



QUARRYING | MDS M515 PROCESSING STICKY LIMESTONE

A Limestone quarry in Poland contained a seam of material, heavily contaminated with sticky clay. The customer needed a solution to process this material effectively

This material was causing issues in their crushing train by continuously clogging the crusher pre-screen. This resulted in Clay being forced into the crushing chamber, slowing production and causing unnecessary wear on the crushing components.

Challenge

The clay-bound material was proving so difficult to process that the customer resorted to stockpiling it in another area of the quarry. This practice was wasting valuable time and resources, as well as adding unnecessary costs.



M515 Heavy Duty Trommel Solution

The MDS M515 heavy duty trommel offers a different screening mechanism compared to other traditional screeners. The rotating drum promotes tumbling of the material. This, coupled with a longer retention time results in a scrubbing action and helps to break loose the clay and other impurities. This unit was also fitted with a drum cleaner mechanism designed to keep the drum openings clear even in the harshest conditions.

Job Requirements

- Recover clean limestone rock from sticky feed material
- Reduce the amount of clay being sent to the crusher
- Reduce the need for stockpiling unusable material



The MDS M515 Heavy Duty Trommel can handle large feed loads of up to 20T in its massive 12.6m³ (16.5yd³) hopper, taking up to 800mm (32") size rocks in the feed. This unit offers a different screening mechanism to regular screens, allowing it to effectively clean rocks and screen materials. It has a rotating drum that tumbles and agitates the material inside, allowing it to break impurities from the rocks.



Location: POLAND

Machine: MDS M515

Application: STICKY MATERIAL / LIMESTONE

Throughput: 450-500 TPH, Fuel Efficiency 15 L/hr

Machine Specs:

- Diesel, CAT 3.6 Tier 4 Stage 5 Engine
- Fines 75mm (3") Fully Welded Drum with Drum Cleaner Attachment
- Mid-Product 150mm changeable screens
- Tipping Grid with 550mm spacing





Key Benefits:

1- Clay Separation: The M515 effectively separated the sticky clay from the larger Limestone rocks, creating a clean mid-size and over-size product.

2.Space Optimization: By Processing this material, the customer significantly reduced the amount of unusable material stockpiled, creating more room in the quarry, and enabling more efficient operations.

3.Product Classification: The machine created 4 different sized products:

- 0-75mm fines product
- 75-150mm product on the mid conveyor
- 150-800mm product on the Oversize conveyor – Ideal size for Armour Rock/Rip-Rap Products
- +800mm Oversize Product from the tipping grid

Conclusion:

The implementation of the MDS M515 heavy duty trommel revolutionized the processing of previously unusable material. By effectively breaking down clay content and producing various sized products, the machine not only optimized quarry space but also contributed to environmental sustainability.