



zenon – building management with vision

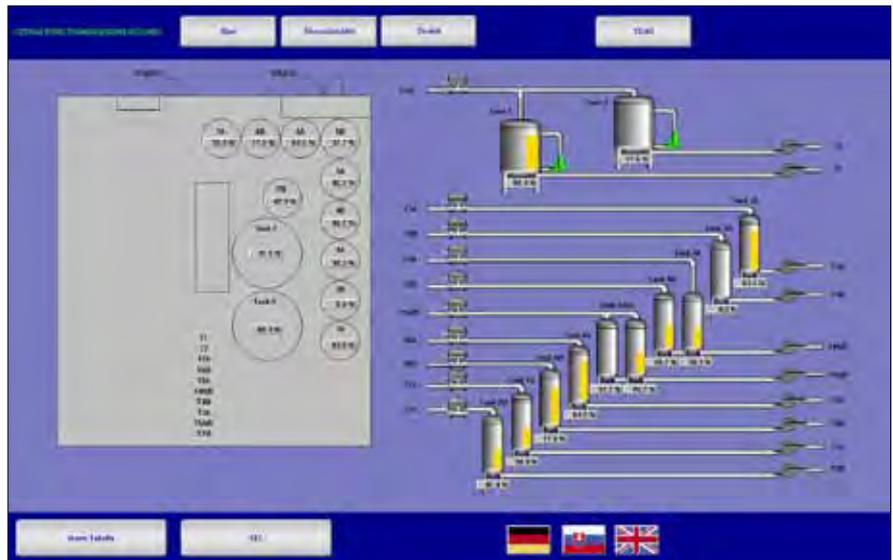
From zero to sixty.

Safety, ease of use and responsible energy management characterize the modern production and office buildings of today. GETRAG FORD Transmissions decided to use zenon for building management at its new production site in Slovakia.

In the industrial area of Kechnec in the east of Slovakia, GETRAG FORD Transmissions has created a state-of-the-art production site, which has been producing the GETRAG PowerShift® and motorcycle transmissions since 2007. The factory in Kechnec was the first location where the manufacturer started to produce the new dual clutch transmission. The automotive groups Mitsubishi, Ford and Volvo introduced this dual clutch transmission to the market at the start of 2008. With around 700 employees, the factory at the site in Kechnec today produces the 6DCT450 and 6DCT470 range of GETRAG PowerShift® transmissions and motorcycle transmissions.

FULLY UP-TO-DATE INFRASTRUCTURE

GETRAG FORD Transmissions was able to set up this new production location within one and a half years. In addition to the production halls, the transmission factory building complex near Kosice, Slovakia, includes 120 office workspaces, plus a kitchen and canteen. The wing of the building also contains storage halls for deliveries and the dispatch of goods, as well as bottom tanks in the cellar that are filled with oil. Pumping stations move this oil to the production halls, where it is used for the milling machines. zenon takes care of the visualization and monitoring of the building in Kechnec, as well as its lighting equipment and the



Visualization of the oil storage and the pumping stations with zenon:
An alarm is triggered if the limit values fall below a minimum or exceed a maximum.

energy supply. LON is used as a fieldbus; the Siemens S7 controllers are connected via TCP/IP. „The diversity of drivers was an important criterion for us when selecting a control system. zenon is the solution that enables by far the most flexible connection to different controllers,“ explains Ralf Wagner, Plant Engineering Supervisor at GETRAG FORD Transmissions. The BMS solution is used as a client-server system at GETRAG FORD Transmissions. There is a server in the electrical engineering department and a client in the gatehouse for use by the security guards.

WELL-THOUGHT-OUT LIGHTING MANAGEMENT

At the production site in Slovakia, zenon is used for, amongst other things, the lighting management and controlling the blinds. Thanks to the well-thought-out lighting management – a combination of artificial lighting and the intelligent manipulation of daylight – it is possible to both reduce energy costs and increase user comfort. The DALI lighting equipment in the production halls operates in response to the changing natural light during the day and is regulated automatically. DALI is an international standard that was conceived for digital lighting control. Sensor signals on each side of the building are available in the zenon application as an actual value and provide the actual level of brightness. The intensity of lighting for the artificial lighting can be regulated manually or automatically on the basis of this. For example, if the value falls below 500 lux, additional artificial lighting must be used. These values are also available for the blinds, which are also operated by either manual or automatic control. For easy-to-use time control, GETRAG FORD Transmissions uses the Production & Facility Scheduler in zenon. With

the intuitive user interface, users can easily configure the lighting management, configure it in the zenon Editor and change it at any time whilst the program is running. The advantages of this comprehensive lighting management can be measured clearly by the transmission manufacturer: „Thanks to the innovative, daylight-sensitive lighting control, we save around 40 percent of energy costs in the Kechnec factory compared to our other production locations and the previous figures we obtained from the Kechnec plant. At the same time, the lighting equipment has a much longer lifespan,“ explains Ralf Wagner from GETRAG FORD Transmissions.

EFFICIENT MONITORING

However, it is not just with lighting management that GETRAG FORD Transmissions has energy consumption under control. The factory in Kechnec has a total of three transformer stations, which have four transformers each, as well as medium-voltage equipment and a low-voltage distributor. All input electrical voltages which must be transformed are recorded, as is the voltage required to supply the machines. Using zenon, the employees at Kechnec also monitor the energy consumption of the machines. In the reporting, the energy loss from the low-voltage equipment is displayed, so that the hourly, daily and monthly energy consumption can be seen. The long term objective is to avoid expensive load peaks and so obtain energy at the best conditions and to optimize energy use.

Visualization of the oil storage and the pumping stations is just as sensitive as a constant supply of energy. Here, zenon displays the respective fill levels of the oil tanks. An alarm is triggered if the values fall below a minimum or exceed a maximum. This



zenon visualizes and monitors the transformer stations, energy consumption, lighting control, control of blinds and the doors of the production complex.

guarantees that the production is constantly supplied with the necessary amount of oil, but never exceeds a certain level.

Security is also provided for by zenon: the monitoring of access doors is also displayed via zenon. If a door opens, the desk officer is informed of this. This is especially important at night, so that security can always see if somebody enters the production halls and can see which doors have been left open, for example. The security staff has only limited access to the zenon application: they can view the monitoring of doors and the lighting management, but cannot make any changes to the application itself. An overview is always maintained and erroneous operation is thus not possible.

A RELIABLE INFRASTRUCTURE, PUT INTO OPERATION QUICKLY

GETRAG FORD Transmissions needed just one and a half years to construct the factory: it has been in operation since the end of 2007. „It is a very special challenge to create a completely new factory, with new employees, for the production of new products. The bottom line: it worked,“ said Ralf Wagner, Plant Engineering Supervisor at GETRAG FORD Transmissions, summarizing the progress of the project. Part of this overall functional system is zenon for building automation. Here too, Ralf Wagner has a positive conclusion: „The best solutions are those that you don't notice. This is the case with zenon. When we build new factories in the future, we will place our trust in zenon again.“

GETRAG CORPORATE GROUP

The GETRAG Corporate Group is the largest independent manufacturer of automobile transmissions in the world, with around 13,450 employees at 24 sites. The corporate headquarters are in Untergruppenbach, Germany. The Group develops technical solutions for the automotive industry and offers a wide range of transmission system products and drivetrain components for cars, SUVs, motorcycles and light commercial vehicles. The company supplies all notable automobile manufacturers around the world. GETRAG FORD Transmissions Slovakia s.r.o. is one of four production sites of GETRAG FORD Transmissions, a full-service system supplier headquartered in Cologne. GETRAG FORD Transmissions was founded at the start of 2001 as a 50-50 joint venture of GETRAG and Ford of Europe.

OVERVIEW OF THE ADVANTAGES

- ▶ Comprehensive energy management
- ▶ Well-thought-out security concept
- ▶ Clever lighting and blind control
- ▶ Simple operation, high operability
- ▶ Rapid installation, quickly put into operation