

# 10,000 TPH Fully Mobile Slewing Sizer Station

## Mechanical and Structural Design

- Chassis Structure
- Slew Bearing
- Slew Table
- Main Structure Support Beams
- Upper Structure
- Yoke Pivot Assembly
- Hopper and Hopper Support
- Conveyor and Feeder Assembly

The key feature of this Mobile Sizing Station is the capacity for co-existent sizing and handling of minerals at all locations along the quarry face.

With an all-up weight of approximately 1600 tonnes, this unit is believed to be the world's largest mobile sizer.

The very nature of rotating and moving plant is one which imposes significant fatigue and impact qualification to the overall design.

Finite Element Analysis (ANSYS) was used to model both individual components, and also connecting parts of the sizer, in order to gain a detailed insight into the static load regimes of the operating unit, in addition to the dynamic (fatigue) driven aspects of the design.

Bennett Associates (originally founded in 1984) was acquired in 2008 by Atkins; bringing their proven technical expertise to the UK's leading engineering consultancy.

