# Maintenance support agreement Scalable service agreements to assure the success of your electric rope shovel's maintenance strategy

The maintenance support agreement (MSA) is the result of a study of our customers' maintenance styles and service needs. It provides scalability and value through the bundling of services to best meet your outsourced maintenance needs.



MSA configuration

As a worldwide electric systems supplier we have learnt a lot from our customers about your daily maintenance needs:

- All of our customers manage at least some level of inhouse maintenance and rely on vendor-provided services to support their maintenance activities
- Most of our customers employ outside resources to fill gaps in the capabilities and capacity of their maintenance staff
- Many customers rely on vendors to provide customized personnel training to help maintain skills for effective system maintenance as well as for advanced learning
- Customers expect effective vendor supplied evolution and upgrade programs to help them take advantage of new functionality and to manage product lifecycle status changes
- Predictable spare parts costs are important to all system owners
- System application engineers are often employed to modify user interfaces and process control configurations to address changing process requirements

All the above needs became a backbone of our consistent approach to maintenance agreement offer preparation.

#### Maintenance support agreements

In a study of the maintenance style and service needs of our customers, we learned even more about your key service requirements. This information was used to develop a more comprehensive service contract structure: the maintenance support agreement. This structure provides scalability and value through the bundling of services to best meet your outsourced maintenance needs.

## Service levels

Multiple service levels are available for each identified key service requirement. This flexibility allows you to build an agreement to provide the right amount of service based upon your in-house capability and strategy. For example, level 4 services accommodate customers who rely heavily on ABB knowledge and expertise. Other customers, who maintain comprehensive in-house skills and capacity for in-house-maintenance, may benefit instead from level 1 or complimentary level services. A detailed scope of supply for each group of services is dependent on the service level chosen by each customer.

ABB's maintenance support agreement covers all shovel electric equipment, including:

- drive system.
- electric motors.
- control system.
- low and medium voltage supply systems (switchgears and transformers).



In-house Maintenance Services	Maintenance Labor Services	Skills Development & Maintenance	Evolution & Update Services	Parts & Repair Optimization	Application Engineering
Need support to help implement in-house maintenance strategy for specific tasks	Need to fill gaps in on-site <b>maintenance labor</b> knowledge and availability	Need to develop and maintain personnel <b>maintenance</b> <b>skills</b> for best asset performance	Need <b>update and</b> <b>evolution support</b> to maximize productivity	Need predictable and <b>optimized</b> <b>parts and</b> <b>repair costs</b>	Need system application engineering expertise to help manage changing process requirements



A Bucyrus-Eerie model 295-BIII electric shovel from Itabira – Vale Brazil, retrofitted with modern ABB AC drives and control system.

## Customer support services

This part of the maintenance agreement is the backbone of the service partnership between customers and ABB. ABB offers to engage all necessary resources to help users work effectively and safely with their shovel system as well as to give access to information and guarantee assistance (direct or indirect) and a timely response. We keep users connected, informed, and prepared throughout the system lifecycle.

## ABB delivered maintenance

This supplements customer's maintenance forces with ABB service labor filling expected or unexpected voids in capacity and/or capability. ABB engineers always have the full backing of ABB resources, sharing in the maintenance of the shovel system through lifecycle changes.

# Skills development services

Regular training keeps the skills of the team on pace. Training is provided as "formal" in-center courses, introducing the skills required to maintain new equipment and applications or for personnel new to the existing equipment or applications. Field-based coaching supplements in-center training with hands-on, field-based, task-specific training. It is obvious that regular training reduces the impact of lifecycle changes.

# System evolution services

System upgrades are designed to improving performance and extend both the functionality and the lifetime of the system to provide end-users with the best possible return on their investments. Upgrade services comprise both hardware and software updates. Advice on upgrade feasibility with detailed instructions is available from ABB sales and service personnel as well as from ABB's channel partners. The benefits of upgrading a drive typically include lower maintenance costs and reduced energy consumption.

# Parts cost optimization programs

Parts Advantage Program covers the entire scope of the ABB parts and repair relationship. It makes parts procurement manageable and predictable. Spare parts are always available where and when customers need them. The benefits tied to participation in the parts and repair program also come from supporting system uptime throughout the lifecycle.

# System application engineering services

ABB expertise can help to ensure the performance of the system with the minimum investment. An ABB expert can go periodically to the site and, using tools specially developed for open-pit mining machinery, calculate the return on investment of mechanical and electrical retrofits, allowing you to get the most of your investment.

For more information, please contact:

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