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How efficient technology saves a whole lot of energy

Reference Report Bosch Industrial

New Bosch steam boiler for Iveco Bus

Since the birth of Iveco Bus in the Czech Republic, plenty has changed. Including in terms of energy efficiency and environmental protection. The replacement of the 51-year-old process heat system at the Vysoke Myto production site has shown how you can really save a lot of energy today by using efficient technology.

Iveco is a great growth driver in the Czech economy. The bus manufacturer employs over 3800 staff in Vysoke Myto and creates around 1700 jobs at Czech sub-contractors. "We are currently producing 20 buses a day. This makes us the largest bus factory in Europe, and makes the Czech Republic the country with the greatest number of buses produced per

head. We owe this result to the entire team of Iveco Czech Republic, strategic suppliers, business partners and, of course, our loyal customers," said Jiří Vaněk, CEO of Iveco Czech Republic, during the „company of the year in the automotive industry“ gala evening in June 2019 at Prague Castle.



*The „Crossway“ bus:
One of the most
successful bus series
from Iveco
Photo: Iveco Bus*

The same aims – climate protection

The automotive and commercial vehicle sector is transforming itself anew. Highly developed motors and electromobility aim to conserve finite resources, save fuel and minimise harmful CO₂. But vehicle production itself must also comply with high environmental standards. To achieve ambitious climate targets and improve the energy balance in production, Iveco has redefined its company energy supply. After 51 years of continuous use, the steam boiler system that had been used reached its limit. Iveco decided on the advantages of a contracting model and commissioned the company Komterm as an energy service provider. With efficient Bosch boilers, Komterm guarantees energy-optimised operation management for the next 15 years. For this, the company has planned two new boiler houses from the ground up, for the Iveco A1 and A2 sites in Vysoke Myto.

Energy efficiency as the key to sustainability

Originally, the old steam boiler system supplied both sites simultaneously. The separation allowed the 1600-metre-long connecting steam line to be decommissioned. The newly designed steam distribution system will optimise the quality of the heat supply. Saturated steam will now be used as a heat carrier, instead of overheated steam. The new UL-S boilers generate this process heat particularly efficiently and harness waste heat through integrated heat exchangers. Together with the switchover to natural



New boiler house at A2 Iveco site Vysoke Myto

gas, this resulted in considerable savings, with the primary energy consumption reduced by a whole 38 per cent. This leads not only to very significant financial savings, but is also an advantage in terms of climate protection. No more solid pollutants and SO₂ emissions are released – in comparison, the original system emitted 98 tonnes of sulphur dioxide in 2017. Furthermore, NO_x emissions decreased by 88 per cent, CO emissions by close to 95 per cent and CO₂ production by 56 per cent compared to the original level.

After twelve months in the construction phase, including planning permission and project runtime, the local Bosch service team put both boiler systems



Boiler system at A2 site:

UL-S steam boiler, 7 700 kg/h

UL-S steam boilers, 4600 kg/h each



Photo: Iveco Bus

into operation. The process heat is used mainly in the paint shop and for building heating. Besides the boilers Bosch also supplied further system equipment, from water treatment to condensate recovery. In addition, the control technology was completely renewed and connected to the remote access MEC Remote. It allows the operator to visualise the surface of the control system and call up relevant data any time and from anywhere. Bosch experts can even carry out remote diagnoses, parameter configurations and troubleshooting. Komterm can consequently optimise service costs and increase Iveco's reliability of supply.

Summary

The new energy solution supports Iveco Bus in achieving considerably more sustainable production with minimal CO₂ emissions. The Bosch boilers with an efficiency level of more than 95 per cent generate process heat cost-effectively and energy-efficiently all round. With the connection of the pre-configured control systems to the central control technology, Komterm as an energy service provider always has the operating data of both systems in view. Networking with the remote connection MEC Remote creates additional security. For stable and energy-optimised operation and system management.

efficiency
+38 %

Boiler system at A1 site:
UL-S steam boilers, 3400 kg/h each



From the carriage to the “Crossway” bus

The roots of bus manufacture in Vysoke Myto stretch back to 1895, when the company's initial occupation was the manufacture of carriages and car bodywork. That was the foundation of the site – the bus factory there is now one of the largest in Europe, at 225 000 square metres. The first bus back in 1928 had 14 seats. However, it was only 20 years later that the company “Karosa”, then state-run, specialised in commercial vehicles. After privatisation, the company was later part of Renault and Iribus, until Iveco eventually took over the company in 2003. Iveco has celebrated unbeatable successes to the present day, including its “Crossway” bus line for urban use (page 1).

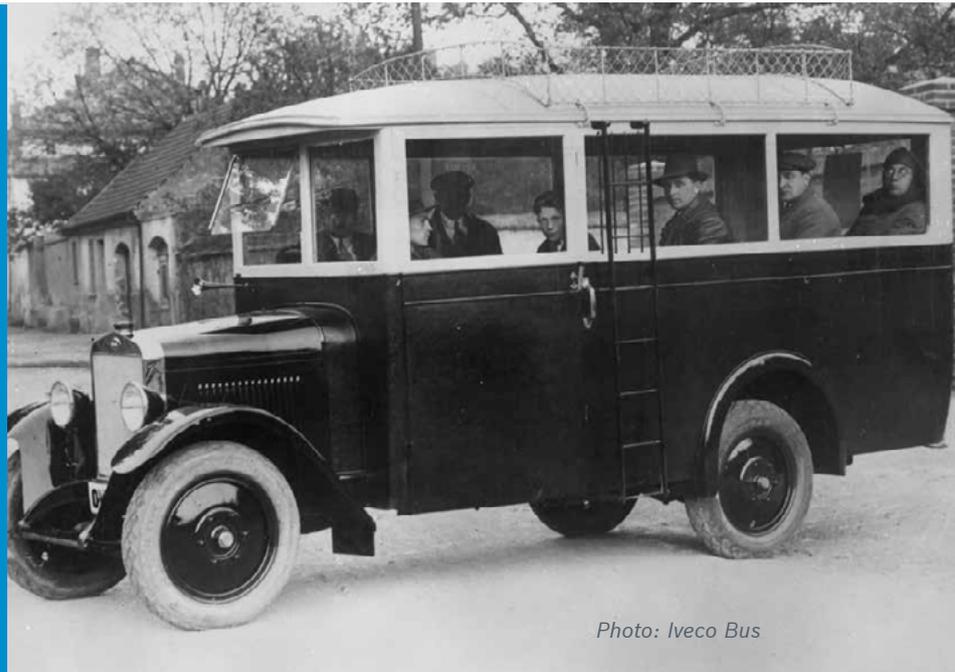


Photo: Iveco Bus

The companies involved

Operator:

KOMTERM Čechy, s.r.o.
E-Mail: cechy@komterm.eu
www.komterm.eu

Plant location:

Iveco Czech Republic, a. s.
E-Mail: bus.cz@iveco.com
www.ivecocr.cz

Construction:

SAPA - LPJ, spol. s r.o.
E-Mail: sapa@sapa-lpj.cz
www.sapa-lpj.cz

Installation:

Datatherm, spol. s r.o.
E-Mail: datatherm@datatherm.sk
www.datatherm.sk

Project coordination:

Komterm Energy, s.r.o.
E-Mail: komterm@komterm.eu
www.komterm.eu

Local Bosch contact:

Bosch Termotechnika s.r.o.
Tel.: +420 261 300 300
www.bosch-industrial.com/cz

Bosch Industriekessel GmbH

Nuernberger Strasse 73
91710 Gunzenhausen
Germany
Tel. +49 9831 56-253
Fax +49 9831 56-92253
sales@bosch-industrial.com

Bosch Industriekessel Austria GmbH

Haldenweg 7
5500 Bischofshofen
Austria
Tel. +43 6462 2527-300
Fax +43 6462 2527-66300
sales-at@bosch-industrial.com

info@bosch-industrial.com
www.bosch-industrial.com
www.bosch-industrial.com/YouTube