



SEDLECKÝ KAOLIN

Centuries of
Quality

Company
presentation 2021



Centuries of Quality

Since

1892

SEDECKÝ KAOLIN
CENTURIES OF QUALITY

**WE HAVE EVERYTHING
UNDER ONE ROOF**

*Complex
supplier*



Own deposits



Mining



Processing



Transport

COMPANY HISTORY AND EXPERIENCE



Family owned
and operated company

Established in
1892

Experience in mining
129 years

Major supplier
In Europe



SEDLECKÝ KAOLIN
CENTURIES OF QUALITY

WE HAVE A STRONG FOUNDATION



100% Czech capital, one owner



8 manufacturing plants



17 kaolin and bentonite deposits



550 employees



High market share
In kaolin



ISO certification
9001:2015, 14001:2015
BRC

WE ARE SPECIALISTS IN PRODUCTION OF



Kaolin



Kaolin mixtures



Zeolite



Calcined Kaolin



Bentonite



Muscovite Mica

CONTROL ORIENTED COMPANY

*Online quality control,
once per hour complete
production sample testing*

15 

We have 15 workers in our laboratory,
some of them working in three shifts



CONSTANT QUALITY

Most advanced analytical devices working for you

— **Bruker AXS D8 ADVANCE**

X-ray Diffraction analysis

— **Datacolor – R457**

Brightness measurement

— **Sympatec**

Laser particle size analysis

— **Haake Viskosimeter**

Rheological properties testing

— **Bruker AXS S4 PIONEER**

X-ray Fluorescence chemical analysis

— **Einlehner Abrasion tester AT 1000**

— **Micrometric**

Sedigraph particle size analysis

— **Plasticity test**



WET PRODUCTION PROCESS

QUARTZ FREE (QUARTZ CONTENT BELOW 1% ACCORDING TO EU REGULATION)

METAL FREE

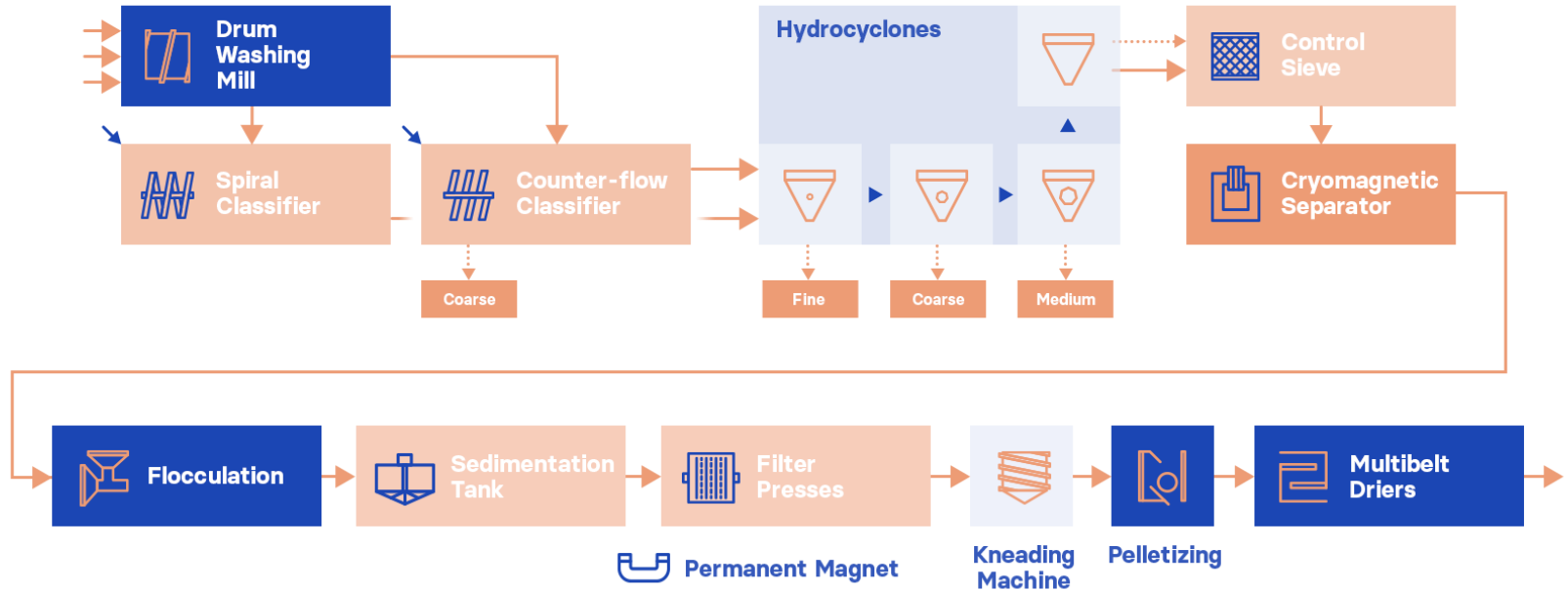
- Effective specific kaolin processing
- Raw materials are diluted to 50g/l slurry, 95% of water
- Hydraulic separation
- Magnetic separation
- Materials are dewatered, the water is removed by using flocculation additives that enable the material to dry and keep a stable moisture in the final product
- Highest possible purity
- Stable in processing

RUBBER APPLICATION

- Total moisture (surface and structural moisture) below 2 %
- Fast incorporation in elastomer matrix
- High BET Surface, primary particle about 1 μ m
- Very low abrasivity
- Tailor-made modifications
- High process stability
- Unique plasticity values



A CLOSER LOOK AT OUR PRODUCTION PROCESS



DRY PRODUCTION PROCESS

QUARTZ FREE (QUARTZ CONTENT BELOW 1% ACCORDING TO EU REGULATION)

METAL FREE

- All of the material is dried at once
- No water added
- Regulation of pH
- Air separation of unwanted particles
- Use of fluid bed separation
- High shear particle delamination
- State of the art production in new factory

Patented production technology by Sedlecký kaolin, a.s.

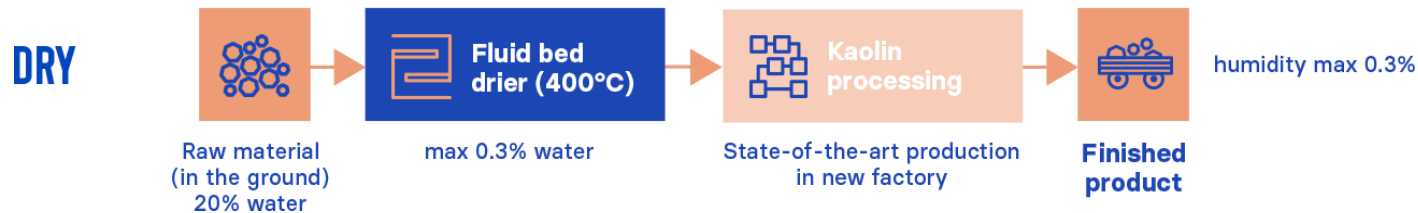
RUBBER APPLICATION

- Total moisture (surface and structural moisture) about 0,3%
- Fast mixing
- Very high durability and stability of green and vulcanized surface
- Low gas and steam permeability
- Insulation function
- High process stability





PRODUCTION PROCESS DRY VS. WET



Patented production technology by Sedlecký kaolin, a.s.



CALCINATION PRODUCTION PROCESS RUBBER APPLICATION

QUARTZ FREE (QUARTZ CONTENT BELOW 1% ACCORDING TO EU REGULATION)

METAL FREE



- Effective specific kaolin processing
- Raw material base from wet and/or dry production
- Kaolin heated to thermal expansion
- Low coefficient of thermal expansion
- Delaminated to customer request
- Stable in processing
- Total moisture (surface and structural moisture) typically 0,3% only
- Hydrophobic materials
- BET Surface, according the calcination grade
- Variable calcination conditions allow specific product qualities
- (Vinyl) Silane modification for sealing and cable possible
- High process stability



Dry/Wet processed
- raw material



Calcination
(800 - 1 550 °C)



Delamination



**Finished
product**

FLEXILIS — INNOVATIVE SOLUTIONS



Our partner Flexilis GmbH is taking care of the following areas:

- application
- contacts
- new developments
- all questions related to the rubber processing with those materials

We started the project of white fillers for tire and non-tire compounds, based on very modern and sustainable production in Czech Republic already several years ago.

Sedlecký Kaolin produces also calcined products which we could include into the central purchasing project on longer term.

For further information regarding our partner please contact:

Flexilis GmbH

Untere Viaduktgasse 55/7, A-1030 Vienna, Austria

Phone: +43-1-522 36 40-0

E-Mail: office@flexilis.eu

Web: www.flexilis.eu

VAT No. ATU75937701

OUR COOPERATION WITH CONTINENTAL



Our joined development with R&D Puchov started about ten years ago.

The breakthrough point was the industrialization of the Vulcolin W type in dry process technology in 2018 including the site release audit in spring 2018 with a very good rating.

We are in contact with the factories, mainly plants Otrokovice and Puchov, Mrs. Sander of the central purchase and central PI Mr. Belza. For ContiTech we are in contact with Mr. Wiessner in Hamburg.

In the mean time 3 products are fully or partly industrialised:

- **Vulcolin W** - for inner liner in Otrokovice and Puchov plants, with better performance over the time, according the report from Otrokovice, due to the dry separation technology
- **Vulcolin SU-C** - for steel wire coating, with local production, replacing US product in both Otrokovice and Puchov plants
- **Vulcolin 77C** - for technical rubber goods, we are waiting for the very final approval of our local central EU product for production Units in Germany and Hungary

The goal is to deliver the products without packaging, either in returnable big bags or silo trucks, using local transport and flexibility of the production. This is already in practice in Otrokovice and Puchov plants.

**WE HAVE PERFECT LOCATION
TO SERVE ALL YOUR NEEDS**



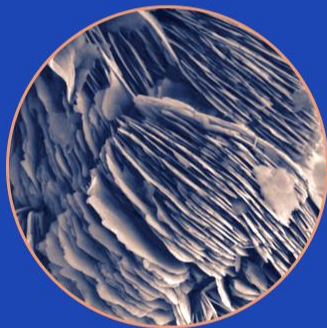
*We are located in the
heart of Europe,
Karlovy Vary, Czech Republic*

ISO CERTIFIED COMPANY



Sedlecký Kaolin is compliant ISO 9001:2015 and 14001:2015

OUR KAOLINS FOR RUBBER INDUSTRY



Lamellar particles in deposit

*1 μ m by 0.1 μ m
Aspect Ration 25:1*



Kaolin ready to be used



OUR KAOLINS FOR RUBBER INDUSTRY



Product	BET (m ² /g)	X50 (μm)	Oil absorption (g/100g)	Moisture (%)
<i>Vulcolin OT76M</i>	19	1.3	60	2
<i>Vulcolin BC</i>	22	2.7	68	2
<i>Vulcolin CI20R</i>	15	2	55	1
<i>Vulcolin CI40R</i>	15	4	55	1
<i>Vulcolin CN20R</i>	13	1.9	50	0.8
<i>Vulcolin W50</i>	14	5	57	0.5
<i>Vulcolin W50E</i>	14	5	57	0.3
<i>Vulcolin 15AP</i>	24	1.5	70	1.5
<i>Vulcolin COM-7</i>	16	2.5	85	3

EFFICIENT & SUSTAINABLE



Our vision is to...

...be an ecologically responsible company.

...respect the environment while also committing to the economy.

...constantly work on optimizing the use of resources.

...minimize and monitor our waste production.

For us, responsible production means...

...constant research and development.

...being a reliable supplier of first-class quality products.

...reaching highest standards by constant quality control.

...producing in Europe according to valid EU guidelines.

Our customer relation service ...

...works efficiently and guarantees a reliable supply chain.

...is committed to our goals just like us.

...uses innovative process technology to reach CO2 reduction and cost efficiency.

...strives to reduce transport routes to the bare minimum.

Together we prioritize customer satisfaction...

...by offering our customers a wide range of products.

...and work on customized solutions.

...by improving our customers' productivity and process optimization.

...by developing tailor-made products.



OUR VISION AND VALUES



Quality

selected deposits, modern technology, international standards



Reliability

Controlled quality and on-time delivery



Tradition

founded in 1892



Long-term perspective

vast resources, continuous development



Flexibility

privately owned, short decision process



Versatility

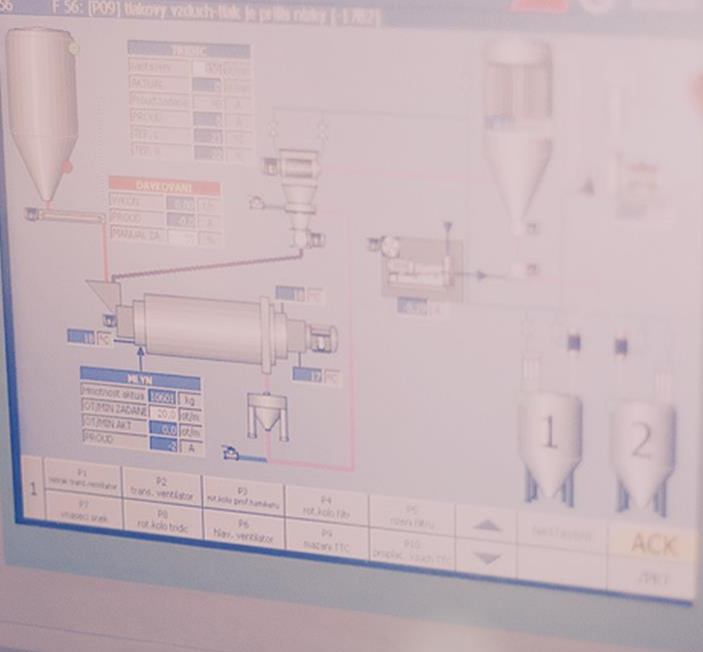
effective exploitation

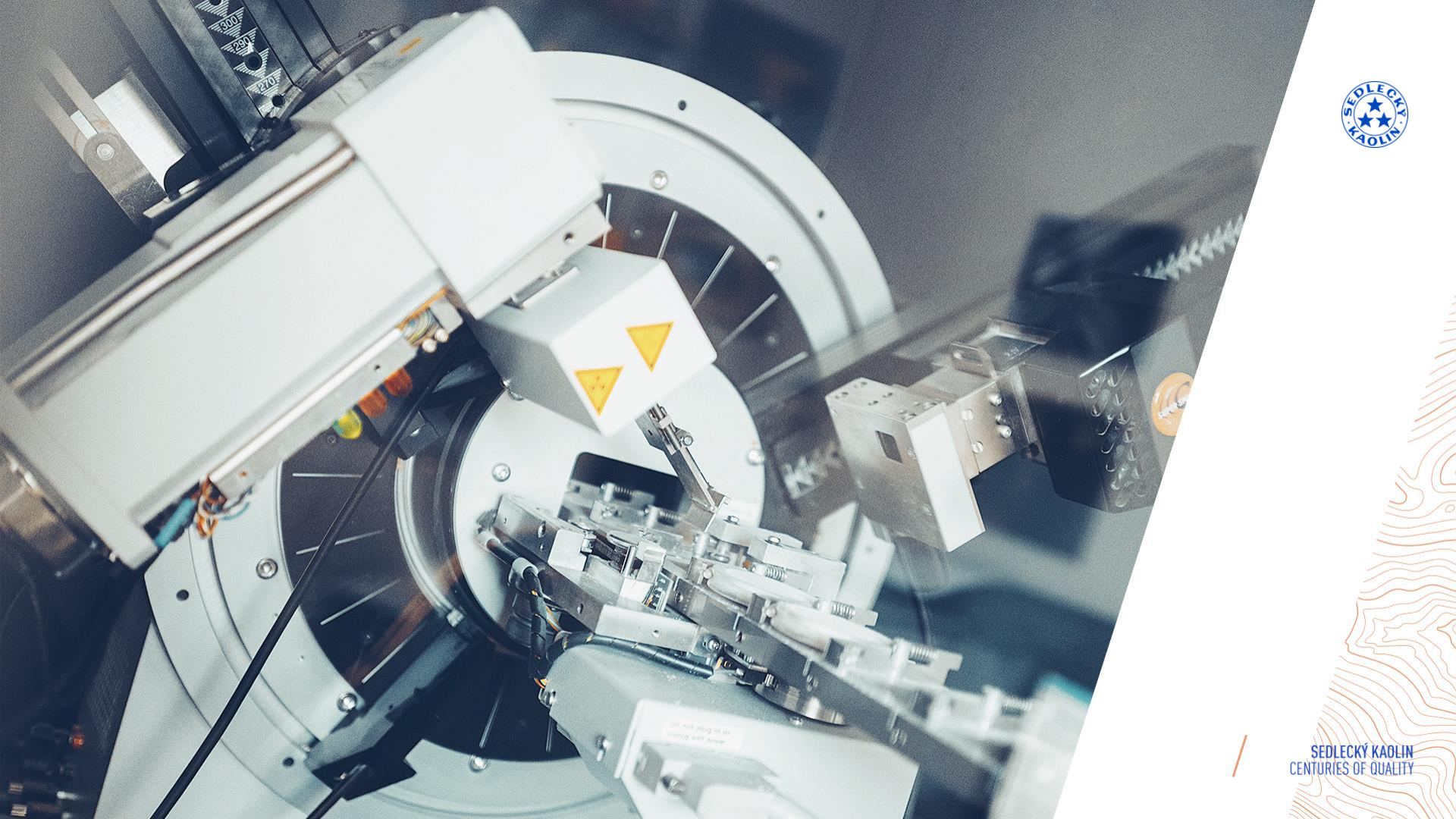




HOW WE OPERATE

Sedlecký Kaolin operates with state of the art equipment and sophisticated computer controlled processes





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CENTURIES OF QUALITY



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SOCIAL AND ENVIRONMENTAL RESPONSIBILITY

Reclamation of our environment and human resource development is an integral part of our business.



Reclamation of nature at Bozicany quarry



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