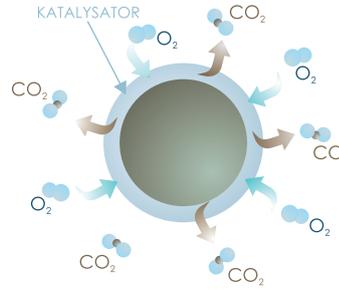
CATALYST CHARACTERISTICS

BURNING COAL WITHOUT CATALYST



- ▲ low burning efficiency
- ▲ difficult access of oxygen to coal surface
- ▲ blocking surface by exhaust gas
- ▲ coal sintering
- ▲ high content of unburned particles

BURNING COAL WITH CATALYST



- ▲ high burning efficiency
- ▲ easy access of oxygen to coal surface through oxygen bridge (redox mechanism)
- ▲ easy diffusion of exhaust gas
- ▲ low content of unburned particles

FEATURES:

- mixture of salts of alkaline reaction
- available in two sorts:
- 'dry' as powder
- 'wet' as water suspension
- non-toxic
- inexplosive

SAFETY, HYGIENE, STORAGE

- store in the original case, far from food
- store in temperature up to 60°C
- S2 – keep out of reach of children
- S46 – in case of swallowing see a doctor and show package
- S47 – store in temperature up to 60°C

As a result of research several types of Cat-Er catalyst have been developed for various types of coal.

Various catalyst compositions result from changeable physical and chemical characteristics of types of coal used in heat and power plants and from different methods of coal feeding.

- Depending on the way that coal is fed to the boiler, type of boiler and form of coal (dust, briquette, fine coal), various ways of catalyst feeding have been developed which aim at achieving optimal contact between coal and catalyst.