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ABB unveils game-changing ABB Ability™ eMine to fast-track transition to all-electric mines

- eMine™ comprises a purposeful approach, method and integrated portfolio of electrification and digital systems designed to accelerate the decarbonization of the mining sector
- ABB is also piloting ABB Ability™ eMine FastCharge, the world's fastest and only fully automated charging system for haul trucks, offering up to 600kW of power
- eMine™ can reduce diesel consumption by up to 90 percent while haul trucks are on an electric trolley system

ABB today launched ABB Ability™ eMine, a portfolio of solutions that will help accelerate the move towards a zero-carbon mine. ABB also unveiled the piloting of the groundbreaking ABB Ability™ eMine FastCharge, the world's fastest and most powerful charging system, designed to interface with all makes of electric mining haul trucks.

eMine™ comprises a portfolio of electrification technologies which makes the all-electric mine possible from mine to port and is integrated with digital applications and services to monitor and optimize energy usage. It can electrify any mining equipment across hoisting, grinding, hauling and material handling. From 2022, it will include new ABB Ability™ eMine FastCharge which provides high-power electric charging for haul trucks and is currently in pilot phase. It also incorporates the ABB Ability™ eMine Trolley System which can reduce diesel consumption by up to 90 percent, significantly lowering energy costs and environmental impact.

“The global mining industry is undergoing one of the most significant and important transformations of our generation – and that is to become zero-carbon,” said Max Luedtke, Global Head of Mining at ABB. “ABB Ability™ eMine is an exciting milestone to help convert existing mining operations from fossil fuel energy to all-electric. Mines can become even more energy efficient with vastly reduced levels of CO₂ emissions, while at the same time staying competitive and ensuring high productivity.”

eMine™ FastCharge can serve as a cornerstone of the transition to fully electrified mines across the industry. This flexible and fully automated solution is being designed for the harshest environments, can be installed anywhere and can charge any electric truck without human intervention at up to 600kW, the highest power available on today's market to minimize the downtime of mobile assets. Charging time will depend on the battery capacity onboard the haul truck and the operational profile, however in many instances a suitable state of charge could be reached within 15 minutes. With eMine™, ABB is extending its capabilities to the electrification of mining trucks and technologies for the full mining process.

eMine™ provides integral design planning and thinking to maximize the value of electrification, helping to design the hauling process in the most optimized way with electrical solutions that match mine constraints and help meet production targets. ABB helps mine operators map their journey towards an all-electric mine from phasing out diesel to embedding a new mindset and new team skills. By fully integrating electrification and digital systems from the mine to the port, eMine™ further reduces overall costs and improves mine performance while significantly lowering environmental impact.

ABB draws on 130 years of experience in the mining industry and is a pioneer in the integration of electrification, automation and digitalization in mining. eMine™ is underpinned by ABB Ability™ MineOptimize, a platform that optimizes engineering in the design of the plant or mine and facilitates the transition to the digital and CO₂-free mine of the future.

ABB (ABBN: SIX Swiss Ex) is a leading global technology company that energizes the transformation of society and industry to achieve a more productive, sustainable future. By connecting software to its electrification, robotics, automation and motion portfolio, ABB pushes the boundaries of technology to drive performance to new levels. With a history of excellence stretching back more than 130 years, ABB's success is driven by about 105,000 talented employees in over 100 countries. www.abb.com

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