

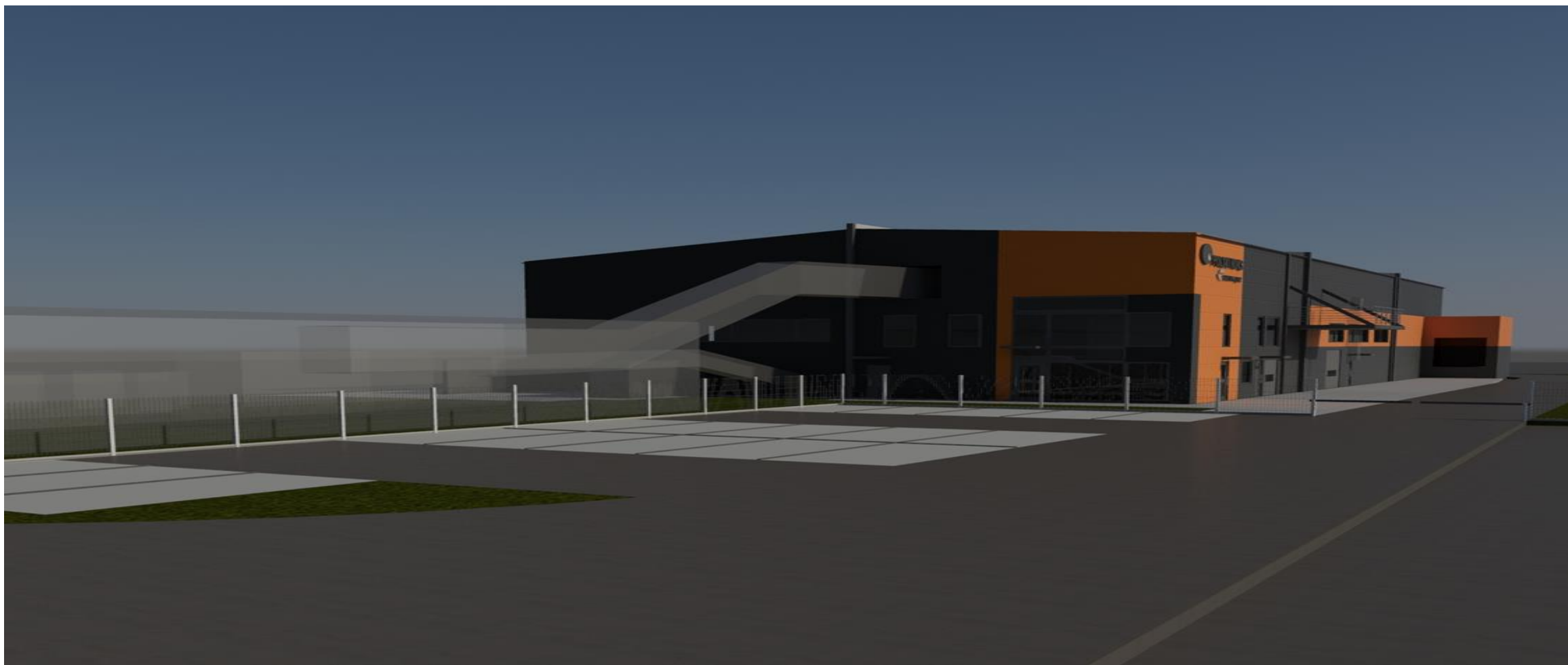


JSW
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VARMO

**TECHNOLOGY FOR COMPOSITE
SOLID FUELS PRODUCTION**

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Varmo technology is an innovative technology for the production of composite solid fuels.

The developed technology and applied technical solutions make it unique on a global scale.

VARMO technology can be used for the production of all kinds of composite fuels using various types of coals as well as mine waste available on global markets.



Production of composite fuels using energy coal for individual heating



Production of full-value fuels for industrial power and heating using mine-type mining sludges



Production of densified component of coal blends with use of fine coal fraction (FCF) for coke oven batteries.



Production of composites intended for use in metallurgy.



Production of composites based on biomass raw materials.

Advantages of VARMO technology:

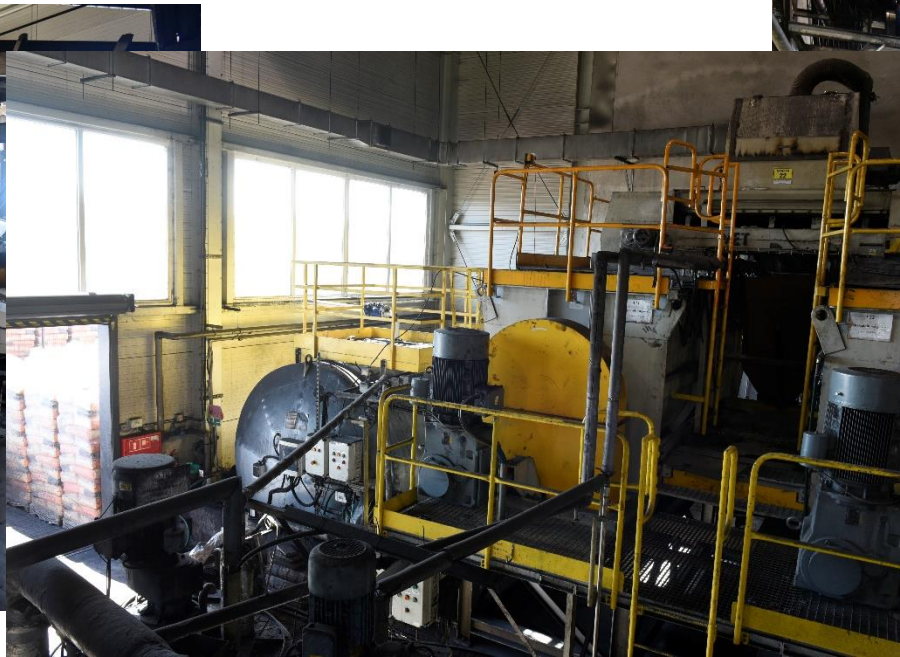
Experience

Process flexibility

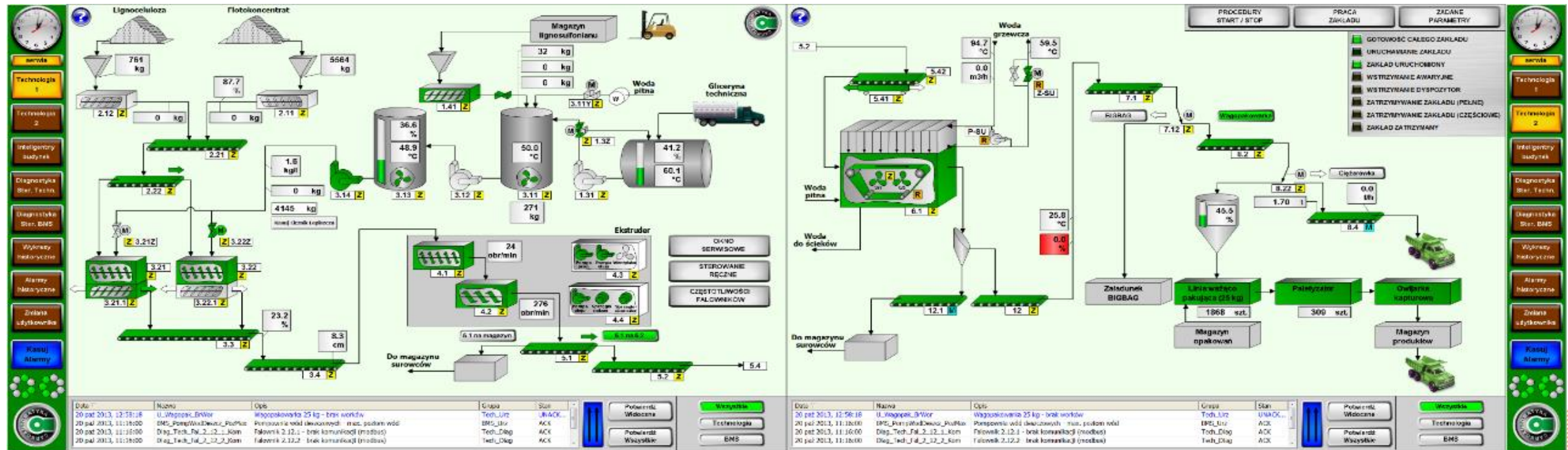
Automatic production control

Scalability

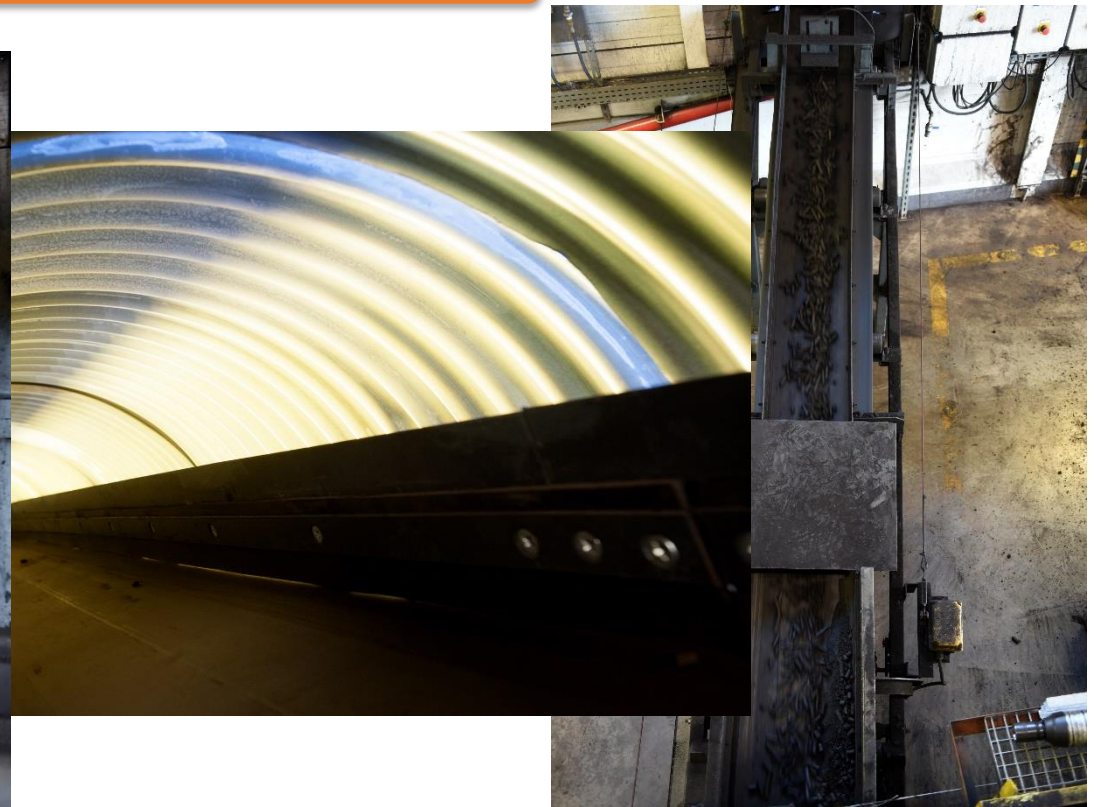
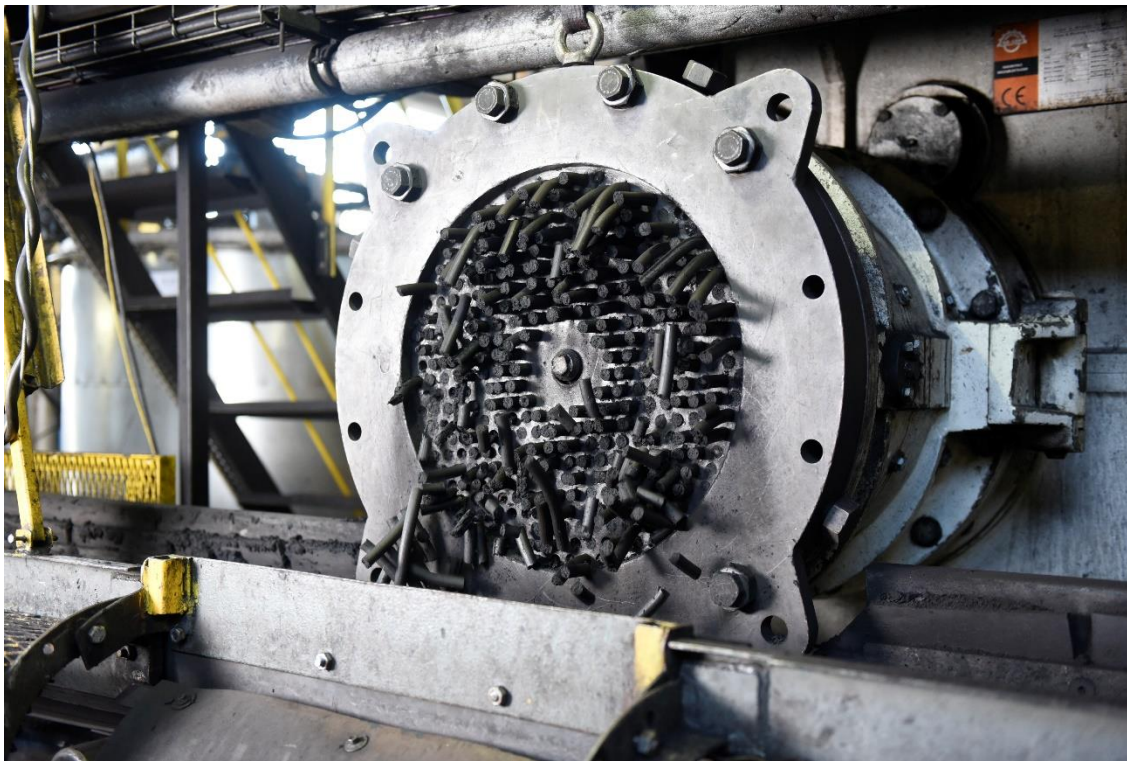
Process flexibility and scalability: allows the use of selected proportions of the basic raw materials with the use of binder in both dry and liquid form



Automatic production control using the latest solutions in the field of automation.



Experience: production of VARMO fuels



VARMO

The fuel was designed in a way that significantly changes the combustion kinetics, giving it clear ecological attributes, entitling to the qualification of fuel as a new generation fuel. VARMO is produced for use in modern boilers with automatic feeding of fuel, i.e. boilers with a screw feeder or a reciprocating conveyor.

Ecological Coal Fuel VARMO Premium is an innovative product, composite solid fuel, whose production is based on the use of flotation concentrates and a binder being a biocomponent mix.

VARMO Premium is a fuel characterized by high quality and utility parameters:

Calorific value: 28 ÷ 30 GJ/kg

Ash content: up to 6 %

Sulfur content: up to 0,8 %

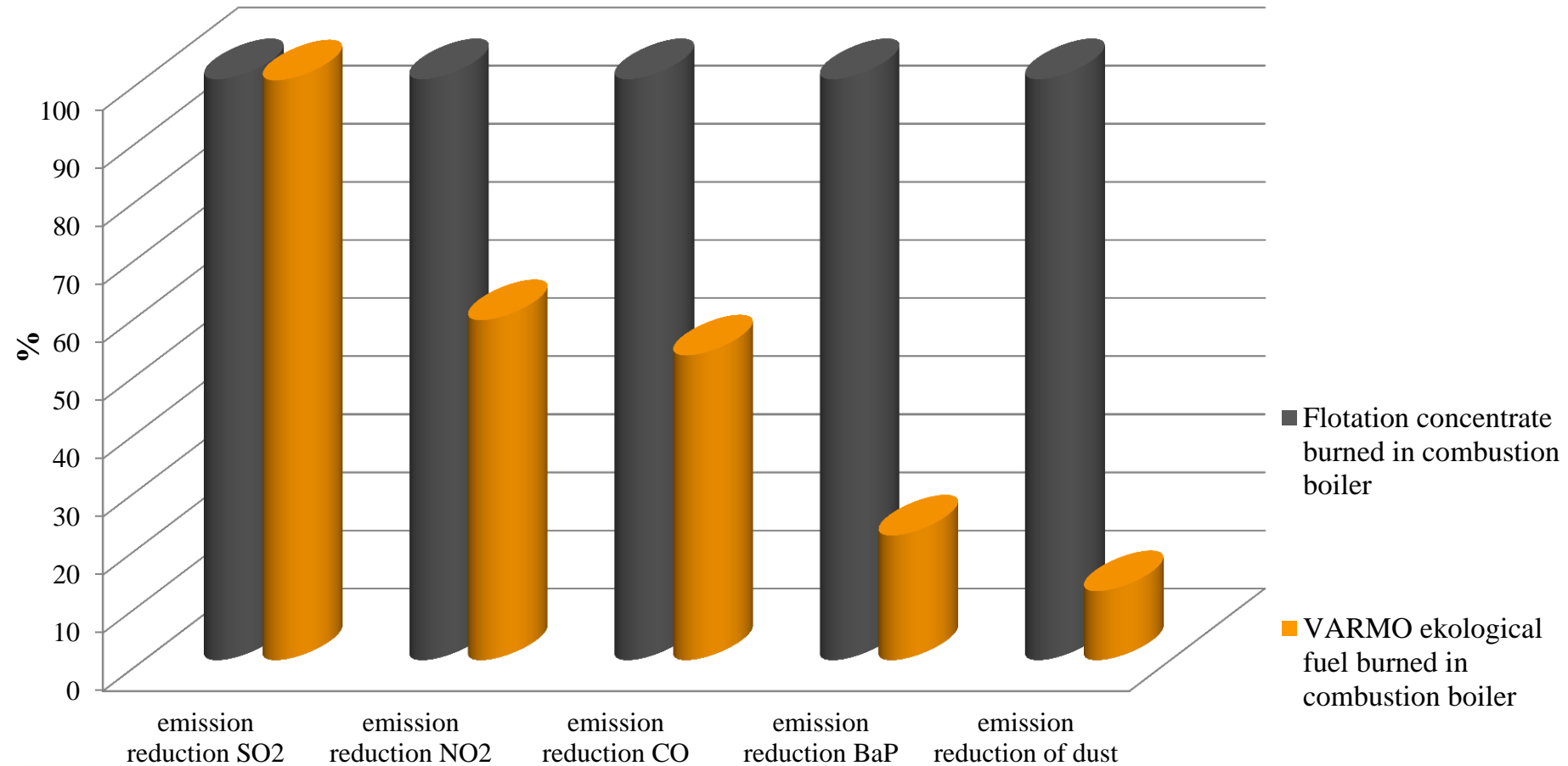
Moisture: up to 4 %

The VARMO Premium coal fuel is a novelty on the market as the first composite carbon fuel that allows to improve environmental conditions in urban agglomerations and tourist and spa regions by reducing harmful substances, including a significant reduction in carcinogenic benzopyrene emission.

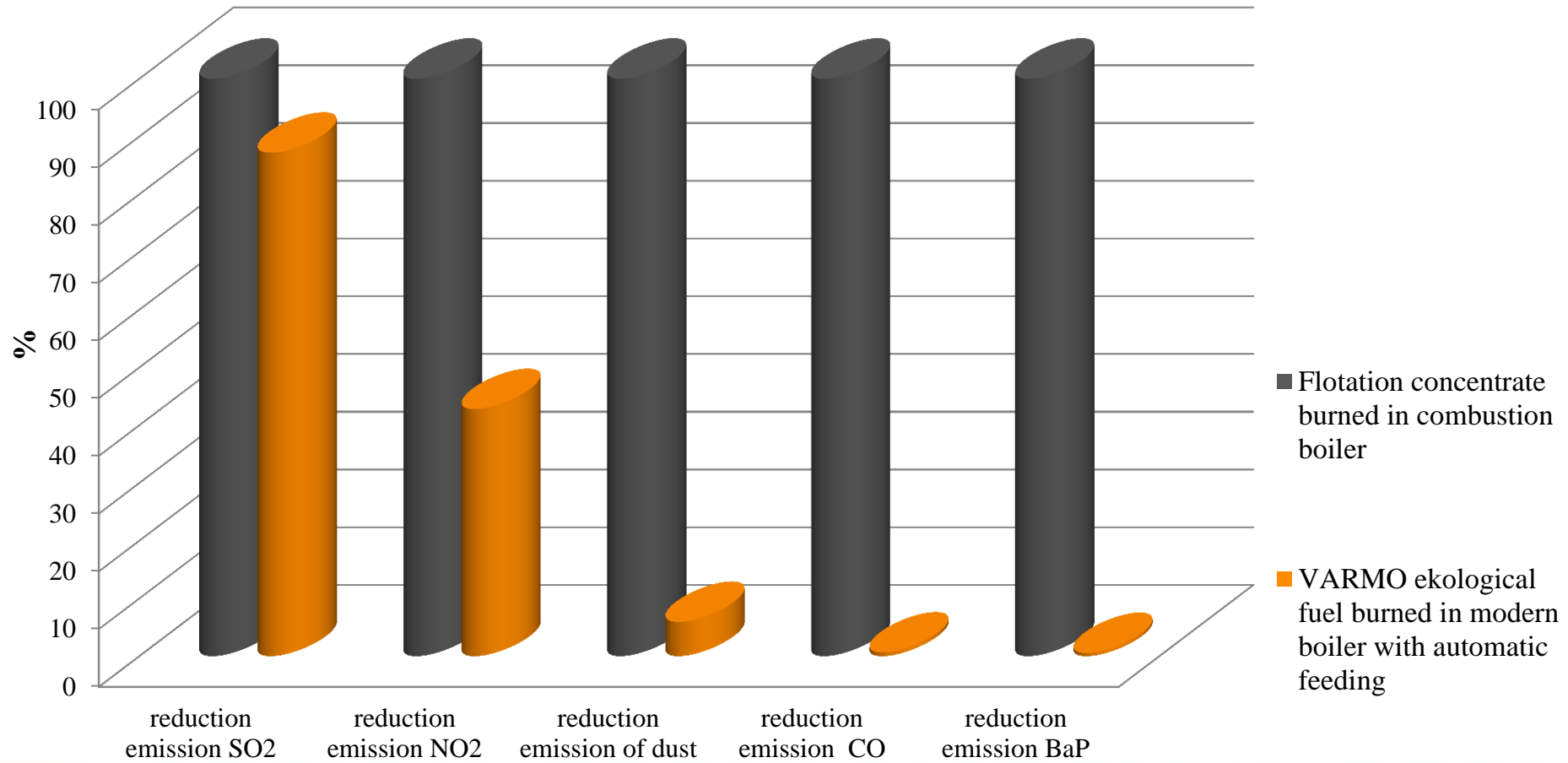
Ecological Coal Fuel VARMO Premium has received the Certificate for the "Ecological safety sign" issued by the Institute for Chemical Processing of Coal in Zabrze.



Reduction of emissions by using VARMO in a combustion boiler (old type)



Reduction of emission by using VARMO in a modern boiler with automatic feeding





Thank You for your attention.