

Service product

Minerals Plant Fingerprint Maximizing your equipment performance



Mining companies competing in global markets must maintain and constantly optimize the efficiency of their operations to stay successful over time. Since minerals plants include complex equipment and processes that are critical to the mine, you need in-depth expertise and knowledge to assess and improve their performance. You need a partner like ABB: Our service teams consist of equipment and process specialists. With the help of our knowledge-based, structured assessment – Minerals Plant Fingerprint – they help you to get the most out of your operation and assets.

Comprehensive expertise

An in-depth view into your asset and production performance



With more than 250 complete plant-wide electrical, control and infrastructure solutions installed in over 45 countries, ABB's experience in mining and mineral processing started more than 50 years ago. Our extensive knowledge bank gained during the last decades is leveraged in our Minerals Plant Fingerprint concept: Our experts assess ABB electrification and automation equipment performance, together with overall production efficiency to derive a basis to optimize all three. Since plant efficiency can be significantly impacted by equipment and process automation that is not well-maintained or not optimized, it is important to assess, benchmark and elevate the performance of these key assets. ABB's Minerals Plant Fingerprint approach helps you to keep your equipment performing at a high level.

The Minerals Plant Fingerprint is a unique approach to quickly assess equipment maintenance effectiveness and performance of a plant typically within a week on-site. This is in contrast to traditional plant equipment maintenance audits that can take weeks or months to complete. The Fingerprint provides a structured assessment of how well process automation and electrification equipment is being maximized and how well production processes are controlled. Our experts analyze the collected information, provide recommendations for improvement and calculate the business impact for your mine.

Before the visit a data collection packet is sent to your site personnel to gather preliminary information. During the site visit, our process experts collect equipment data, process control data and production information. After the on-site

review, our experts analyze the collected information off-site and document the results in a detailed report. The report identifies the status quo of your equipment performance and provides improvement recommendations with estimated return on investment (ROI).

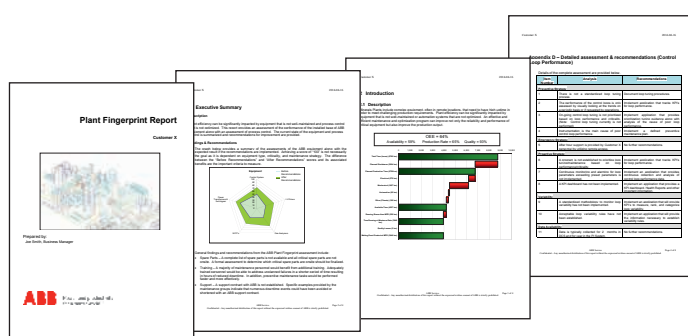
Since the Plant Fingerprint is structured and repeatable, our experts can benchmark equipment performance and process control enhancements and measure improvement on a periodic basis. Evaluation of similar assets between sites can also be measured and best practices determined.



Collaborative approach for improved mine performance

To leverage the entire potential of the Plant Fingerprint assessment process, it is essential that our experts work closely with your site personnel. Only by working together with your team can we pinpoint possible improvements and define prioritized recommendations and financial impact accurately.

With the Mineral Plant Fingerprint approach our team assesses not only single pieces of equipment isolated from each other. We analyze entire production areas and will come up with accurate measurements as well as process relevant findings. To finally improve your equipment performance and production processes, we will provide you with clear data, recommendations and tailored plans aligned with your targets and goals. We will work together with you to establish an impactful business case focusing on the highest priorities and strongest returns.



A detailed report summarizing the findings and recommendations will be handed over to you.

ABB's Minerals Plant Fingerprint

Your challenges

- Critical equipment operating in remote locations
- Improve production rate
- Reduce maintenance and energy costs
- Sustainable life cycle strategy

Our solution

The assessment of your important equipment and process control performance to determine critical areas of improvement.

Features

- KPI benchmarking including Overall Equipment Effectiveness (OEE)
- Reliability and maintenance assessment
- Analysis of preventive, emergency and predictive maintenance, life cycle strategy and training needs
- Spare parts criticality analysis
- Process control performance examination
- Cyber security overview
- Financial impact analysis
- Business case development

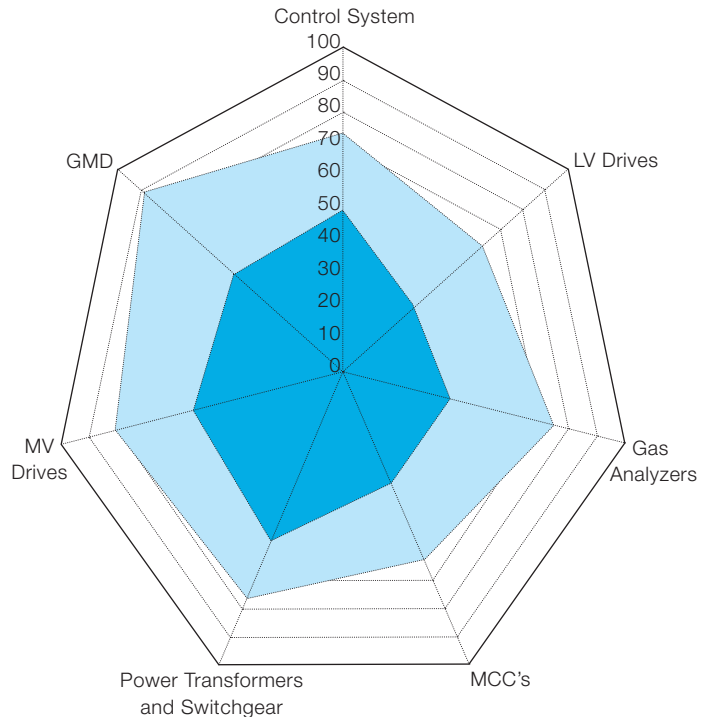
Benefits

- Increase production output
- Sustainable maintenance strategy
- Optimize equipment performance
- Improve efficiency results

A sustainable, tailored service concept Focused on your continuing success

The Minerals Plant Fingerprint is the optimal solution to elevate equipment output and production efficiency. ABB is your strategic partner to overcome equipment performance barriers and maximize your return on assets (ROA). Equipment, automation and the overall production process is assessed and recommendations and priorities are established specific for your site requirements.

The analysis will be used as a basis to update your maintenance plans including optimization of time devoted to predictive, preventive and reactive maintenance. The overall life cycle of the equipment will be assessed and a multi-year plan established to ensure equipment components do not become obsolete and the equipment performance is optimized throughout its life.



We assess the performance of the equipment and show the scale for possible improvements in compiled, clear graphics. This example shows the "as-is" status in the dark blue area while the light blue region shows the results after the recommendations are implemented. The business impact and financial benefits of the increased "score" are included in the final results. Assessed equipment includes: Control systems, frequency converters, GMDs, harmonic filters, MCCs, LV drives, MV drives, motors, power transformers, switchgear, rectifiers, gas analyzers and substations.

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