



REALIZACE PRŮMYSLOVÝCH STAVEB OSTRAVA

akciová společnost

The Company **RPS Ostrava a.s.** is a design engineering company operating on the Czech and foreign market since 1997. The strategy of the company is to provide customers with complex services to solve their problems.

Focus of activity:

- Coal preparation plants and mineral resources dressing plants
- Storage and handling of bulk materials
- Landfills and storage complexes in coking plants, power plants, heating plants, ...
- Lines for processing of biological waste



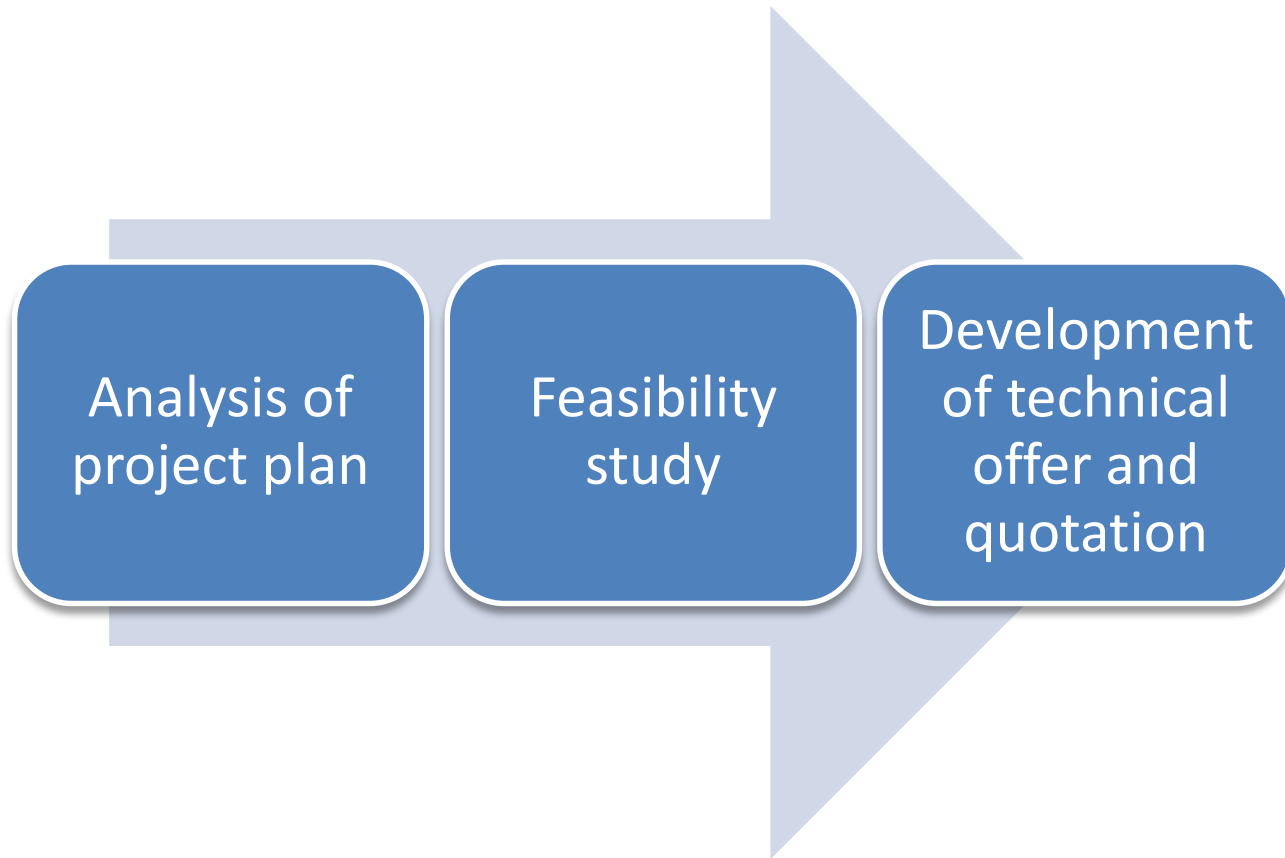


RPS OSTRAVA, a.s. offering supplies and services associated with turn-key plants or their parts in the area of transport, treatment and storage of mineral resources.

- Crushing and sorting plants
- Dense medium treatment
- Flotation and reflation
- Storage facilities
- Drainage of products

The technologies offered in various versions can process black coal and lignite as well as other minerals such as magnesite, apatite, and others.

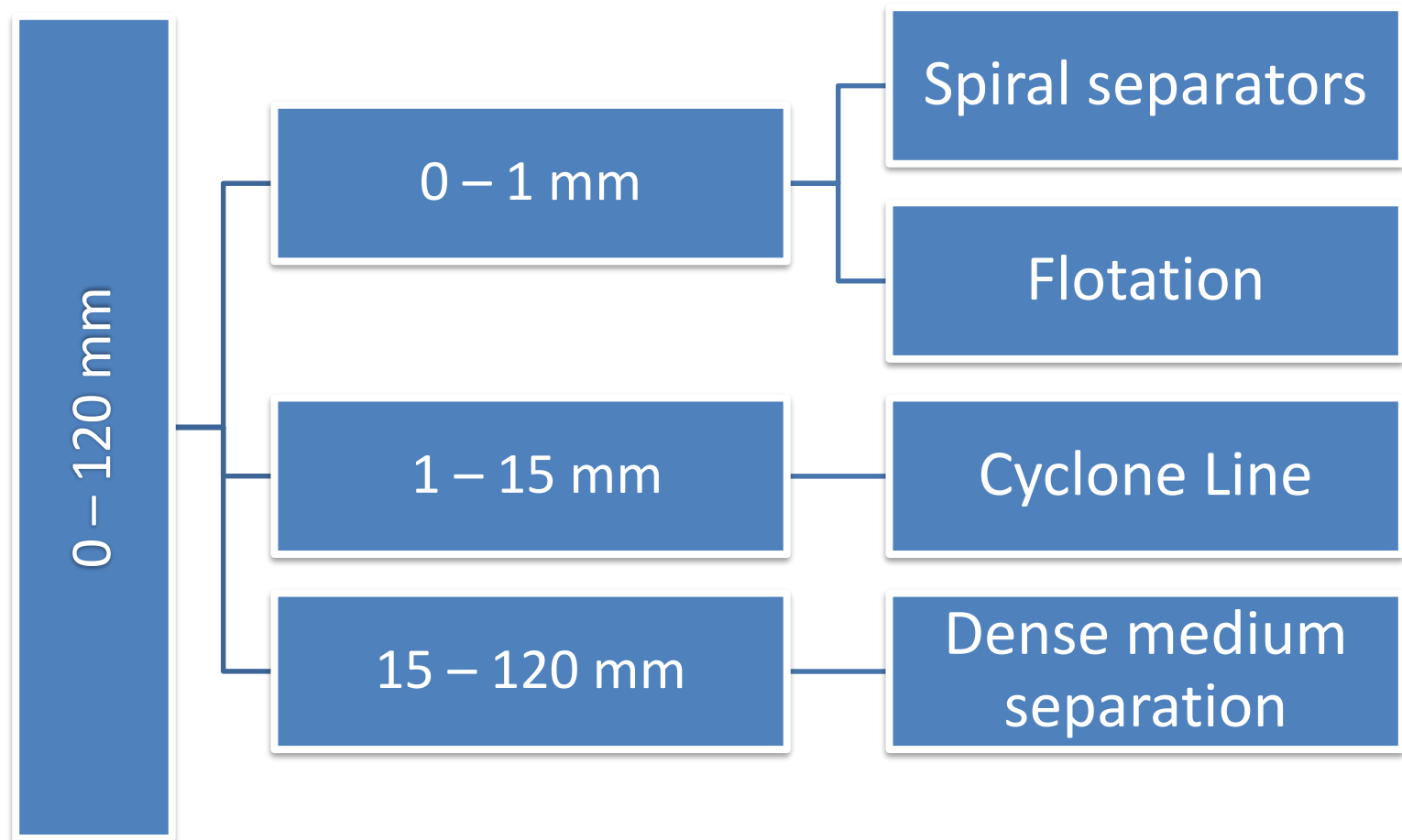
PREPARATION OF PROJECT



PROJECT REALIZATION

- Elaboration of the bid
- Arrangement for project funding
- Development of basic-design of construction in all professions
- Development of detail design of construction in all professions
- Deliveries of selected machinery and equipment
- Provision of production of selected equipment in the customer's country
- Facility installation in all professions
- Engineering of the work
- Preparation of operating procedure
- Putting works into operation
- Providing for comprehensive and guarantee testing
- Processing of supplier and As-built documentation
- Training of customer personnel
- Handover of the work to the customer

DRESSING OF BLACK COAL AND LIGNITE



SCREENING AND CRUSHING PLANTS



Preparation of extracted raw material for the dressing process.

South Africa, DRA

TRANSPORTATION OF RAW COAL FROM THE HOIST EQUIPMENT

Skip
containers



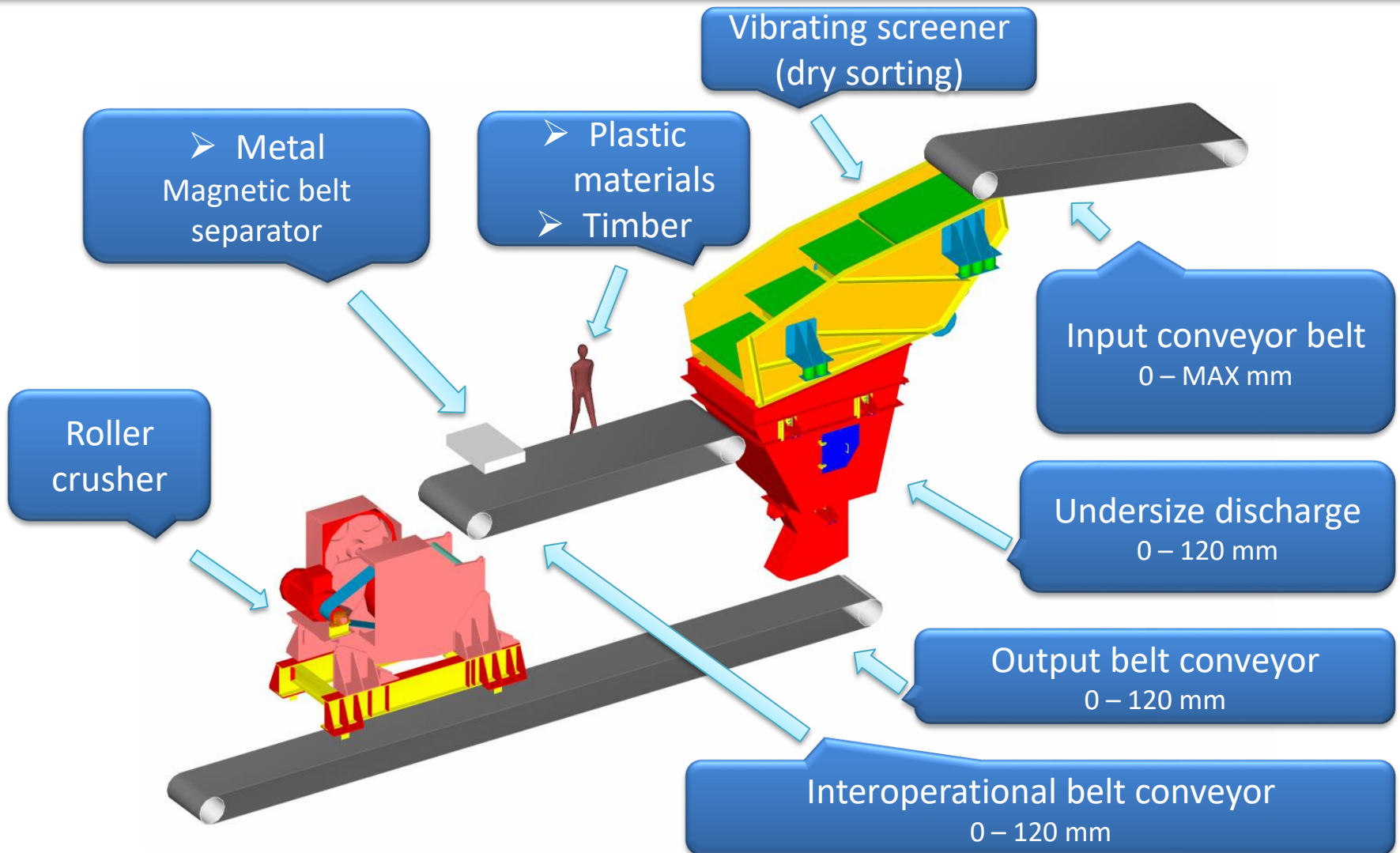
Belt
conveyors



Drag
conveyors



SCREENING OF RAW COAL



SORTING OF TAILINGS ON BRADFORD SORTING DRUMS



Paskov Mine, Staříč plant, OKD

BASIC TECHNOLOGICAL PARAMETERS [BRADFORD]

• Output [t/hod]	600	800
• Drum diameter[mm]	2 600	3 200
• Drum length [mm]	4 000	5 000
• Total el. input[kW]	45	55
• Maximum grain size [mm]	300 x 400 x 1 200	

DRESSING OF COARSE COAL IN HEAVY MEDIA SEPARATORS

BASIC TECHNOLOGICAL PARAMETERS [DREWBOY]

• Separator output [t/hod]	100 - 200	200 - 300	300 - 400
• Feeder wheel diameter[mm]	3 800	4 500	5 350
• Maximum grain size [mm]	300 x 400 x 1 200		
• Minimum grain size [mm]	6 x 6 x 10		
• Minimum grain size [kW]	15		



ČSM Mine, OKD



Darkov Mine, OKD

PREPARATION AND REGENERATION OF WASHING LIQUID

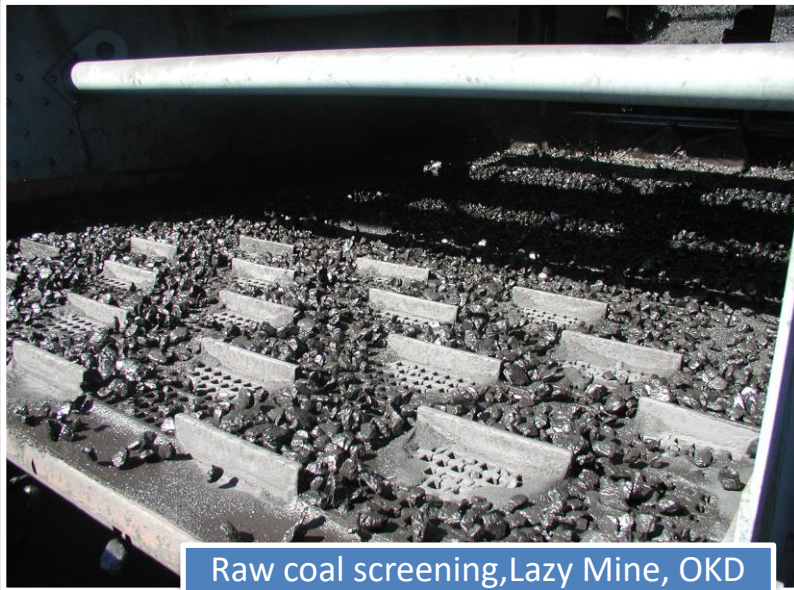


Preparation of washing liquid,
ČSM Mine, OKD



Magnetic separator,
ČSM Mine, OKD

DRAINAGE AND SORTING OF COAL ON VIBRATING SCREENS

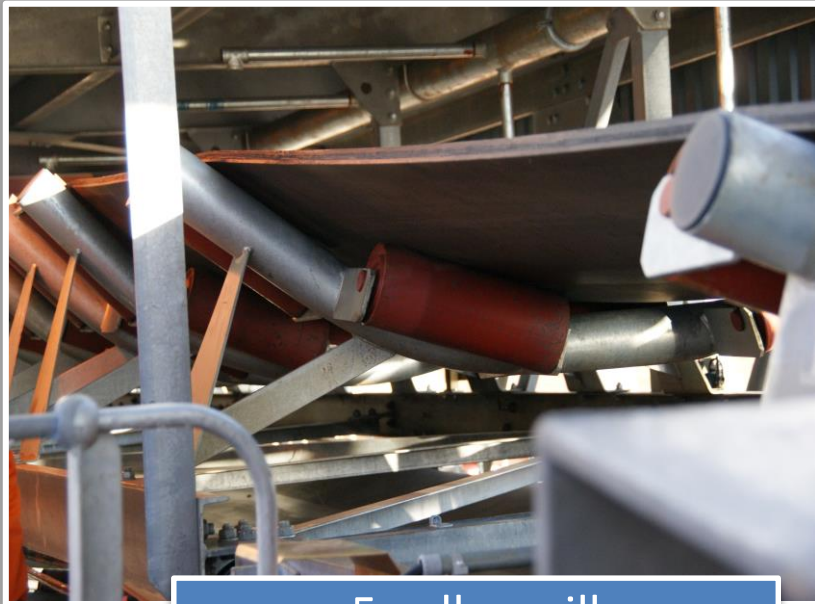


Raw coal screening, Lazy Mine, OKD
Q=180t/h



Drainage on sludge-removing (banana) separators
ČSM Mine, OKD
Q=200t/h

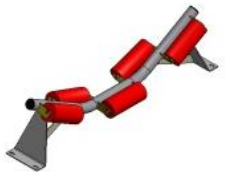
TRANSPORT TO STORAGE AND SHIPPING FACILITIES



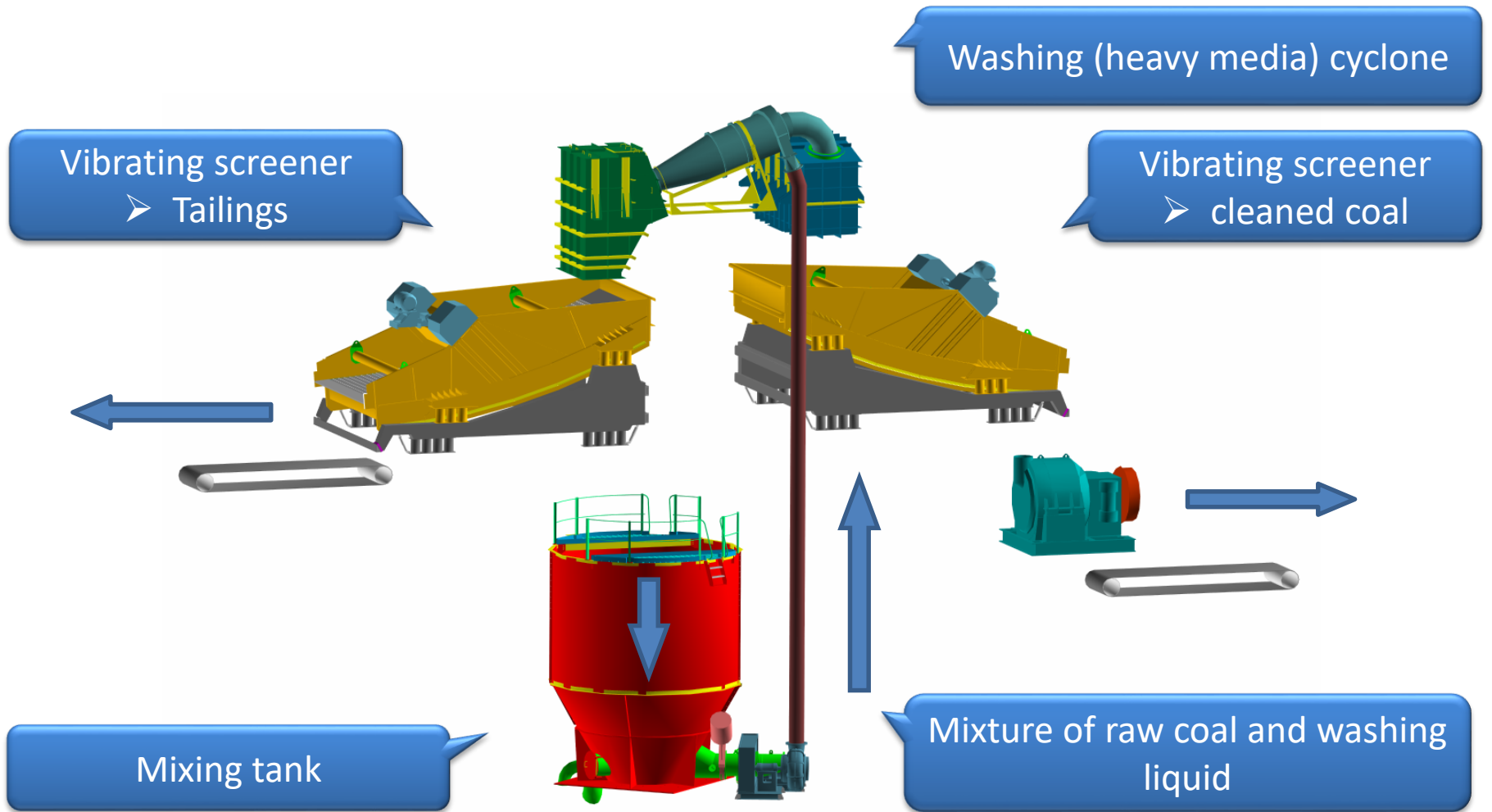
5-roller mill



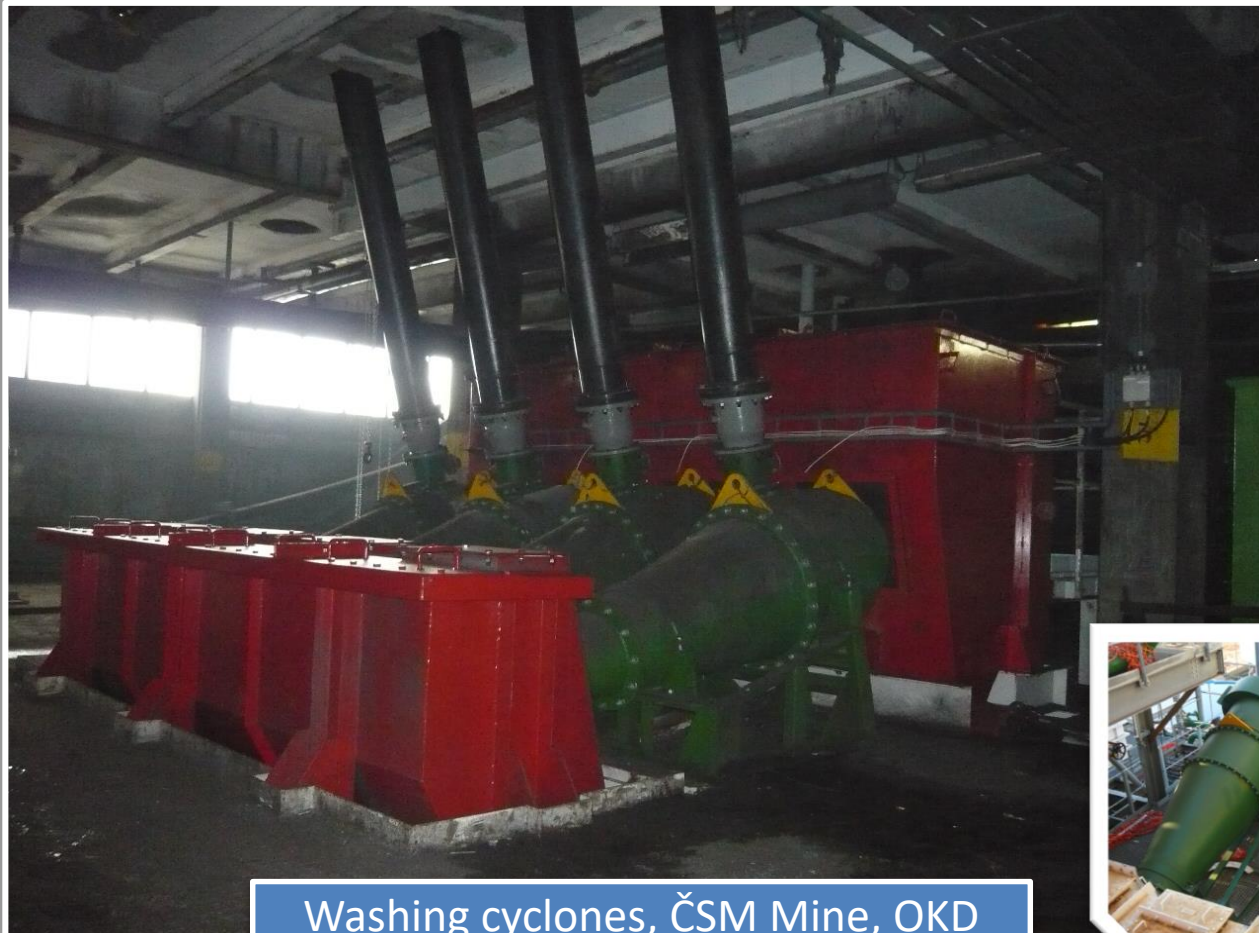
Belt conveyors



FINE-GRAINED COAL TREATMENT



TREATMENT OF FINE-GRAINED COAL IN HEAVY MEDIA HYDROCYCLONES



Washing cyclones, ČSM Mine, OKD

Q = 80 t/h



DRAINAGE OF WASHED COAL



Vibrating screeners, ČSM Mine, OKD
Q = 80 t/h



Centrifuge of washed coal,
ČSM Mine, OKD Q = 260 t/h

DRAINAGE OF TAILINGS



Drainage screener, ČSM Mine, OKD

Q = 80 t/h



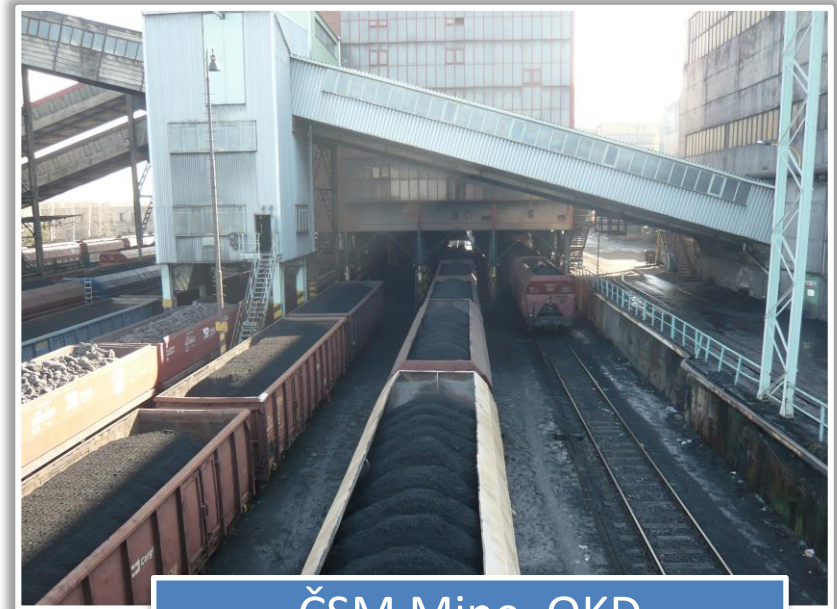
TRANSPORT TO STORAGE AND SHIPPING FACILITIES



Karviná Mine, OKD

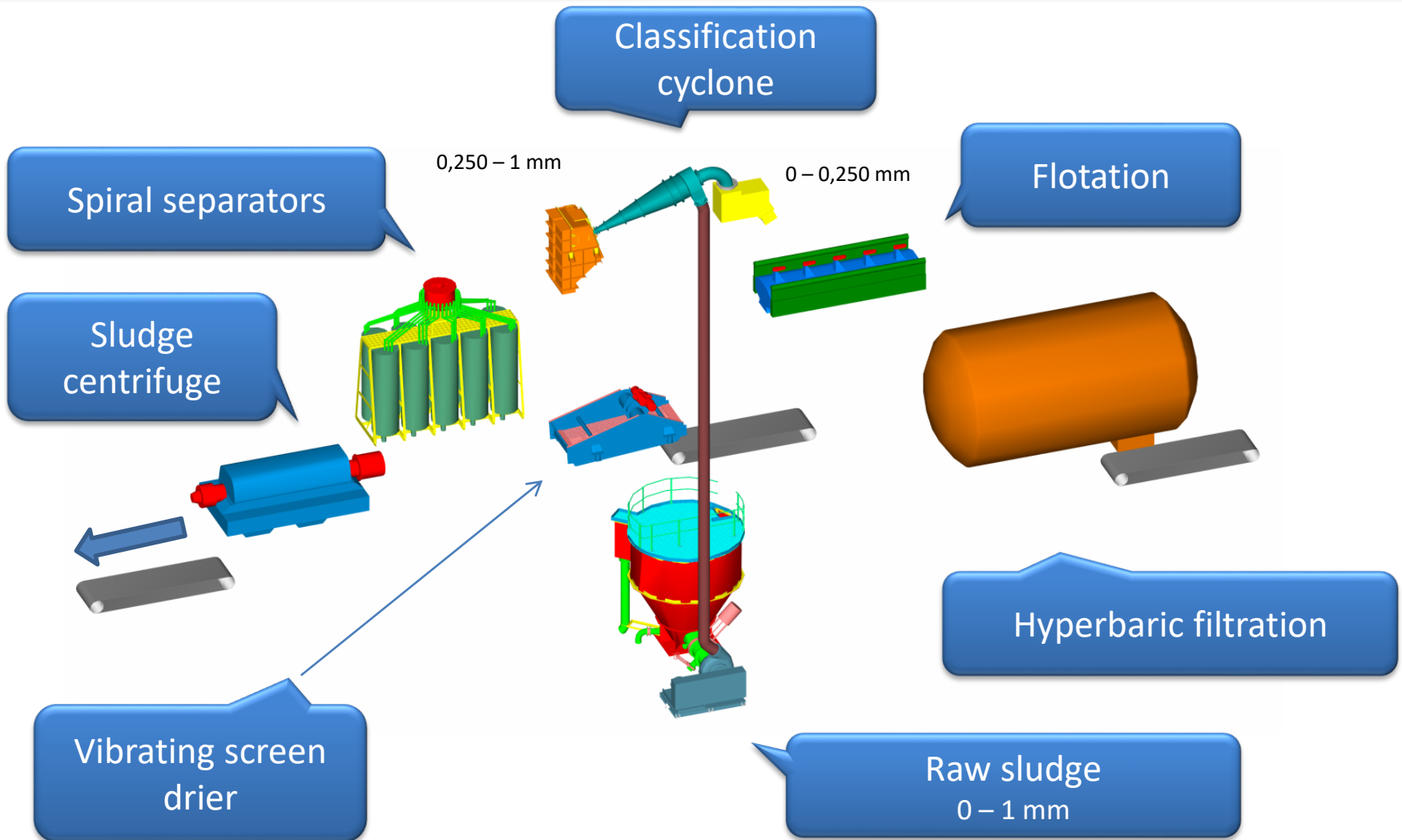
Outdoor dump including truck loading

Loading into railway wagons



ČSM Mine, OKD

RAW SLUDGE TREATMENT

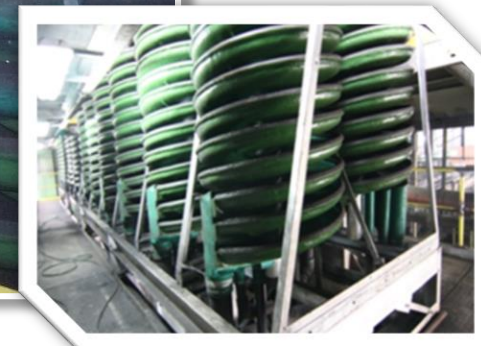


CLASSIFICATION OF RAW SLUDGE USING CLASSIFICATION CYCLONES



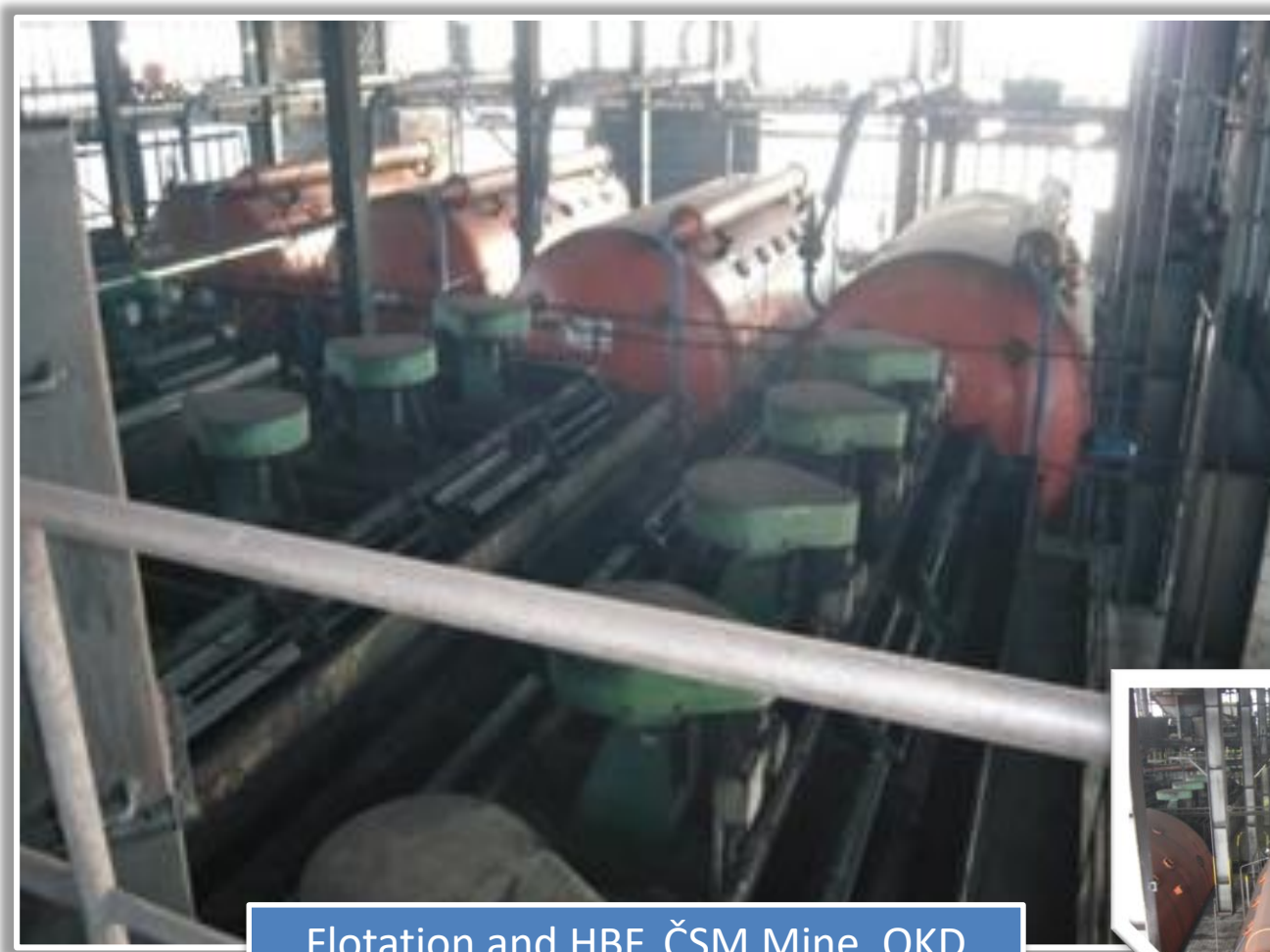
Classification cyclones,
ČSM Mine, OKD
Q = 71 t/h

RAW SLUDGE PROCESSING ON SEPARATING SPIRALS



Spiral separators, ČSM Mine, OKD
Q = 100 t/h

FLOTATION AND HYPERBARIC FILTRATION



Flotation and HBF, ČSM Mine, OKD



DRAINAGE OF COAL FRACTIONS

- Vacuum filters
- Hyperbaric filters [HBF]
- SVS centrifuges

Vacuum filter,
Darkov Mine,
OKD
Q = 17 t/h



Andritz
Hyperbaric
filter, ČSM
Mine
Q = 50 t/h



SVS
centrifuge,
Darkov Mine,
OKD
Q = 40 t/h



DRAINAGE OF FINE-GRAINED TAILINGS

- Float filling
- Dehydrator
- SVS centrifuges
- Filter press



Float fill, ČSA Mine, OKD



SVS centrifuges, ČSM Mines, OKD
Q = 40 t/h

COAL CONCENTRATE THERMAL DRYING



Thermal drier, Darkov Mine, OKD
Q = 120 t/h

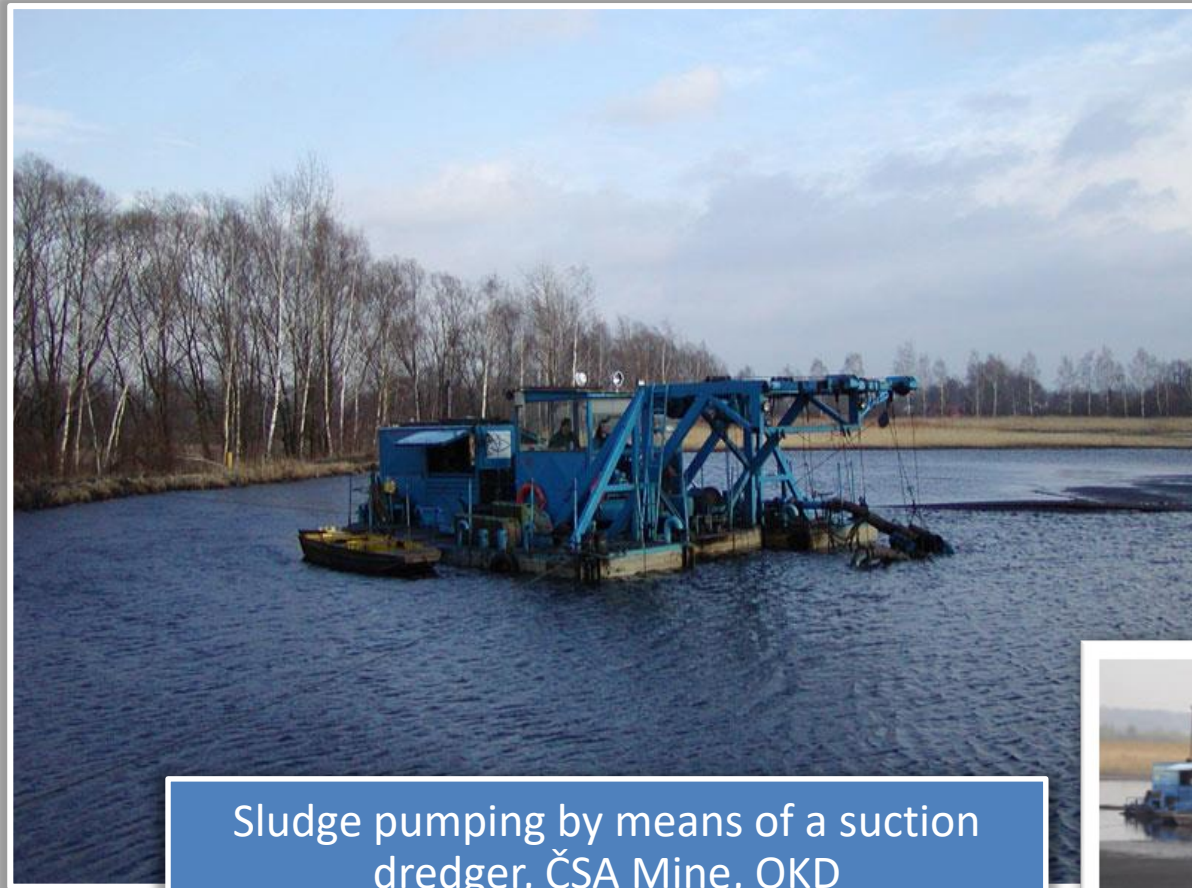
EXTRACTION FROM SLUDGE BASINS FOR REFLotation



BENEFITS:

- Simple technology
- Low costs of mining
- High return on investment projects
- Removal of environmental burdens from the past

COAL SLUDGE PUMPING BY HYDRAULIC SUCTION DREDGER



Sludge pumping by means of a suction
dredger, ČSA Mine, OKD

$Q = 200 \text{ m}^3/\text{h}$



CLEANING OF RAW SLUDGE FROM FOREIGN OBJECTS – INSPECTION SORTING



Removing of foreign objects from coal sludge.

- Timber
- Leaves, reeds
- Stones

ČSA Mine, OKD
Q = 400m³/h

SLUDGE PUMPING AND TRANSPORT IN GREATER DISTANCE

Transport of treated sludge to the processing plant.



Return water pumping station,
Darkov Mine, OKD



Long-distance sludge pumping,
Darkov Mine, OKD

REFLOTATION OF COAL SLUDGE

High-capacity
VF flotation
machine
Q = 60 t/h



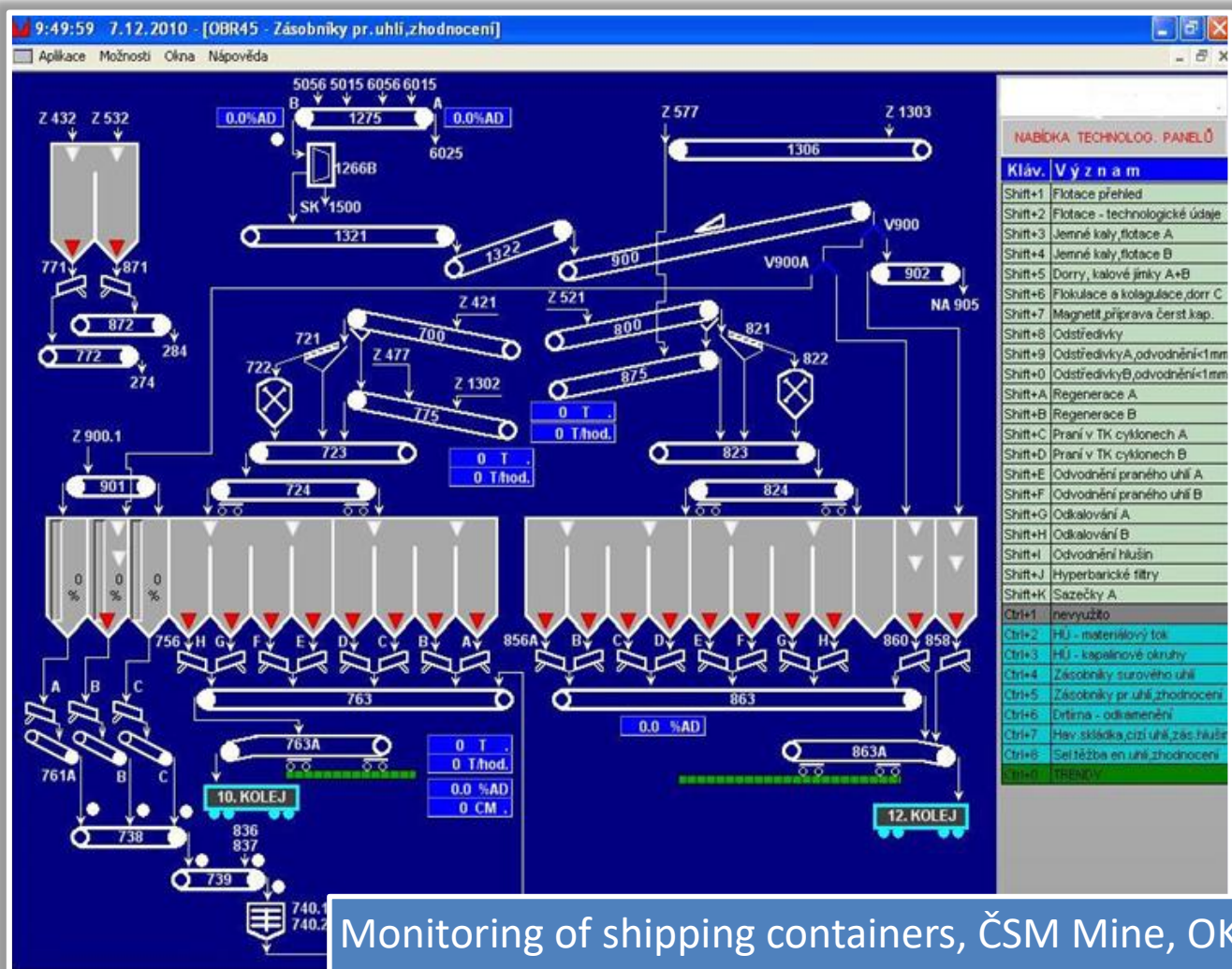
Andritz
Hyperbaric
filter
Q = 50 t/h



Andritz
Hyperbaric
filter
Q = 50 t/h



MONITORING THE VOLUME AND QUALITY



Monitoring of shipping containers, ČSM Mine, OKD

PREPARATION OF POWER-PRODUCTION MIXTURES ACCORDING TO CUSTOMER REQUIREMENTS

Discharge of raw materials from the container.



Belt discharge, Paskov Mine, OKD
Q = 120 – 150 t/h



Vibrating feeder, Darkov Mine, OKD
Q = 200 t/h

SHIPMENT, STORAGE COMPLEXES

Raking of coal from the slot container .

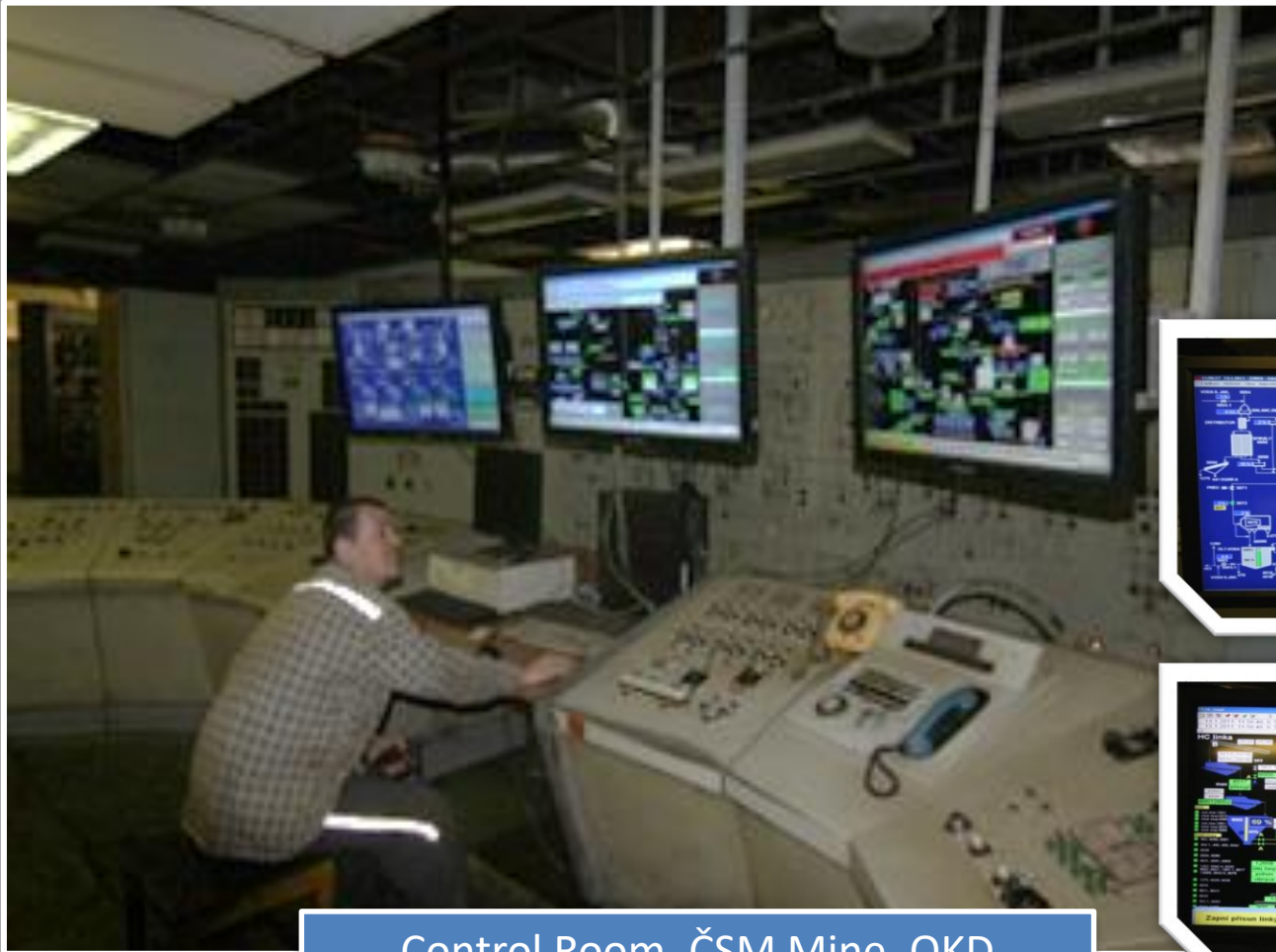


Extracting car, Trmice power plant
Q = 500 t/h



MANAGEMENT OF TECHNOLOGICAL PROCESS

Modernization
of Control room.



Control Room, ČSM Mine, OKD



REFERENCES OF INVESTMENT EVENTS



- Sorting and crushing station - Pilansberg Mine, South Africa 2007
- Centrifuges of fine fractions - Darkov Mine, Paskov Mine, ČSM Mine, OKD 2006 - 2010
- Coal preparation - Middelburg Mine, South Africa 2007 - 2009
- Drain and refloatation of sludge - Doubrava Mine 1, Darkov Mine, OKD 2009
- cyclone preparation plant, upgrading plant - ČSM Mine, OKD 2009 - 2010



Crushing station - Pilansberg Mine, South Africa, JAR

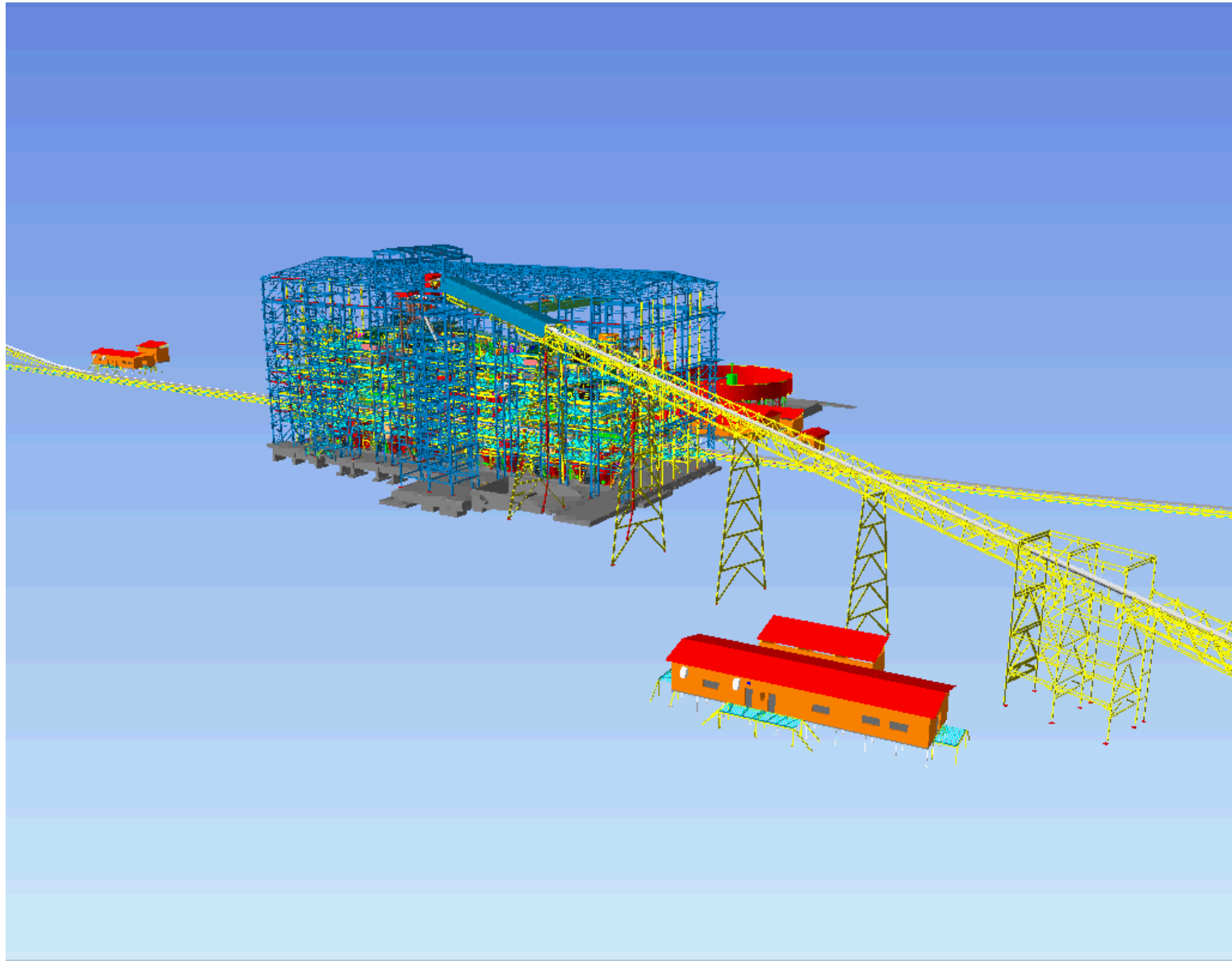


Fine fraction centrifuges – Darkov Mine, Paskov Mine, CSM Mine, OKD

Q = 40 t/h



Coal preparation plant Middelburg-South, JAR





Drain and reflotation of sludge - Doubrava Mine 1, Darkov Mine, OKD



- Cyclone treatment plant, plant upgrading - ČSM Mine
- Rock removal [Bradford] – ČSM Mine, Paskov Mine
- SVS centrifuges - Darkov Mine, Paskov Mine, ČSM Mine
- Pumping and processing of sludge - Doubrava 1 Mine , Darkov Mine
- Evaluation of thermal coal – ČSM Mine
- Supplies of machines and equipment for bulk material handling



Construction of preparation plant, JAR



Flotation machines and Thickener DORR, JAR



**Thank you for your attention and
we look forward to our
cooperation.**

