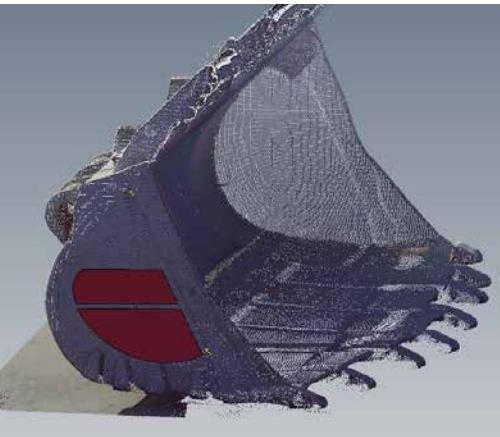




# Laser scanning and DEM (DISCRETE ELEMENT METHOD)

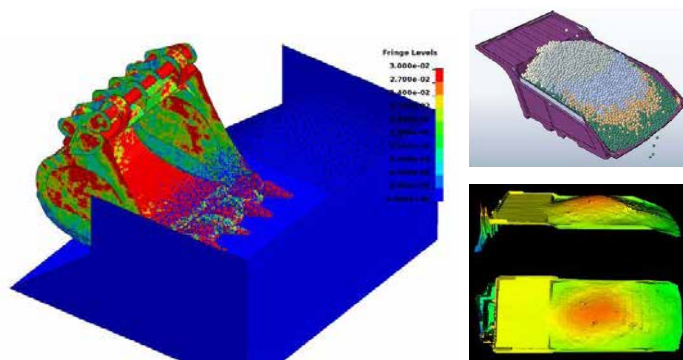
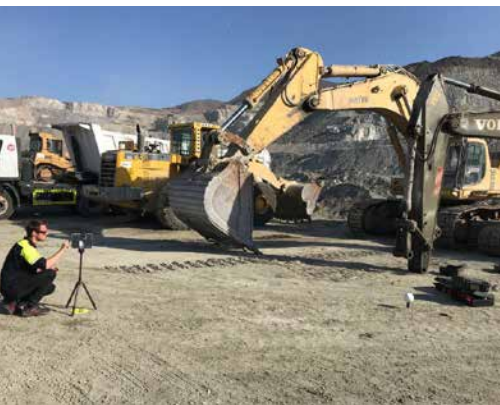
Laser scanning is a quick method for accurately measuring 3D dimensions. DEM is a numerical method for computing the motion and effect of small particles. DEM can be utilized to realistically analyze loads the equipment is subjected to as well as material flow and wear.



- Quick and accurate measurements
- Short downtime for measurements
- Processing the point cloud to manufacturing drawings
- Repairs and reverse engineering
- Wear rate monitoring



## VERIFICATION OF FILL FACTOR AND LOADS USING DEM



## OUR OFFER

- Analyzing the data from laser scans to manufacturing drawings
- Analyzing the design to determine actual loads and fill factor with DEM
- Wear engineering based on DEM simulations



## WHEN YOU NEED ENGINEERING SUPPORT BEYOND THE EXISTING SCOPE

SSAB Services now offers a Product Development and Engineering team, with market-leading innovation and engineering support throughout the entire product development cycle.

We can offer a one stop shop, including conceptual and functional design, extensive CAD and FEM design development, physical prototyping, manufacturing drawings and serial production of steel components.

### Examples of the state-of-the-art technologies:

- Design for advanced roll forming
- Fatigue life analysis combined with HFMI post welding treatment
- DEM wear and load simulations
- Full manufacturing drawing documentation
- Double die bending
- Fastening systems – alternatives to welding
- FEM simulations for product development and verification of functional design and fatigue life analysis
- 3D laser scanning of components and customization of SSAB product designs

You are welcome to contact us at [engineering@ssab.com](mailto:engineering@ssab.com)