Advanced Separation Technologies for Ores and Minerals

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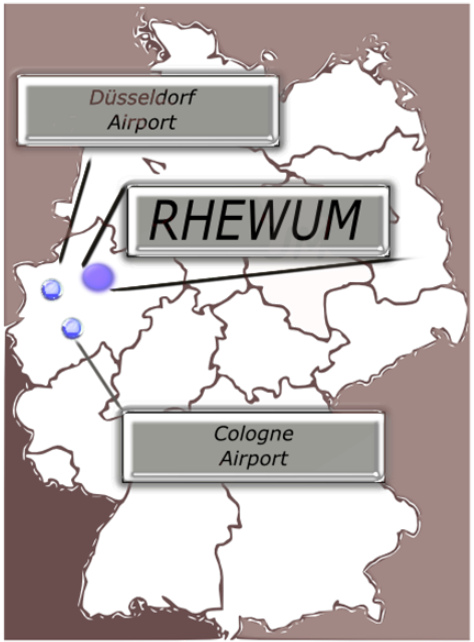
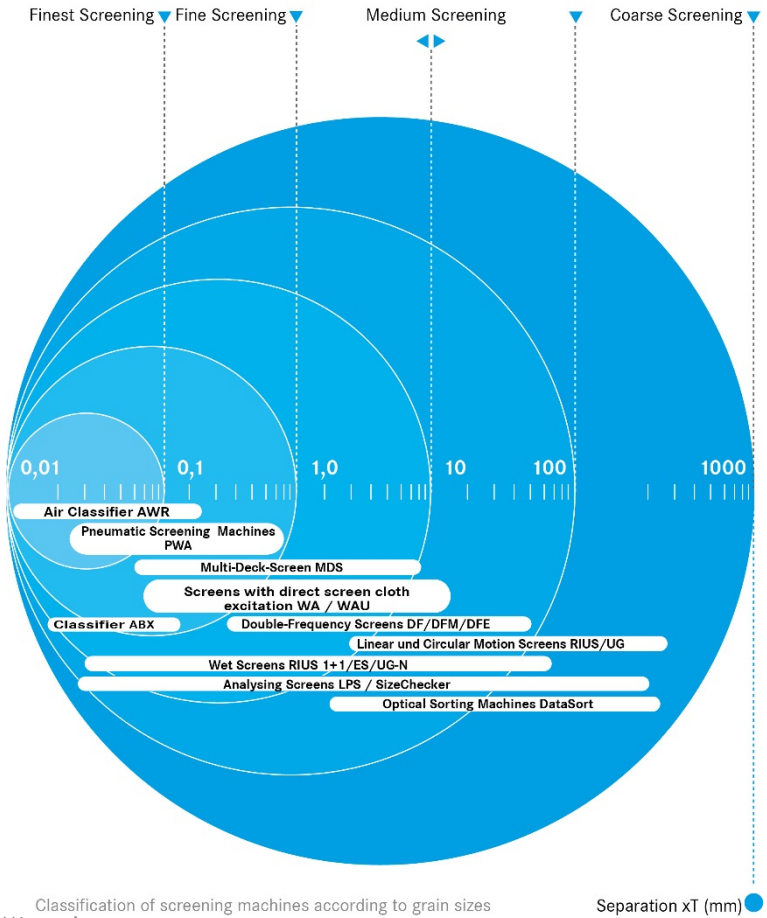
:: Introduction: Roots

- :: RHEWUM is an independent family owned company which was founded in 1927 as „Rheinische Werkzeug- und Maschinenfabrik“
- :: RHEWUM has been developing and manufacturing screening machines and vibrating feeders since the beginning of the 1950’s
- :: Products cover the entire field of dry, wet screens for a vast variety of applications for leading companies worldwide. Optical sorting and air classifying is the logical extension of our activities for the future of our company



:: Introduction: Products

- :: A variety of performance-oriented machines for the classification of bulk materials for the dry and wet separation
  - :: Screening machines with direct excitation of the screen cloth
  - :: Double-frequency screening machines
  - :: Multi-deck screening machines
  - :: Wet screening machines
  - :: Air classifier
  - :: Optical systems



Classification of screening machines according to grain sizes

:: Introduction: Applications

- :: Building- and non metallic mineral industries
- :: Industrial minerals
- :: Rock salt
- :: Fertilizer
- :: Sugar
- :: Quartz sand
- :: Soda
- :: Food industries
- :: ...

:: Major trends in minerals and ore benfeficiation

1. Increasing demand for most industrial minerals worldwide
2. Falling grades

-> **Consequences:**

:: More gangue material has to be processed

:: Fine grinding of ores is necessary to epxlore the ressources efficiently

:: E.g. fine grinding of gold ores down to 10 µm

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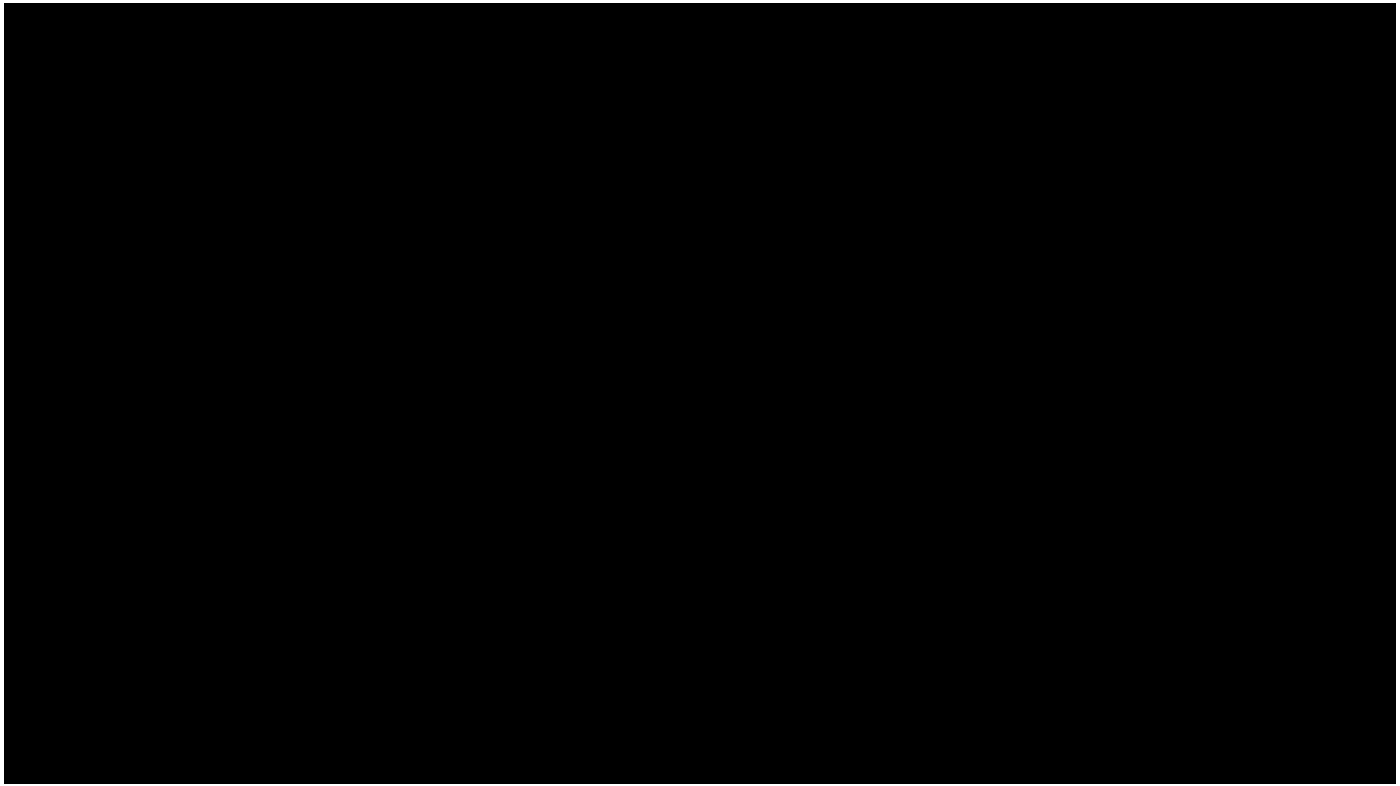
:: Major trends in minerals and ore benfeficiation

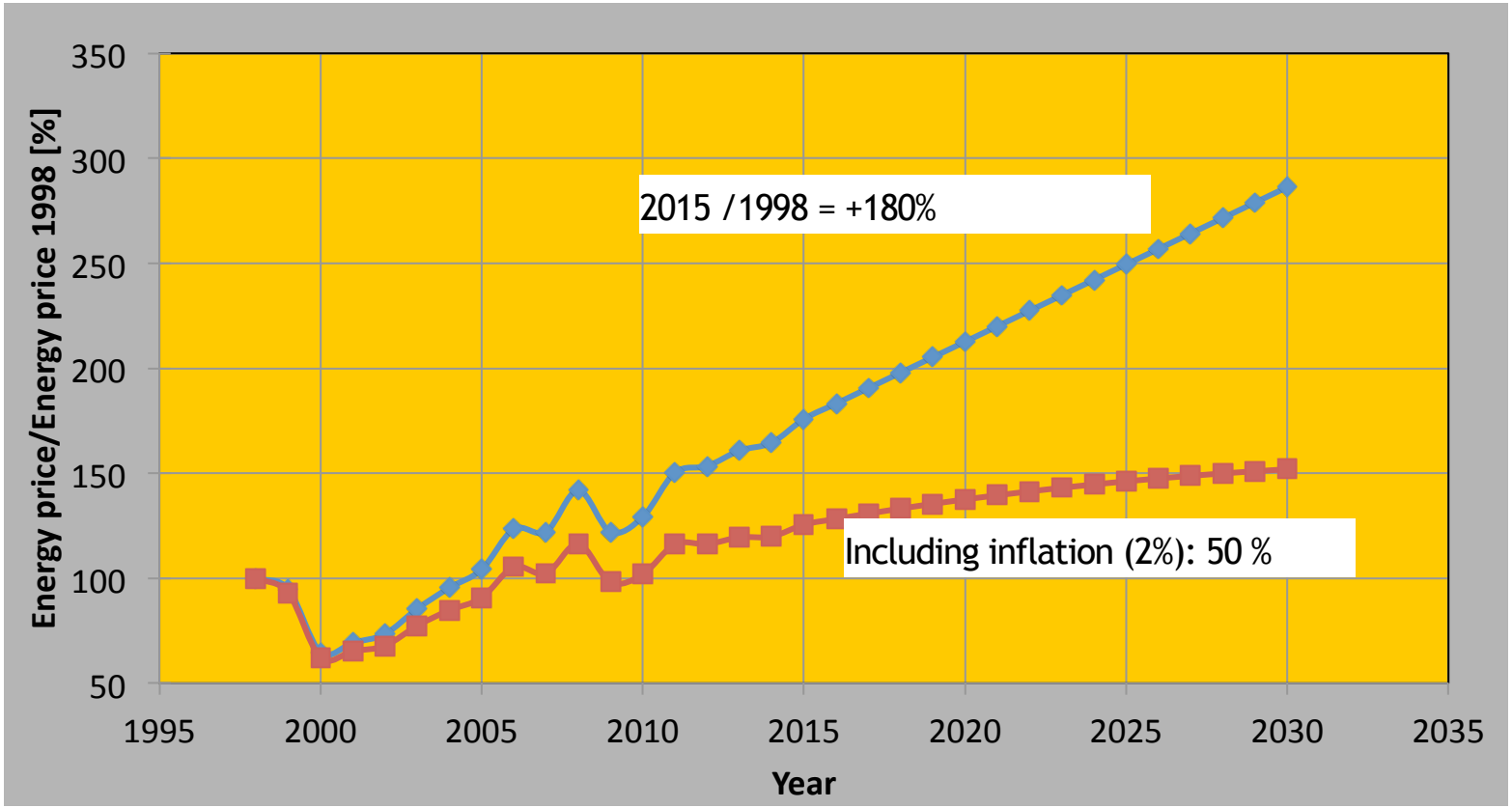
- :: Consequences for screen technology:
  - :: Higher feed rates
  - :: Smaller screen cuts
  - :: Lower energy consumption
  - :: Lower water consumption

:: RHEWUM's approach, High feed rates



:: RHEWUM's approach, small screen cuts

:: RHEWUM's approach, Lower energy consumption



:: RHEWUM's approach, Lower energy consumption

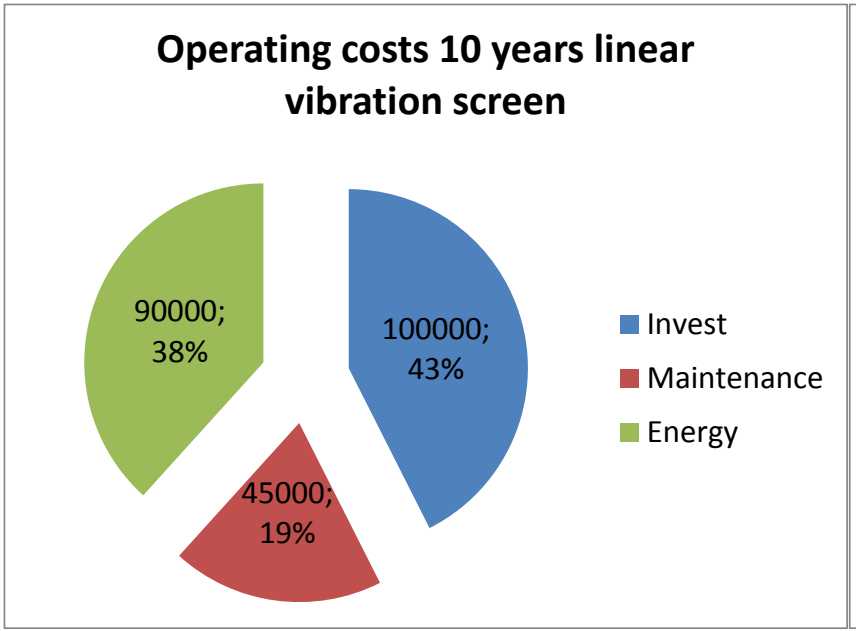
:: Lower energy consumption by using screens with direct excitation compared to standard linear or circular motion screens

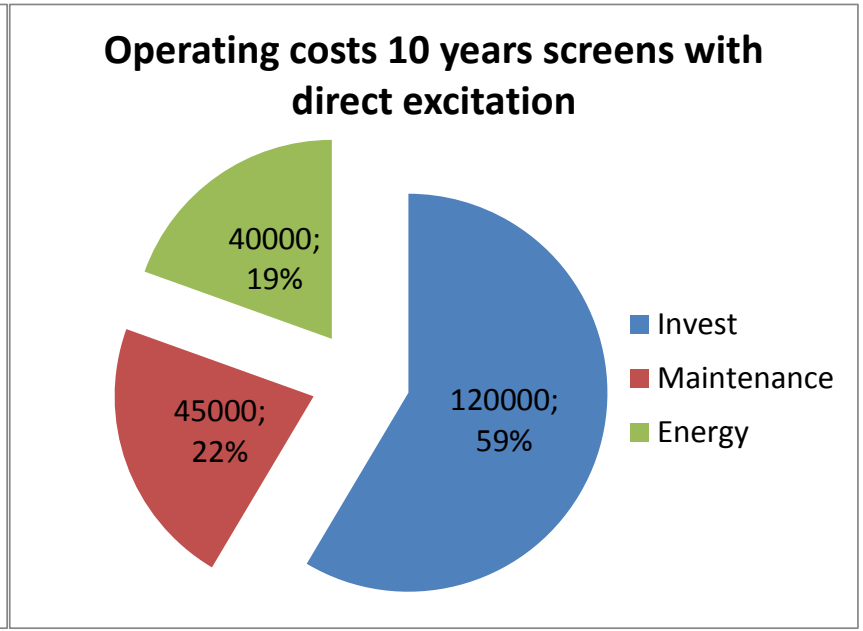
:: Especially for small screen cuts, screens with direct excitation offer higher specific feed rates at low total energy consumption

:: Example: Comparison of investment and operation costs of

linear vibration screens versus screen with direct excitation

:: Example energy calculation





:: RHEWUM's approach, Lower water consumption

:: Specially designed screens for the dewatering / screening of slurries

:: Dewatering screen type WAFL for dewatering of slurries down to 100 µm

Dewatering, standard PU screen, linear motion

Dewatering, RHEWUM WAFL screen

:: RHEWUM's approach, Lower water consumption

:: Why RHEWUM?

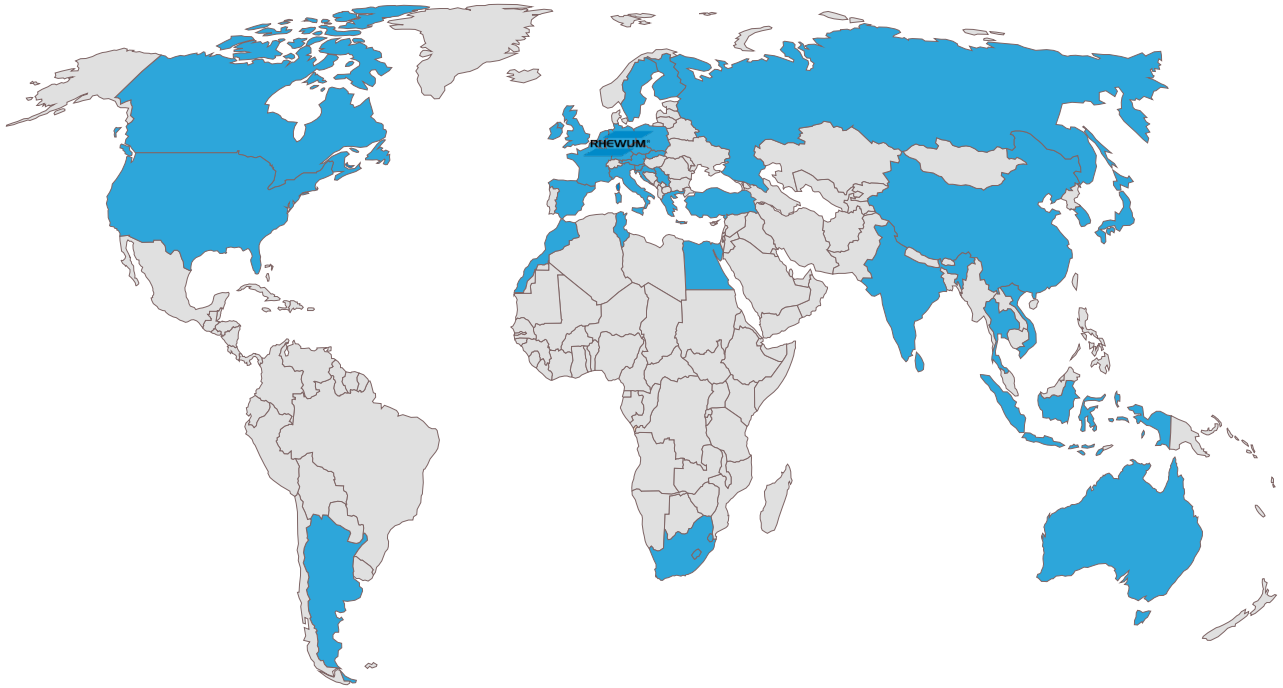
- :: The nuts and bolts of an economic and reliable processing plant is choosing the right components
  - :: Advantage of RHEWUM: A variety of designs, which differ in the working width, the length of the screen and the number of decks
- :: Using combinations of RHEWUM screen, conveying, feeding and sorting technology
  - :: Advantage of RHEWUM: Multiple tasks, one consistent solution
- :: Modern technologies e.g. screen – sensor combinations are offered by RHEWUM
  - :: Advantage of RHEWUM: Special designed sensors like particle size analysis, mass flow or vibration sensors enable 24/7 plant control

:: Key figures

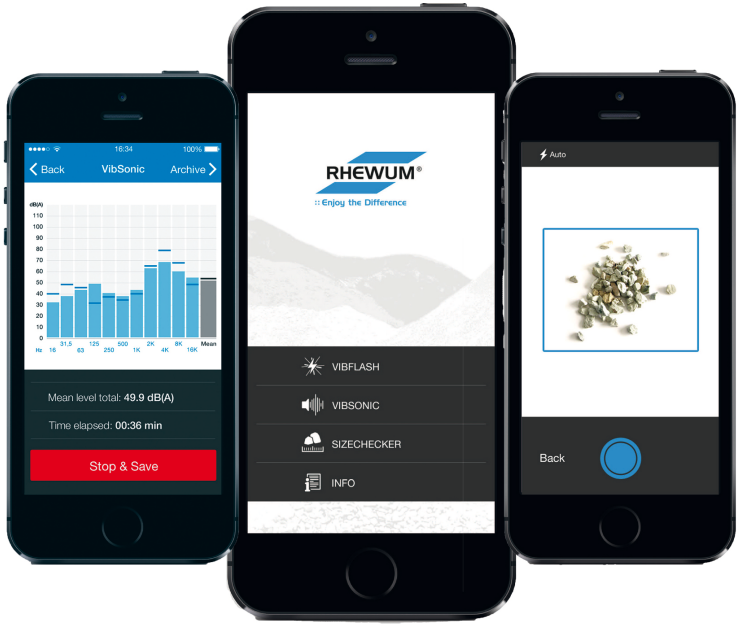
- :: 70 years experience
- :: More than 7.000 machines sold in 90 countries
- :: 100 employees
- :: 15 million Euro turnover
- :: ...

:: Worldwide

:: On every continent you will find competent assistance from the experts at RHEWUM, who will provide you with advice and support for your questions



:: Last but not least: The new RHEWUM App



Measures:

- Sound pressure level
- Frequency (stroboscopic light)
- Particle size distribution
- for iOs
- Android version coming soon

Many Thanks

for your attention!