

Schott and Fichtner power their projects with PKM

Global Energy & Water Projects

PKM offers unique functions for energy & water projects



"The day-to-day work with PKM on the project shows with how much expert knowledge PKM has been developed with and how adaptable Conclude is with their product. PKM reacts to our project requirements, including the general contractor-SAP-Interface. Since we manage the project with the help of PKM, we can quickly and easily exchange and equalize CAD-plans and documents with the general contractor consortium." says Martin Alber from Fichtner GmbH & Co. KG.

In the planning, construction, and operation of power plants it is absolutely necessary to use a standardized identification system. Today, the engineering of power plants with modern human-engine-communications needs a common language for all engineering disciplines; like applications in civil, mechanical, mechatronics, and instrumentation engineering. Increasing plant-power complexity and a higher degree of automation drive a sub-

stantial increase of technical data and information.

The "Kraftwerk-Kennzeichen-System (KKS)" is the German de facto standard for a **Power Plant Classification system**. It is widely used all over the world. In Summary - KKS has following assignments: **Standardized identification** of all types and processes of power plants with enough capacity and possibilities of detail to identify all systems, components and structures. The PKM supports the KKS by predefined archive structures, special types of attributes and a KKS - numbering system implemented within the file name based routing.

You will see:

http://en.wikipedia.org/wiki/KKS_Power_Plant_Classification_System

Plant construction projects are characterised by fixed deadlines for incoming documents and work-flows. Depending on the type of document and the date of the receipt, PKM defines, based on freely-configurable rules, the maximum amount of time the processing of the document should take. PKM administers the **handbooks** in different versions. These handbooks are typical for plant constructions and consist of different documents with various characteristics.

PKM was invented and used for the first time in 1998. Since then, PKM has been used successfully **worldwide for several hundred complex projects**. PKM is available in 12 languages.

The PKM project portfolio ranges from museums, hospitals, office towers to manufacturing and power plants. Customers like

Airbus, Accor, BMW, Drees & Sommer, Fichtner, MEAG, Mercedes, Roche and Schott trust PKM and the **PKM Service-Point** as a reliable member of the project.

PKM ensured the necessary transparency and the smooth data exchange between participants making a very important contribution to the professional and efficient planning and execution of this highly complex project.

Time and cost benefits were realized in addition to reliable project communications and 100,000 tons of transparency - all thanks to PKM!

PKM: References & Projects

Morupule B: Power Station, Botswana

The Morupule B Power Station project involves the installation of 4 x 150 megawatt units. Associated projects include water supply works and the construction of transmission lines and substations for the distribution of power to the rest of the BPC grid. The project also involves expansion of Debswana-owned Morupule Colliery that traditionally produces less than a million tonnes of coal annually.

The US\$ 1, 6 billion (P12 billion) coal-fired Morupule B Power Station project is a major Botswana government initiative driven by the Botswana Power Corporation (BPC).

PKM facts: The members of the project team are widely spread within Europe, Africa and Asia separated by 8 time zones at the most. It is a very important tool for the

communication with the EPC Contractor from China.

AIN Beni Mathar: Thermal-Solar Energy Plant, Morocco

The project will consist of a conventional combined-cycle thermal power station working with natural gas from the Maghreb-Europe gas pipeline and a solar field of parabolic trough mirrors, with a total surface area of about 220 000 m². Plants capacity to generate 472 MW of electricity, including 20 MW from the solar component. The project is expected to take four years to complete with € 400 million invested.

PKM facts: PKM started with the integrated KKS-System in English, Spanish and French.

BKW Germany – Coal Fired Power Plants, Germany

Very close to Dörpen (by the German-Dutch border) and one of many new coal-fired power plants is about to be built. BKW, the Swiss electricity company is investing €430mn (US\$ 670mn) in the project. The power plant is expected to be operational in 2012. Furthermore, BKW is investing US\$ 125mn in a combined-cycle power plant in Bocholt in Germany as well as in a coal power plant in Dörpen.

PKM facts: PKM is used as a central document archive for the all project members in Germany and Switzerland.

Schott Solar: Production Plant for PV and CSP Modules, New Mexico

Schott Solar is currently building a \$500mn facility in Mesa Del Sol. It will produce both photovoltaic (PV) modules and receiver's for concentrated solar thermal power plants (CSP). Production is expected to begin in spring 2009.

PKM facts: Besides document management Schott uses the whole range of task and workflow management functionality of the PKM successfully.

Shams 1: Solar Energy, Abu Dhabi

A great Solar Power Plant is being planned for Abu Dhabi. The plant will be build near the city Madinat Zayad and will have a maximum capacity of 100 MW. Costs are expected be between \$400 and \$500 million. The project will be finished in the end of 2010.

PKM facts: PKM is used as a central document archive for all project members in

Germany and Abu Dabi. It is also used for Bidders spread all over the world.

Tanjung Jati: Coal Fired Power Plant, Indonesia

Tanjung Jati B has a capacity of 2 x 660 MW and is an independent power producer. The plant was developed by Sumitomo Corp., while the power output is sold to PLN. The state power also has to secure coal supply to the plant.

PKM facts: The members of the project team are widely spread within Europe and Asia separated by 8 time zones at the most. Without PKM they would have a hard time to coordinate the plan processing.

Further projects

PKM supports the construction of the biggest Water Desalination & Energy Power Plant of the world. It is worth more than 2 billion USD and it is managed by Fichtner as well.

CONOBJECTS manages the technical components from design to maintenance

Schott encouraged Conclude to develop a tool for managing the technical data of all technical parts and objects of one construction project. CONOBJECTS works like a container of technical data, which can be extended easily by the project participants during the design phase. While adding more and more details on machines and other components CONOBJECTS becomes a complete information system and documentation of the technical objects of your project. By now Schott is using CONOBJECTS in combination with PKM on more than 6 projects worldwide.

**Conclude GmbH -
serving smart solutions**

Launched in Düsseldorf in 2002, Conclude is a high-quality service provider offering innovative and proven software tools for complex construction projects, on a Software as a Service (SaaS) basis.

Delivering its solutions on a SaaS basis means that Conclude handles all system hosting, service and support as a service. Purchase costs for hardware and additional essential software licenses are not incurred. The rental charge is based solely on the number of registered users working

on a given project. There are no hidden incremental costs for data storage, traffic, (technical) support or configuration changes. The monthly rent includes all ServicePoint functions, in particular.

Besides the PKM Project Space, Conclude supplies other integrated solutions for proactive management of budgets, costs, risks and defects. Conclude also delivers special solutions for machinery inventory, facility management and for implementing noise protection programs - all as location-independent Software as a Service via the Internet.

The PKM virtual project space alone is currently supporting more than 25,000 users in over 1000 projects involving a construction volume in excess of 80 billion Euros, in 38 different countries and 13 different language versions. Our customers include Accor, Airbus, BBI, BMW, BBVA, Drees & Sommer, Deutsche Bank, Dresdner Bank, ECB, Fichtner, Grupo Stadia, HochTief, Mercedes-Benz, Munich Re, Roche, Schott, Siemens and UBS.