



TŘINECKÉ ŽELEZÁRNY

Air Protection in TŽ

22. 11. 2018

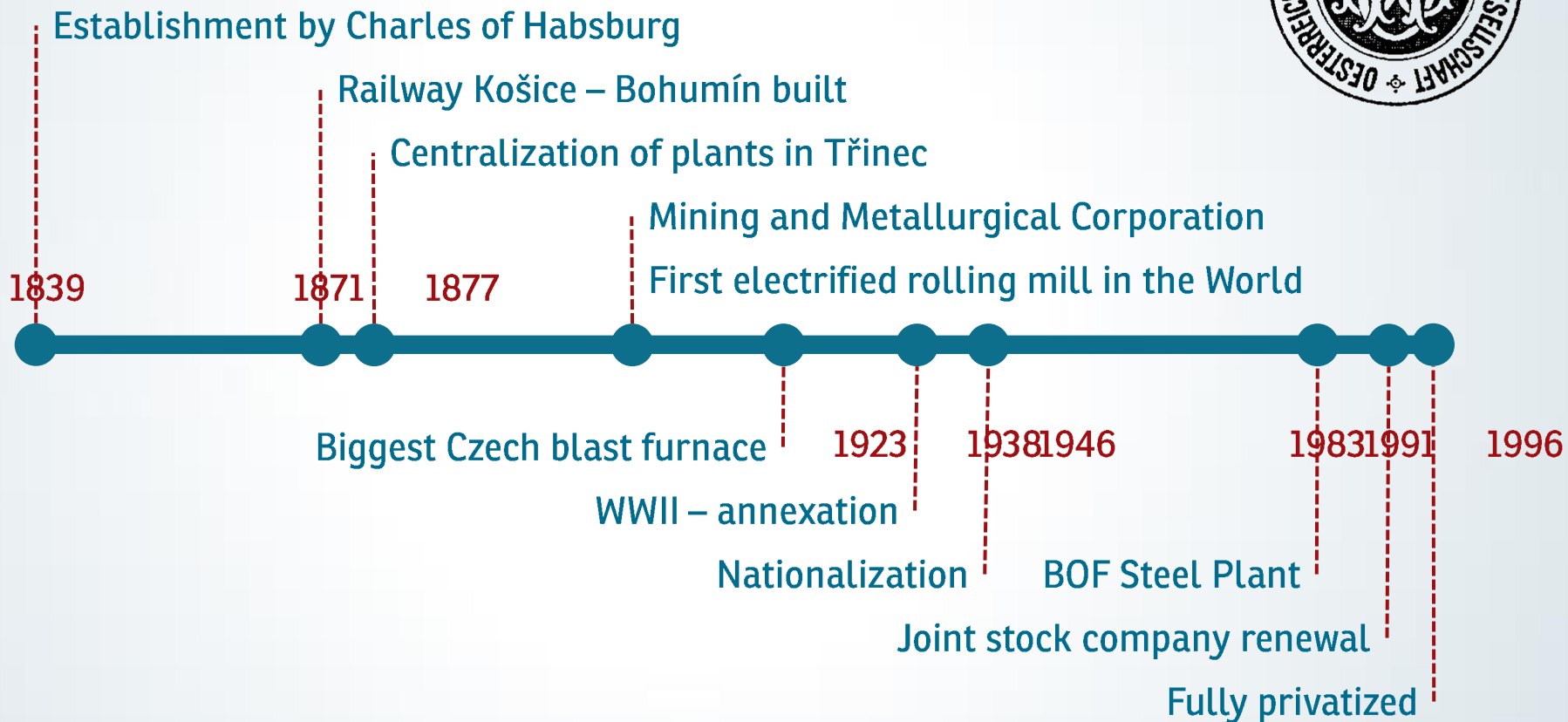
Radim Klimša – Manager of Environmental Dept.



TŽ Bird's View



History



TŽ Highlights

- ③ Tradition since the establishment in 1839
- ③ Integrated steel company
 - ❖ Coke Plant, Sinter Plant, BF, BOF, CCM, EAF, Rolling Mills, Auxiliary Plants
- ③ Annual production of 2.6 million tonnes of crude steel
- ③ Biggest Czech steel producer
- ③ Area of the premises is ca 400 ha
 - ❖ Green is ca 40 % of this area
- ③ 7000 TŽ employees / 15 000 TŽ – MS Group employees

Significant Subsidiaries of the TŽ–MS Group



Energetika



Kovárna VIVA



Řetězárna



HŽP



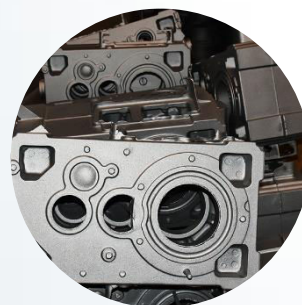
Šroubárna



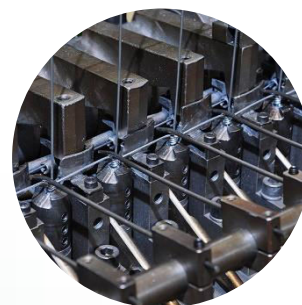
Bohemia Rings



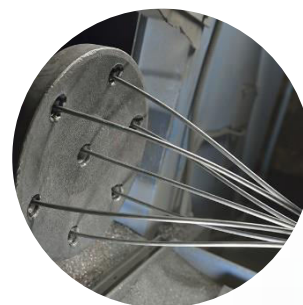
SaS



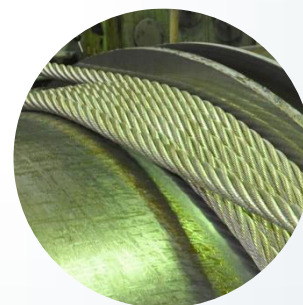
Slévárny



Metalurgia



D&D Drótáru

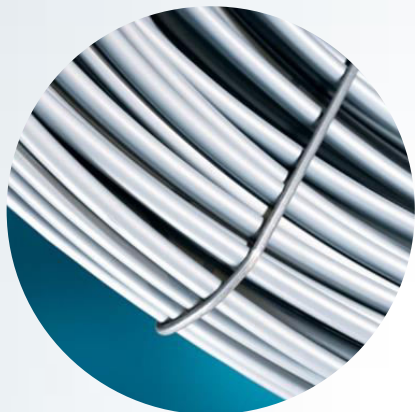


ŽDB Drátovna



VÚHŽ

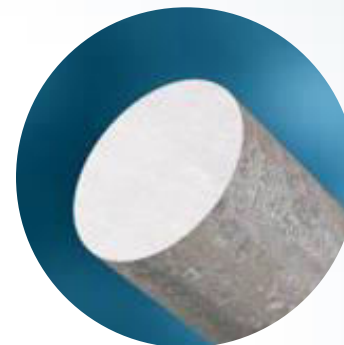
Product Portfolio, Share of Volume 2017



Wire rod 42.8%



Bars 28.5%



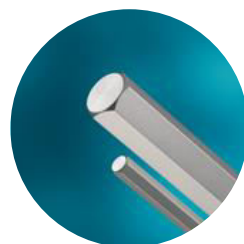
Semis 11.2%



Rails 7.2%



Seamless tubes
4.1%



Drawn steel
4%

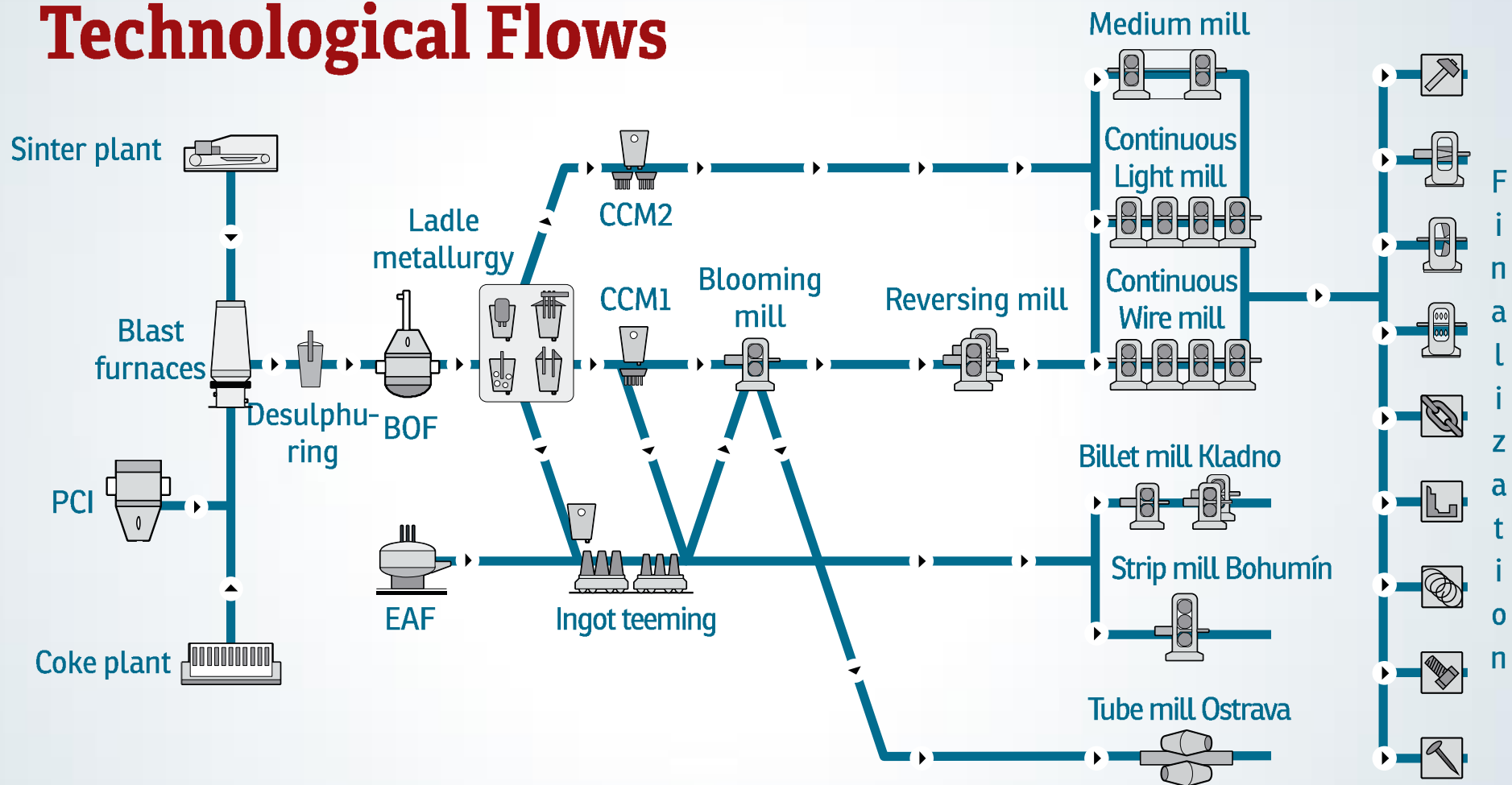


Wide steel
1.6%



Railway accessories
0.6%

Technological Flows



Air Protection

- ③ 108 sources of pollution within TŽ premises plus 34 in other TŽ plants
- ③ Emission limits and caps are continuously fulfilled
- ③ All TŽ facilities are at the BAT level without exceptions
- ③ Třinec area – region with impaired air quality
- ③ Decreasing the dust emissions is a priority
- ③ The way to reduce emissions => INVESTMENTS

Environmental Investments

The total of CZK 9.4 billion invested in the environmental projects since privatization in 1996

Environmental Projects 2013 to 2015 I

- ③ **Re-construction of exhaustion of Teeming Halls at BF #4 and 6**
- ③ **Secondary de-dusting of the BOF Plant**
- ③ **De-dusting of nodes and fumes at the Sinter Plant #2**
- ③ **Decreasing emissions at BF Charge Production Line**
- ③ **De-dusting of multipurpose facility of steel plant sinter production**
- ③ **De-dusting the workplace for ingots cutting**
- ③ **Mobile de-dusting equipment**
- ③ **Multipurpose de-dusting units**
- ③ **De-dusting of coal pit at the Coke Plant**
- ③ **De-dusting of tippers #3 and 4**

Environmental Projects 2013 to 2015 II

- ③ De-dusting the Pellet Sorting Line
- ③ Acquiring the universal sweeping car
- ③ Decreasing fugitive emissions by mobile vacuum cleaners at Light Section and Wire Rod Mill
- ③ Decreasing fugitive emissions at crushing line and slag keeping
- ③ Decreasing fugitive emissions at Multipurpose Environmental Area
- ③ Decreasing Fugitive Emissions at Iron Ore Belt Conveyor – Mist Visor
- ③ De-dusting of tundish keeping area of CCM #1 and 2
- ③ De-dusting of RH Vacuum Station #2
- ③ Planting the insulation greenery

De-dusting of Blast Furnace Teeming Halls



De-dusting of Nodes and Fumes at the Sinter Plant #2



Secondary De-dusting of the BOF Hall



Secondary De-dusting of the BOF Hall

Before



After



De-dusting the Workplace for Ingots Cutting

- ② Covered cabin with exhaustion for cutting with oxygen lance equipped with cloth filter

Before



After



De-dusting of Tipplers #3 and 4



De-dusting of Pellet Sorting Facility

Before



After



Decreasing Fugitive Emissions at Iron Ore Belt Conveyor – Mist Visor

Before



After



De-dusting of Coal Pit at Coke Plant



De-dusting of Sinter Stackers



Cleaning Wagon for Sinter Plant



Mist Cannons at the Secondary Raw Materials Plant



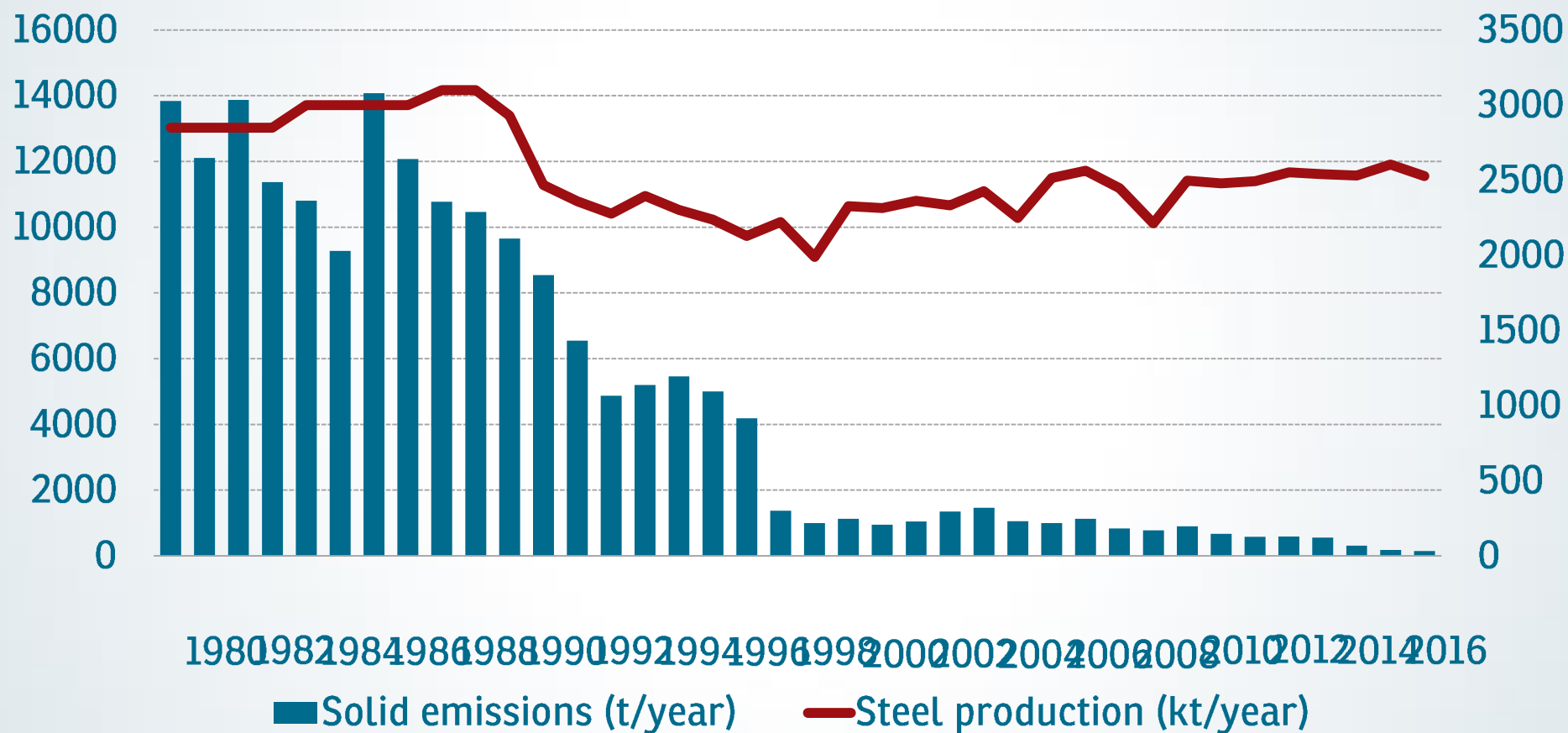
Insulation Greenery



Environmental Projects 2016 to 2018

- ③ De-sulphuring of fumes at Sinter Plant #2
- ③ Dosing of active coal at Sinter Plants #1 and 2
- ③ Modernization and reconstruction of the Coke Oven Battery #11
- ③ De-sulphuring of fumes at Sinter Plant #1
- ③ Building of the Hot Blast Stove #64
- ③ Acquiring the Water car – Secondary Raw Materials Plant
- ③ Filtering station at slag milling facility
- ③ Central exhaustion at Sinter Plants, Blast Furnaces, and Billet Mill

Dust Emissions in TŽ



Environmental Projects under Preparation

- ③ Renewal of Hot Blast Stoves at BF #6
- ③ De-dusting of industrial pickers of charg  for production of blast furnace and steel plant sinter
- ③ De-dusting of daily stocks for blast furnaces

Conclusions

- ③ TŽ is aware of its corporate responsibility towards the region
- ③ Effort to decrease the dustiness
- ③ Decrease of solid pollutants by three quarters within 5 years
- ③ All substantial sources of pollution are equipped with cloth filters
- ③ Costs of new investments ca CZK 100 million annually
- ③ Preparation of further environmental projects
- ③ Voluntary agreement with Ministry of Environment and Regional Authority

Then



Now



TŘINECKÉ ŽELEZÁRNY

Thank You for Your Attention

