Application and Process

More than 80% of Phosphate Rock is used for the production of fertilizers. It is also processed to recover the element phosphorus (P). This element is a nutrient, vital to human, animal and plant life.

Naturally occurring Phosphate Rock is mainly mined in Florida, China, the North of Africa and Russia. In the fertilizer process, ground Phosphate is treated with sulphuric acid, forming “Phosphoric acid” and “Single Super Phosphate”.

Phosphate and phosphoric acid are forming “Triple Super Phosphate”. “Mono Ammonia Phosphate” and “Di Ammonia Phosphate” are the end products after the chemical reaction of Phosphate with Ammonia.

NEA Benefits

Experience
- since 1954 in Phosphate Rock grinding
- today 22 Phosphate grinding systems are in successful operation

Fineness
- sharp top cuts by SDR Radial Classifier

Direct Drive
- patented Direct Drive system of the mill with multipole synchrone motor
- simplified mill design, eliminating e.g. gearbox, couplings and oil lubrication
- variable grinding speed for optimized process conditions

Maintenance
- drive and mill rotor with pendulums, are completely removable in one step for efficient external maintenance
- highest process utilization due to lowest downtime

Wear Protection
- heavy duty casting of mill body
- wear resistant grinding tools
- wear protection in the grinding zone

Dust control
- 100% product recovery in full size baghouse, assuring max. 5 mg/m³ dust emission, continuously monitored by a measuring and alarm system.
- dustfree air recycling to the mill
- clean working area by incorporated vacuum cleaning system

Operation costs
- saving energy by using torque motor and eliminating losses from gearbox, couplings or belt drive
- reduce spare parts costs by 50%
Discharge rates are valid for Egyptian phosphate rock with hardness of 90° Hardgrove and feed moisture < 3% H₂O.