KISSY (KraftwerksInformationSSYstem)

Power Plant Information System

Database for determination and evaluation of performance and availability indicators for power plants and renewables-based generating facilities

The VGB power plant information system KISSY provides the following strategic tools for improved plant performance:

- Collection of availability data and determination of performance indicators
- Recording of unavailability incidents for individual power plant components
- Assessment of the indicators for an operator’s own power plant against those of a group of similar plants
- Analysis of unavailability incidents and deduction of options for action

What KISSY offers

With KISSY, power plant operators obtain information on the availability behaviour of their plants and can do benchmarking analyses online. The KISSY system allows operators to compare the data of their own power plant units with an international pool of power plants. KISSY provides various presentation formats of the comparative information.

Analysis of unavailability and the causes of plant failures is based on standardised code systems such as the VGB KKS identification system for power plant components and the EMS event code. A systematic reliability analysis is also to be implemented in KISSY.

Who it is for

- Power plant managers who can use Key Performance Indicators (KPI) to manage a plant efficiently
- Operators who wish to optimise operating and maintenance processes
- Operators’ dispatchers who aim for optimum deployment (merit order)

Who it is for

Characteristics

- Multilingual, currently with six languages (DE, EN, FR, IT, NL, PT)
- Ensures data anonymity and compliance to confidentiality
- Various online analyses
- Over 80 standard analyses

Uses and benefits

KISSY is the leading performance database for power plants and renewables-based generating facilities in Europe. It facilitates an exchange of experience using indicators based on internationally recognised definitions and methods. Widespread operators involvement based on over 800 plants ensures statistical reliability. Simple and multilingual handling enables users to perform evaluations independently online with up to date information. A small amount of effort thus generates considerable added value from the plant’s internal data. The data is also archived, anonymity and data security are ensured.

Contact:
Stefan Prost
Deilbachatal 173
45257 Essen | Germany
Phone: +49 201 8128-278
E-mail: stefan.prost@vgb.org

www.vgb.org
KISSY in service

Example data analyses and evaluation

Technical-Scientific Report «Availability of Power Plants» | VGB-TW 103Ve

The diagram on the left shows a standard analysis of average availability, utilisation and unavailability of energy and time. This analysis is performed annually for all classes of plant (technology, nominal capacity, years of service and operating time). In the hydro power sector, for example, a distinction is made between pump and turbine operation. Specific indicators are also defined for wind turbines. In this way, trends can be identified on the basis of changes in operating patterns or maintenance strategies. Further statistical analyses can also be specified.


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Analysis of unavailability incidents of components on the basis of the KKS or EMS system allows weaknesses to be identified. It can be seen from the diagram, for example, that the number of fault-related damage events (A2) has remained constant in the 10-year period under review, but their share in unavailable energy has significantly increased. The relationship between the flexible operating modes required by changed market conditions and availability will be of especial importance.

In future, KISSY will also provide for reliability analysis of components, so as for example to assess component redundancy or maintenance strategies.


Special analysis | Unavailability of components

Special analyses provide for individualised use of the 40 years of experience reflected in the VGB power plant statistics. In the example the breakdown of unavailability per plant component is shown to identify component weaknesses. This can be helpful in deployment planning or the stipulation of maintenance measures.

Analyses could be performed for example by type, size, operating hours, mode of operation or country.

Source: VGB