



TŘINECKÉ ŽELEZÁRNY

TŘINECKÉ ŽELEZÁRNY USE OF METALLURGICAL COAL

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TŘINECKÉ ŽELEZÁRNY

Agenda

- ① Introduction
- ② Importancy of fuel preparation in case of integrated iron and steel work
 - ③ Coke production
 - ④ Coal powder
 - ⑤ Economical impact
- ③ R&D and Testing
- ④ Summary

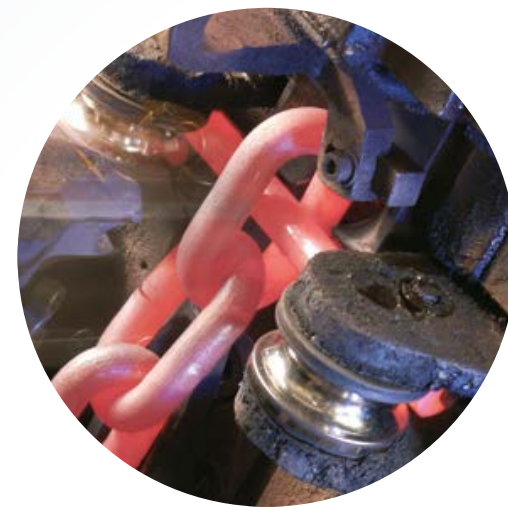
Significant Subsidiaries of the TŽ–MS Group



Energetika



Kovárna VIVA



Řetězárna



HŽP



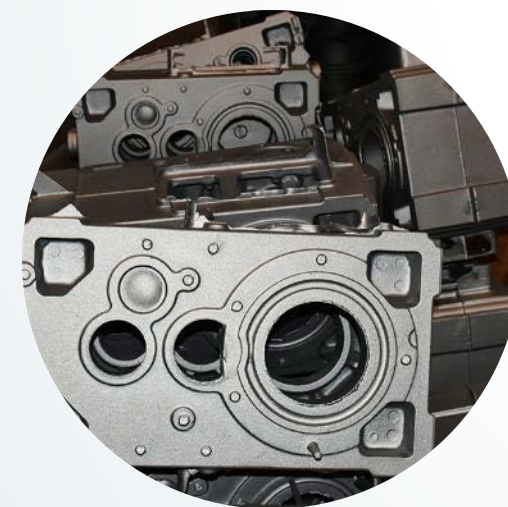
Šroubárna



Brück AM



SaS



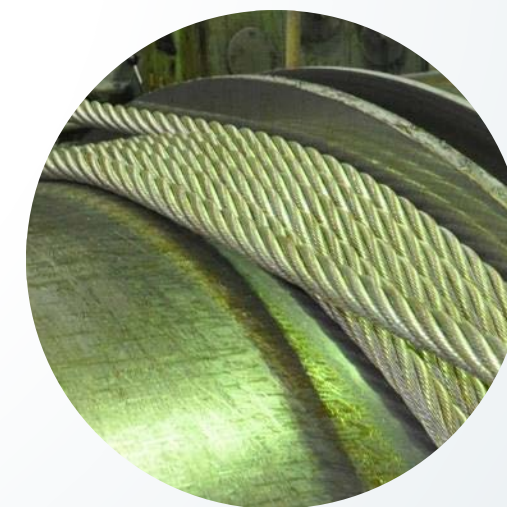
Slévárny



Metalurgia



D&D Drótaru

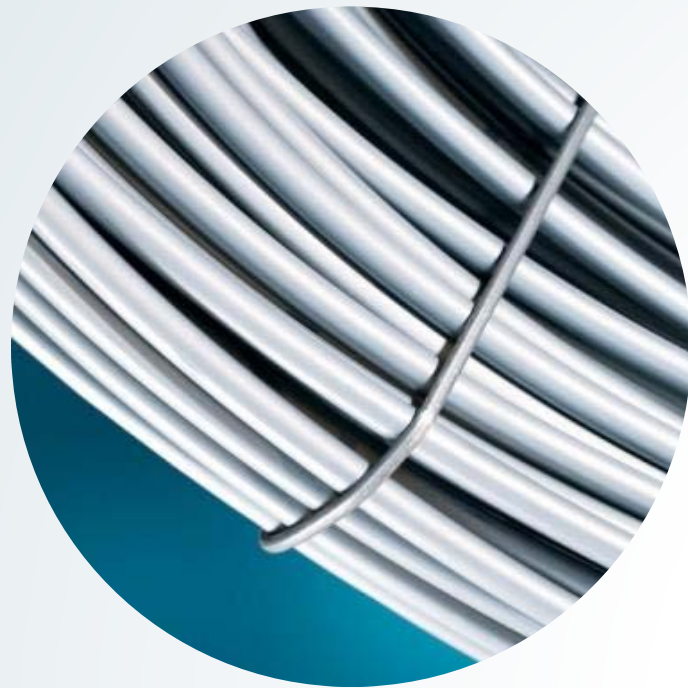


ŽDB Drátovna

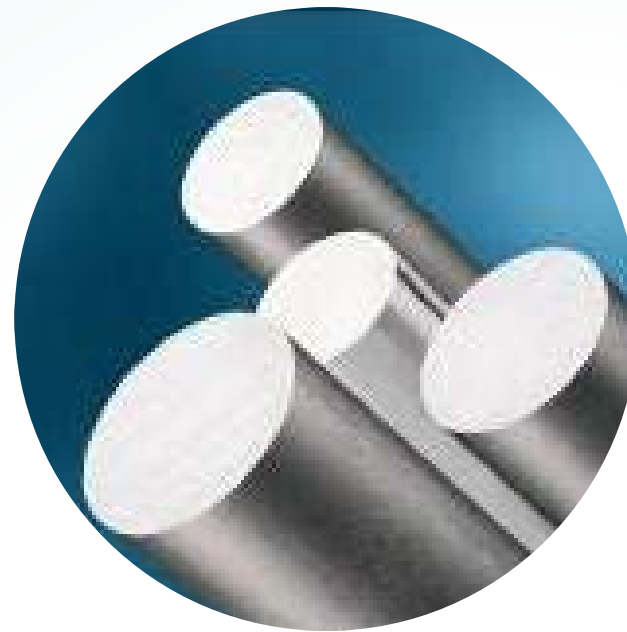


VÚHŽ

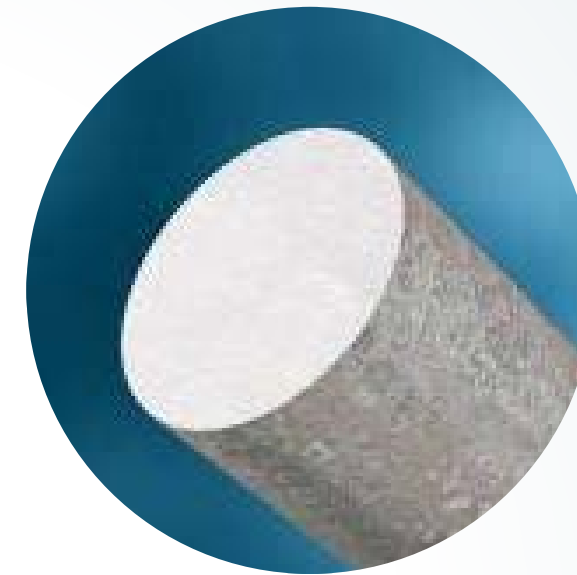
Product Portfolio, Share of Volume 2017



Wire rod 42.8%



Bars 28.5%



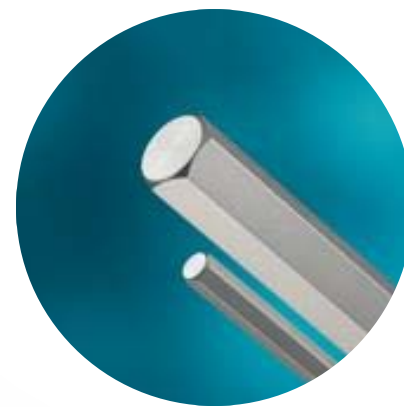
Semis 11.2%



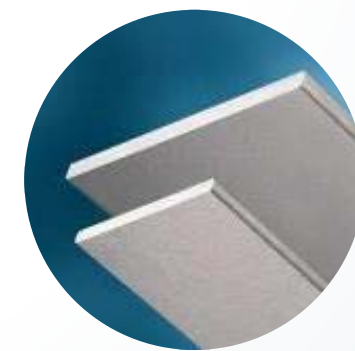
Rails 7.2%



Seamless tubes
4.1%



Drawn steel
4%



Wide steel
1.6%



Railway accessories
0.6%

Our Main Facilities



Production of Coke/PCI, Structure of Costs

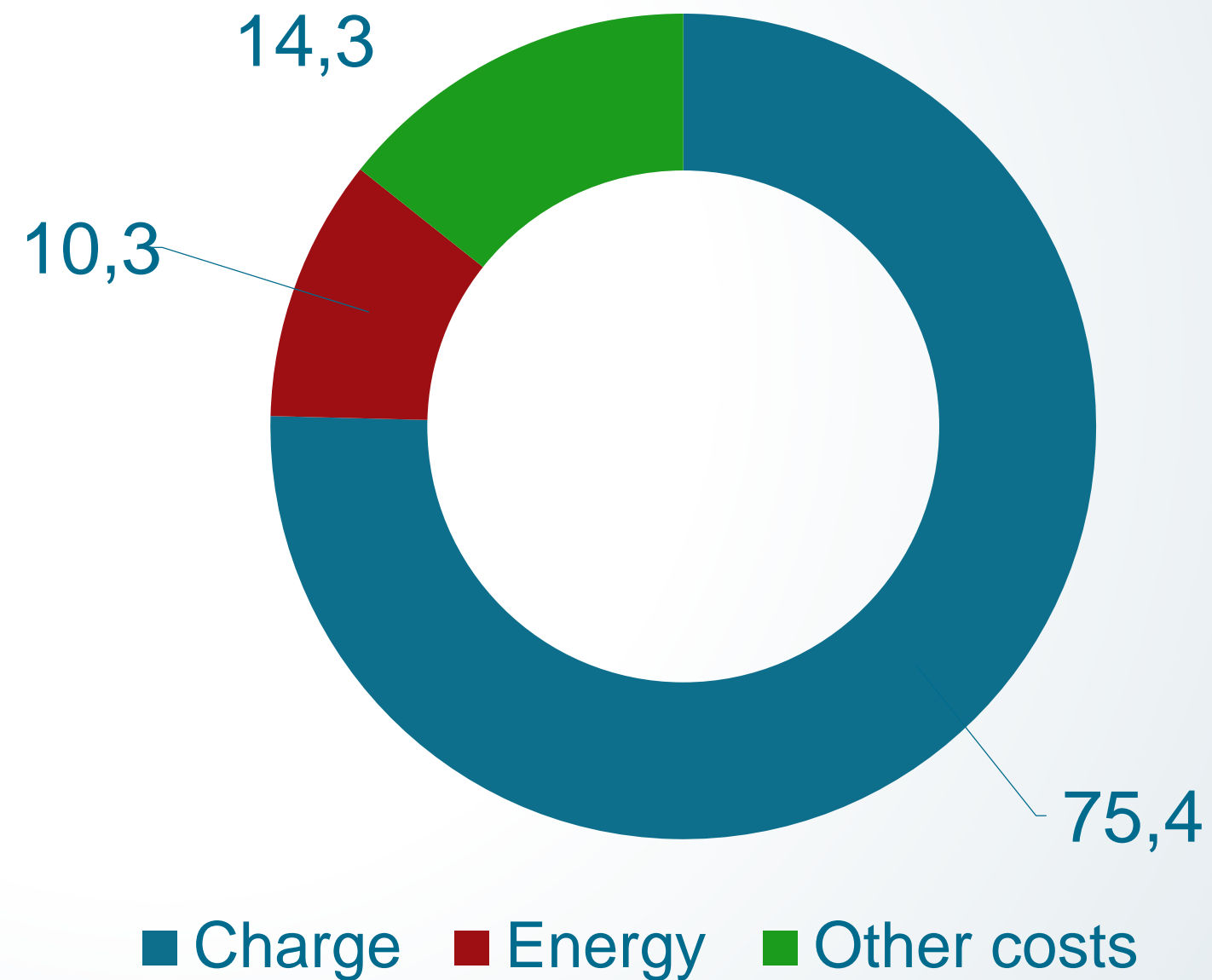
➔ Annual production

➔ Cokewet 724 kt

➔ PCI 281 kt

➔ Coal cons. 620 kg
per t of hot metal

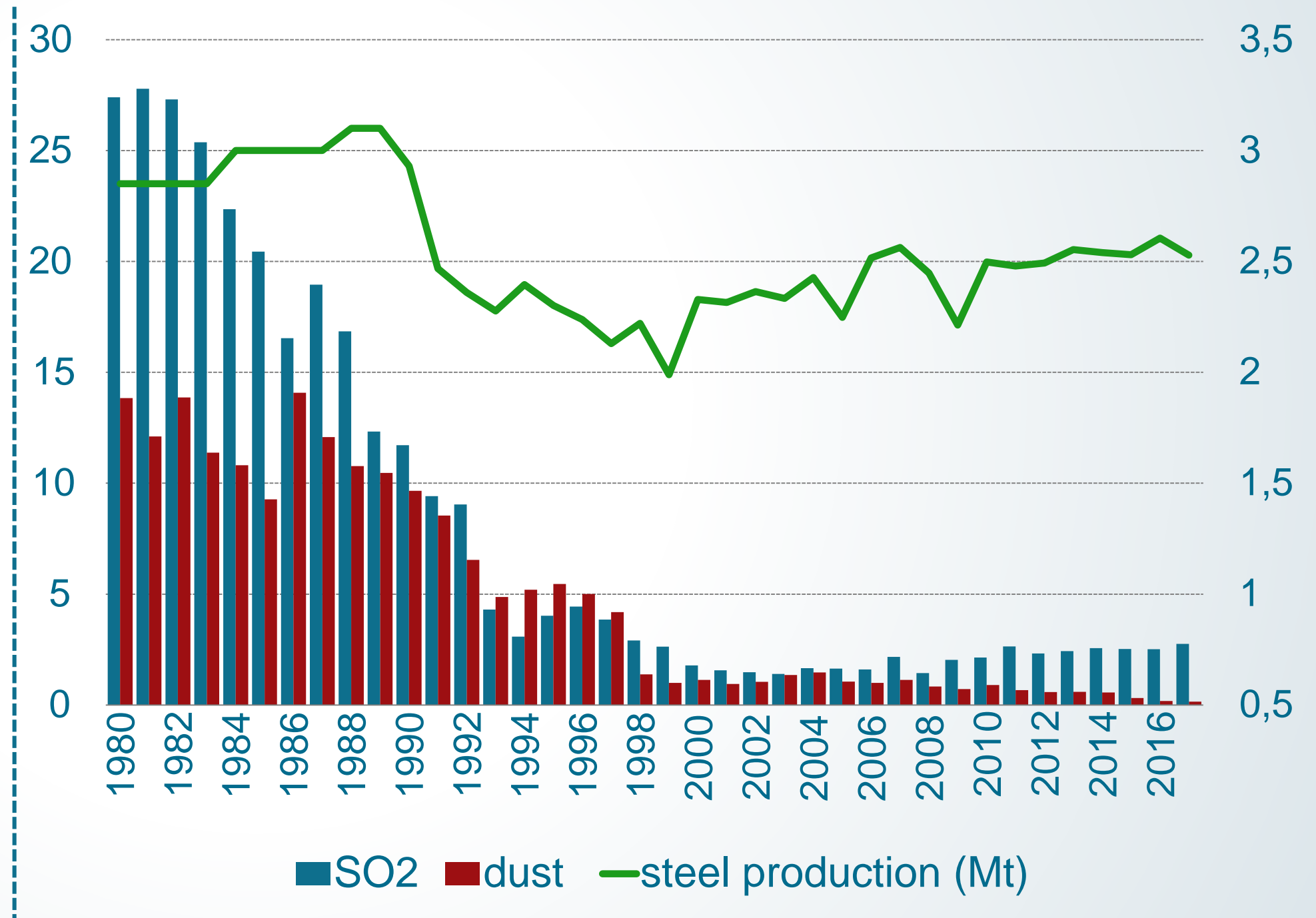
BF Coke Costs Structure



Air Pollution [kt/year]

➔ Investments in the environment
1996-2017
ca CZK 9.4 bln.

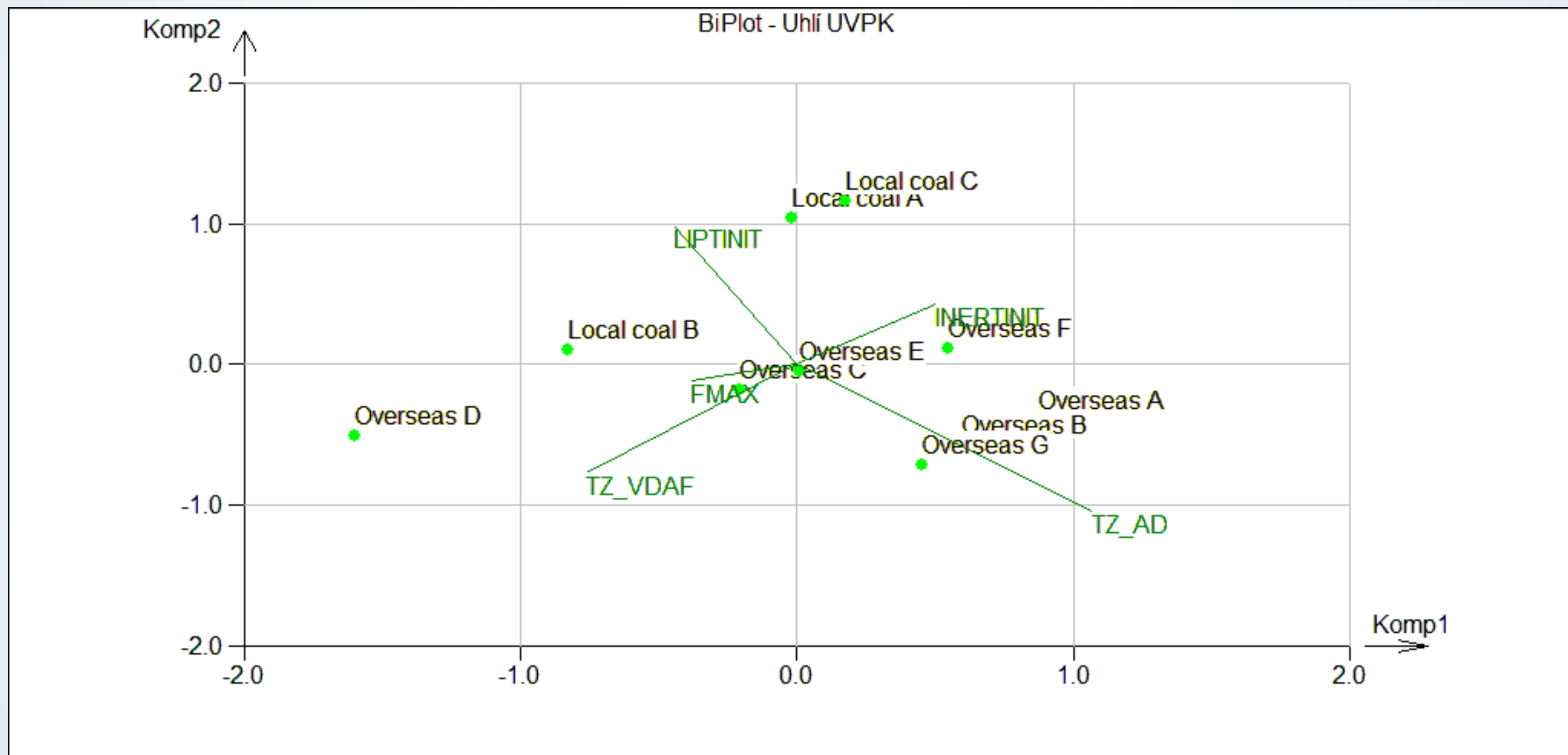
➔ Dust emissions drop
2013-2017
74.7%



Testing in Laboratory and Semi Production Scale



Graph–Evaluation of Different Types of Coal



Conclusions

- ② Process of integration of overseas coals into charge for the blast furnace coke production is possible because of
 - ② Wide range testing in different scales
 - ② Advanced statistical analysis
- ② Above mentioned fact give us possibility for
 - ② Searching the optimum composition of coal charge (with an amount of overseas coals)
 - ② Economical and safe operation of coke oven batteries
 - ② Reduction in repair costs
 - ② Achieving maximum lifetime