

Service Agreement

- how to achieve predictable results



With a service agreement you will achieve your goals

Experience how we can create results together using strategic maintenance planning. With your knowledge of daily operations and maintenance combined with our knowledge of design, construction and commissioning, we are able to create the optimal basis for the operation and maintenance of your plant.

The aim of the service agreement and the long-term cooperation is to reduce the total maintenance costs and increase the availability and thus the earnings from your plant.

Unique needs require unique solutions

No two plants are identical which is why each and every service agreement is tailor-made to match specific needs.

The service agreement usually consists of a basic package of planning, inspection, condition assessment, reporting and follow-up on completed activities.

The agreement is customised according to the strategy chosen for the planned stoppages and maintenance shutdown periods and is extended as required with different service visits and support.



You will get:

- A high degree of predictability in regard to your maintenance costs
- Help with planning and coordination of your maintenance activities
- Preventive maintenance in the form of inspection and condition assessment
- Detailed reports of completed inspections and other activities
- Direct access to Babcock & Wilcox Vølund's expertise in the form of on-site support, telephone support or online support
- Attractive spare part solutions
- 24/7 service

Planning and coordination

We plan and carry out a large number of maintenance shut-downs and inspections every year and can therefore offer a staff of trained and experienced inspectors and supervisors.

Planning of annual maintenance work

Our service engineer will participate with the relevant personnel from your operating and maintenance divisions in the first coordination and preparation of the year's activities. At the meeting, the overall schedule and the need for resources are established for the following year.

Planning of maintenance shutdown

A planning meeting will be held in connection with the spring shutdown or by agreement. On the basis of observation and lessons learned from previous maintenance shutdowns and similar plants, our service engineer will assist in planning the maintenance shutdown activities.

Maintenance shutdown coordination

We offer to be in charge of the day-to-day management and coordination of activities in connection with the maintenance shutdown. Our service engineer coordinates the current and coming tasks with the subcontractors involved and ensures clarification of any safety aspects.

Assessment of maintenance shutdown and inspection

In order to gather and retain the knowledge and experience that have emerged during the maintenance shutdown, a follow-up meeting will be held during which the relevant personnel from your operating and maintenance division will participate along with our service engineer. At the meeting the recommendations and conclusions from the inspection of each area will be reviewed, and any questions to the final report will be answered. On the basis of these recommendations and conclusions, the first steps towards a strategy for next year's maintenance work and maintenance shutdown will be taken.



Inspection and condition assessment

The service agreement may include inspection of the boiler, combustion equipment and boiler cleaning systems. The value of the preventive maintenance lies in using the history of the equipment to predict future maintenance tasks. The effect may include for instance minimising the tendency to overuse spare parts.

Following each inspection, we will write up an inspection report which provides a status of the critical components and any recommendations for the future operation and maintenance strategy.





Service visits

The service agreement may include a number of visits where the task is previously known and defined. We call them service visits. The task may for example be performance optimisation or operator training.

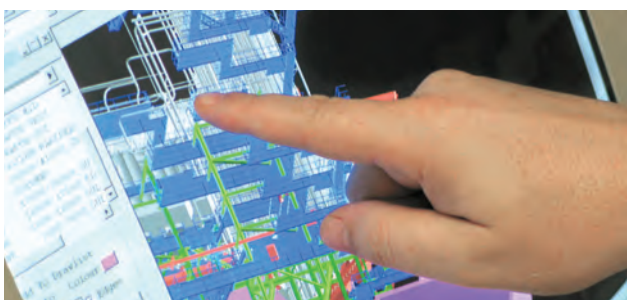
Performance optimisation

If the conditions of the plant's operation change, it may be necessary to optimise the process controllers and regulation of the plant.

In collaboration with the plant's operating personnel, our service engineers inspect and adjust the process controllers and regulation in order to optimise the performance and emissions etc. Any limits will be identified and, based on the latest developments in process and regulation concepts, optimisation measures will be recommended to ensure that the plant is always kept up to date.

Operator training

Regular review of previous material and training of new employees can require many resources. We offer training for operating personnel and assistance in the training of new employees. Depending on needs and requirements, our trainers put together both theoretical and practical training programmes.



Support

With a service agreement you are assured access to support in most situations. By support we mean help in those situations where additional resources or special skills are required. Support can therefore be many things. Some examples are:

- 24/7 service
- Support for start-up after maintenance shutdown
- Online operating support

24/7 service

In emergencies we can offer our service engineers' assistance via our service hotline. This service means that we undertake to commence remedy of errors in the form of repairs or replacements within 24 hours.

Support for start-up after maintenance shutdown

After larger maintenance shutdowns there will be a requirement for functional testing of affected systems. In most cases it will also be necessary to test the plant's safety interlocks.

Our service engineer will, in consultation with your operating personnel, carry out functional testing of the affected components and systems and will assist in the first start-up after the maintenance shutdown.

Online operating support

When connecting to the plant's DCS we offer our service engineer's expertise in troubleshooting, condition assessment, functional testing and optimisation, etc.



Spare part solutions

To ensure that the correct spare parts are available for day-to-day operations and for maintenance shutdowns or breakdowns, we offer to carry out storage management and purchase of spare parts as well as different logistic solutions tailored to your needs.

Management of spare parts

Depending on the chosen solution we count the spare part usage after a maintenance shutdown. Based on this count and the latest inspection report we prepare an offer for new spare parts. The storage inventory is continuously adapted to estimates and recommendations from the inspection reports as well as your general maintenance strategy.

Spare part storage with us

We offer to store your spare parts until you need them. In this way you will save costs for storage and management. Another option could be to enter into a so-called

spare parts fund with plants that use the same type of spare parts. This would bring down the costs even more.

Container solution

We will pack your spare parts into a container that is ready to be forwarded from our storage in Esbjerg at short notice. After the maintenance shutdown or breakdown, the container is returned to us for an inventory and refill. This solution gives an optimal accessibility and high flexibility without you having to allocate permanent space for the storage of spare parts. With this solution you thus save space and resources for storage management.

If you prefer to have your spare parts close by, we can also place the prepacked container at the plant. Each time you use spare parts from the container we will send new ones. This solution gives you the best possible accessibility without commitments.

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