

## Solutions for the Pharmaceutical Industry

# Boehringer Ingelheim: Integrated Drive and Power Management System in Pharmaceutical Production.

### The requirement – electrical engineering and system control near the process

Boehringer Ingelheim laid the foundation stone for the new pharmaceutical plant and at the same time started a new chapter in the history of the company. The state-of-the-art production plant is designed to ensure the worldwide supply of the company group with pharmaceutical substances. The new plant is primarily used for the production of substances involving

complex chemical processes and a high level of value creation as well as new chemical substances. The high availability of the system, cost efficiency and safe operation are the essential requirements for supporting the trouble-free market launch of new products. The launch process for new substances also requires maximum transparency

for process variables and consumption. Process and product quality must also be documented for qualification and validation, as well as in order to comply with the requirements of the FDA (Food and Drug Administration) and GMP (Good Manufacturing Practice). This calls for more demanding requirements in terms of the electrical engineering near the process and plant control.



**The solution – intelligent systems from the feeder to the drive**

The entire low-voltage power distribution system, the drive engineering and power management system were designed and installed by Moeller.

LD busbar trunking systems were used to implement the power transport from the transformer to the main distribution system of the multi-purpose complex which is around fifty metres high. Encapsulated PEC busbars to IP66 were also used to link outdoor sections between the power and production buildings. The modular main distribution systems feature integrated communication functions based on the open PROFIBUS DP system.

In addition to drive control, the direct access to status, diagnostics and maintenance data provides predictive process management – with electronic motor protection automatically included.

This means that Boehringer Ingelheim is always provided with the necessary information at the right time and place.



**The details – central information processing via the power management system**

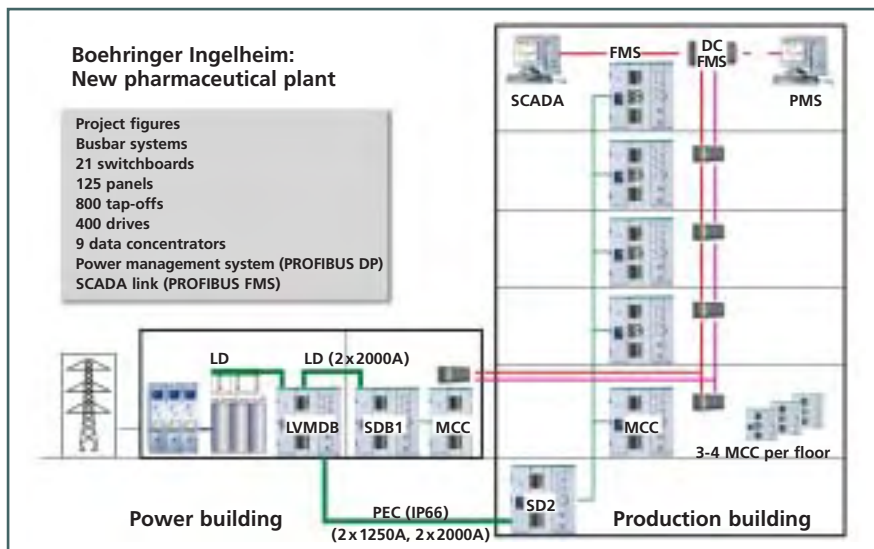
Information about the actual consumption and quality of the mains supply provides a continuous picture of the state of the installation. This also applies to the motor control centre where over 400 drives can be monitored and controlled uniformly.

21 switchboards and approximately 800 tap-offs are used to supply all ten synthesis tracts of the multi-purpose building complex. Moeller's flexible removable compartment design

reduces the time required for refitting. The acquired signals and measured values are collected centrally and transferred to the control level.

Moeller's power management system collates the data in different views and offers a wide range of analyses for ongoing power and drive data. This therefore enables the seamless handling of status, message and maintenance data for over 400 drives – including pumps, mixers and fans from 0.14 to 90 kW.

The relevant power values of the over 200 power tap-off circuits are also continuously recorded and monitored.



**The result – the efficient consumption of resources**

At Boehringer Ingelheim Moeller is supporting a company-wide unified automation system with standard networking concepts. Integrated system modules supply a thorough insight into the system – from the feeder to the drive. Direct status, consumption and quality information for the entire infrastructure supply and power distribution near the process provides the basis for an increase in product quality and throughput in all sections of the process, as well as more efficient energy and raw material consumption.

**Moeller GmbH  
 Systems Division  
 Hein-Moeller-Str. 7-11  
 D-53115 Bonn**

**E-Mail: [systems@moeller.net](mailto:systems@moeller.net)  
 Internet: [www.moeller.net](http://www.moeller.net)**

© 2003 by Moeller GmbH  
 Subject to alterations  
 AR 0207+0014-6215 GB w&d  
 Printed in the Federal Republic of Germany (03/03)  
 Article No.: 267572



Think future. Switch to green.