

The EDS Multishaft Mill shows improved liberation and energy efficiency in comminution

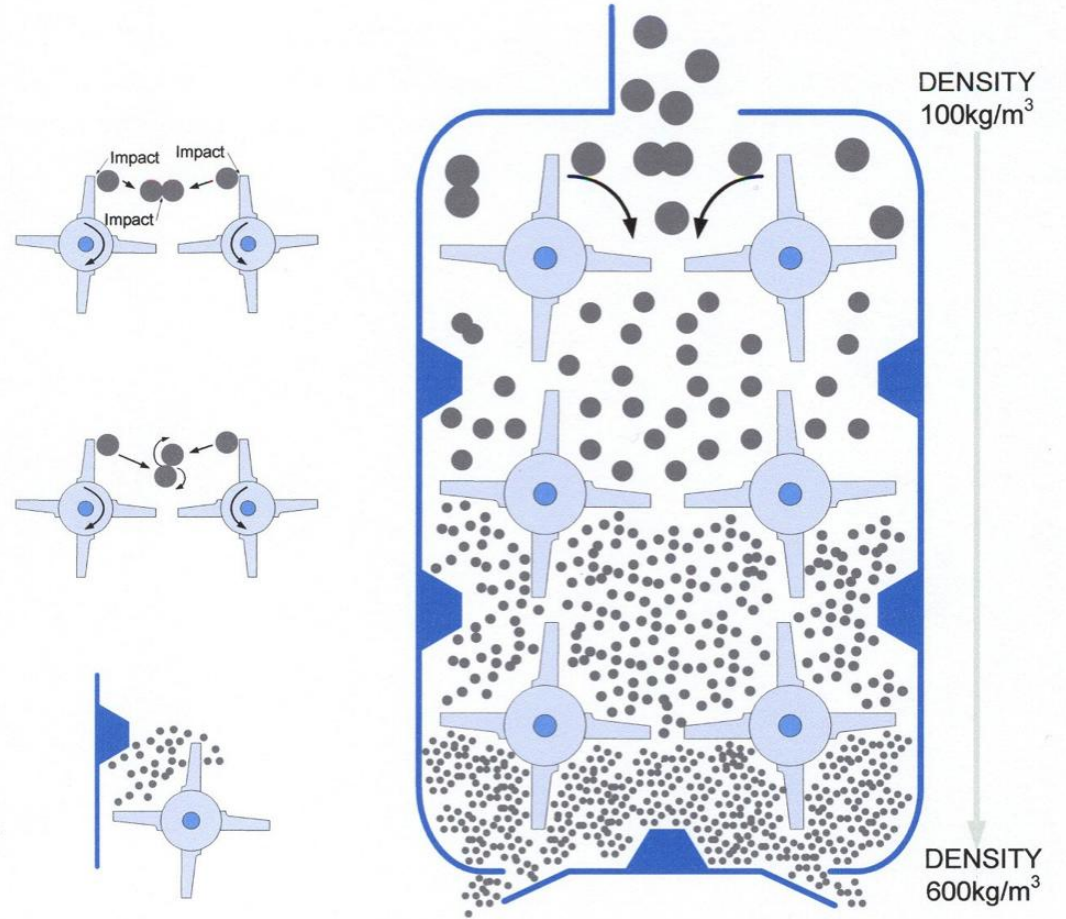


ENERGY & DENSIFICATION SYSTEMS

Summary of Actions

- Crushing
- Milling
- Densification
- Blending

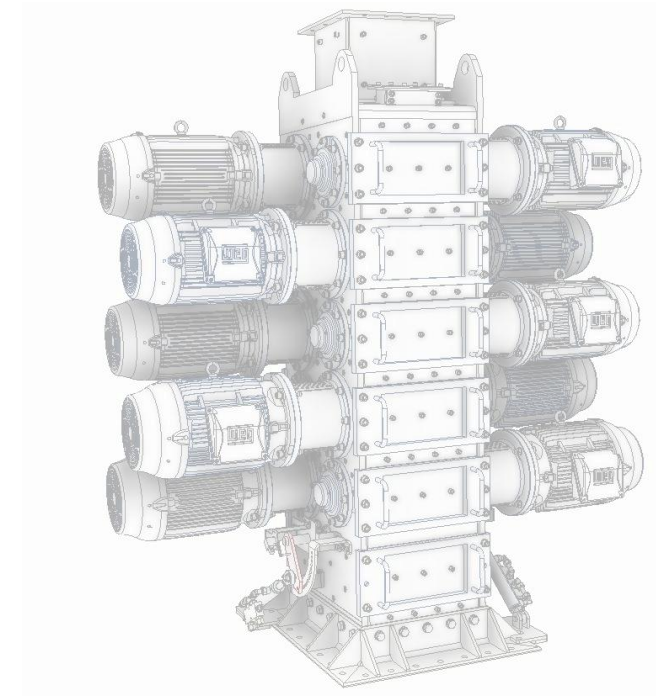
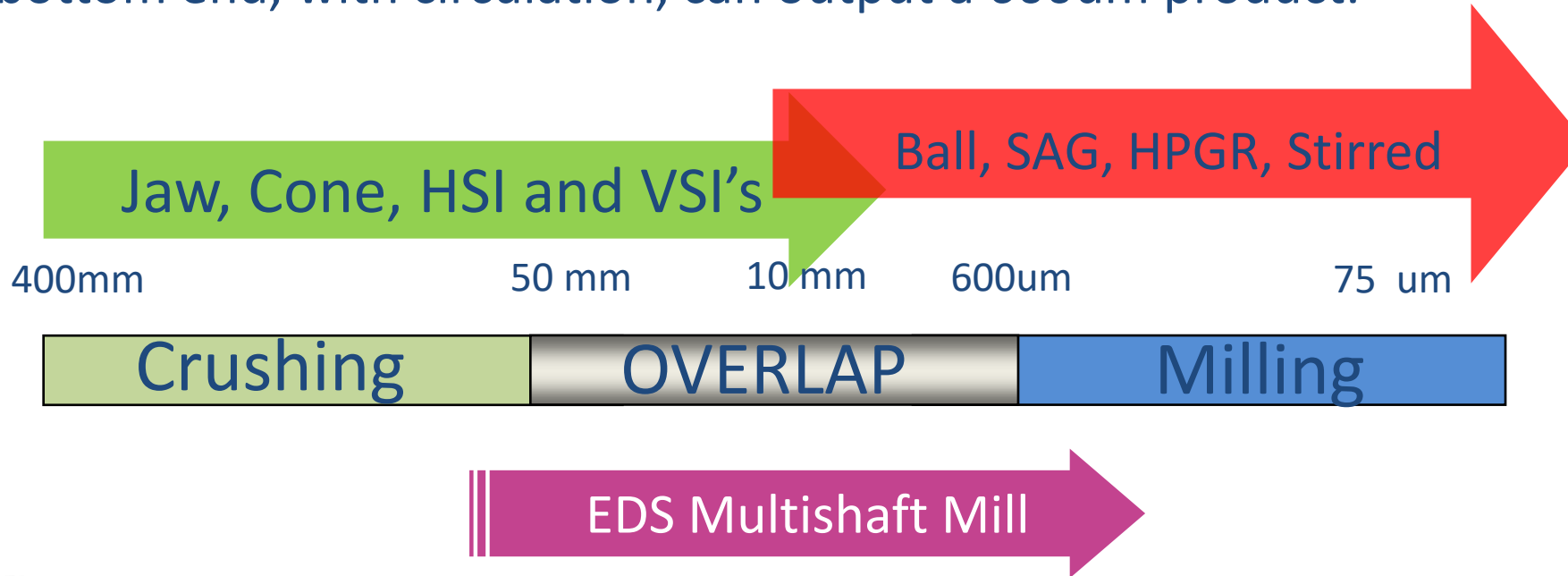
Impact/Attrition



ENERGY & DENSIFICATION SYSTEMS

Tertiary Crusher and Primary Mill

Feed size can be up to 50mm (higher in some application) and bottom end, with circulation, can output a 600um product.



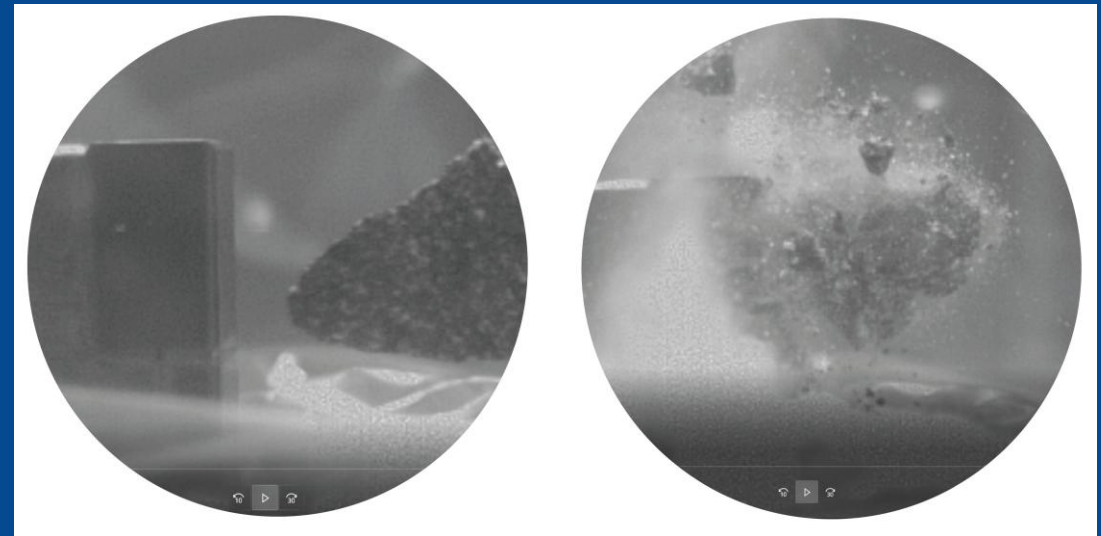
ENERGY & DENSIFICATION SYSTEMS

LIBERATION

The EDS Mill is well-known for its ability to break down ores significantly but the further benefit is that it liberates the minerals from the gangue.



This can be seen from the difference between compressive force breakage and impact force breakage.

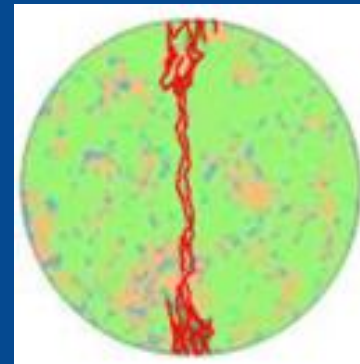


ENERGY & DENSIFICATION SYSTEMS

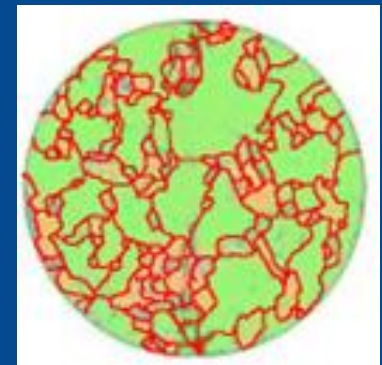
LIBERATION...

Compressive force breakage will, predominantly, break from contact point to contact point. It has no variable pathway other than from point to point.

Impact force breakage, on the other hand, only has one contact force point. This force then has no defined pathway that it will follow, and therefore, generally follows the path of least resistance, which tends to be the mineral boundaries, and hence why the minerals and gangue liberate sufficiently during impact breakage.



Compressive
Force Breakage



Impact Force
Breakage



ENERGY & DENSIFICATION SYSTEMS

LIBERATION...

- This means that less gangue is attached to the mineral particles (silicates and others in this case)
- This implies that it will be much easier to recover the valuable minerals through any downstream process: leaching, flotation, gravity separation, magnetic separation etc.



ENERGY & DENSIFICATION SYSTEMS

ENERGY-EFFICIENCY

There are no heavy components that need to be rotated or moved, such as mill shells, jaw liners, cone mantles etc. There is also no media in the machine that requires energy to move around.



The shafts are easily rotated (NOT under load) and the system simply maintains the speed of the shafts to overcome the impacts. The flingers also have momentum and inertia allowing them to drive through the particle collisions easily.

80%!!

Ultimately, this has proven to provide massive energy savings on operations, with site data showing up to 80% lower energy consumption and efficiencies.



ENERGY & DENSIFICATION SYSTEMS

PICTURES



ENERGY & DENSIFICATION SYSTEMS

PICTURES...

Feed



Product



ENERGY & DENSIFICATION SYSTEMS



PICTURES...





THANK YOU

ENERGY & DENSIFICATION SYSTEMS

www.edsza.com

