



AUTOMOTIVE AND MACHINERY INDUSTRY

The contemporary Lublin is a strong centre of the automotive and machinery industry. Among the companies operating here, there are not only producers of tractors, trailers and cars but also fuel tanks, rims, springs and coil springs as well as vehicle parts - matrix forged, moulded and mechanically treated. This type of industry finds strong support in good infrastructural facilities and professional personnel who to a large extent are recruited from among the graduates of Lublin University of Technology. More than 10 thousand students yearly select fields of study related to the industry. It was the scientists from Lublin University of Technology who in 2012 presented the first car in Poland to be powered by hydrogen.



HISTORICAL OUTLINE |

YESTERDAY

In 1864, Wacław Moritz established his Agricultural Tools Factory in Lublin. In 1874 the Factory of Agricultural Machines of Mieczysław Wolski commenced operations (after the Second World War both sites were combined, forming the Lublin Agricultural Machines Factory - Lubelska Fabryka Maszyn Rolniczych). In the plants of Plage and Lańkiewicz, aircrafts were produced in the inter-war period. It is also here that in the period of 1925 – 1931, in a specially launched car body department, bodyworks were produced for passenger cars, i.a. manufactured by the famous American automotive concern "Chrysler", "Buick", "Hotchkiss" and "Auburu" vehicles as well as for "Ursus" and "Somua" buses. The plants also produced "Ursus A" lorries. Between 1936 – 1939 Lublin was a part of the Central Industrial Zone thanks to which the city became a significant industrial centre. In 1936 the Lublin Airplane Factory launched the production of modern aircrafts under the name of "Seagull", "Bizon" and "Heron". In 1950s, in Lublin, the Truck Factory (FSC) began its operations, specializing in the production of delivery vans (popular cars FSC Żuk and FSC Lublin). It was one of the largest automotive entities in Poland; annually more than 10,000 lorries were produced here. Between 1995 - 2001 a South-Korean concern Daewoo produced in Lublin passenger cars branded as Daewoo Nexia, Musso, Konrado and Honker military cars.



TODAY

The long-lasting traditions of automotive industry are currently being reconstructed. In the same time, machinery sector is seeing dynamic growth. Vast areas where the Daewoo concern used to operate were divided into smaller plots and sold to companies representing various sectors. Tractors and trailers, Grand Tiger pick-ups, Honker 4x4 and Honker Cargo cars are produced here together with diverse accessories. What constitutes an important asset of this area is constantly improved road infrastructure and close vicinity of the Lublin Airport.

STRENGTHS

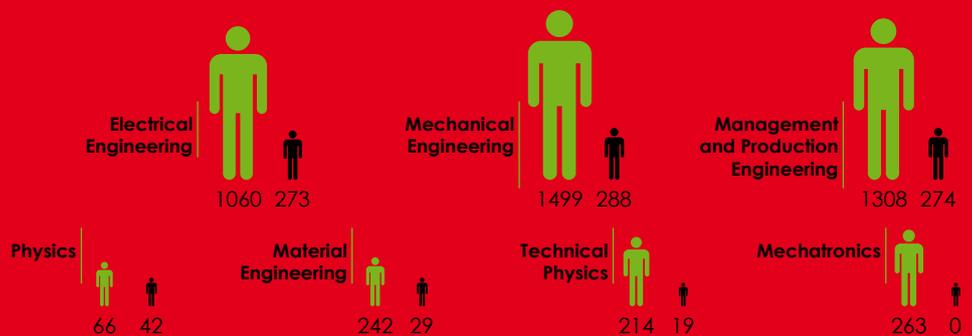
- rich traditions of the Lublin automotive and machinery industry
- science and research potential
- qualified and experienced technical staff
- proximity of Eastern European markets
- appropriate technical and infrastructural facilities

INTELLECTUAL POTENTIAL

FIELDS OF STUDY |

 **Number of students**
– academic year 2012/2013

 **Number of graduates**
– academic year 2012/2013



Self Study based on the data collected from universities and colleges in Lublin

SECONDARY SCHOOLS |

 **Number of pupils** – academic year 2012/2013



* Altogether in secondary schools there are over 13 thousand pupils at technical profiles

* The 1939 Lublin Defenders Electronics Technical Secondary School was ranked the 1st on the list of the best technical secondary schools in Poland prepared by Perspektywy monthly magazine

The Lublin Centre for Technology Transfer of the Lublin University of Technology

www.lctt.pollub.pl

Centre providing information, advice and training services on the transfer of technology, techniques, organization and management and production control as well as initiating and development of direct cooperation between science and business with regard to technology, organization, management and production control.

Research – Development Centre Hajduk Group

www.hajdukgroup.pl

Institution established in 2012, with the status of a research-development centre assigned by the Minister of Economy, implementing research and development works from various areas of technology.

R&D Centre Inventor

www.mdcentreinventor.pl

Research Centre established by SIPMA S.A., specialising in making prototypes and testing, among others, of farm and municipal machines.

Research and Development Centre at Ursus S.A.

www.ursus.com.pl

Project under development and expansion. The Centre has experienced engineering personnel and achievements with regard to the preparation of new structure and implementations.

Innovative Centre of Diagnosis, Research and Analyses WSEI /in the course of implementation/

www.wsei.lublin.pl

Investment of University of Economics and Innovation (planned opening at the beginning of 2015), under which will be created, among other things, transport laboratories, including: a structure materials diagnostics laboratory and mechanical systems tests laboratory.

Innovation and Advanced Technologies Centre of the Lublin University of Technology /in the course of implementation/

www.pollub.pl

One of larger academic investments in the Lublin region, under which over 30 specialized laboratories and didactic research workrooms will be created, including, among others laboratories related to tests of automotive vehicles and their drive units, with particular focus on alternative fuels.





Source: URSUS

CAR RUNNING ON HYDROGEN

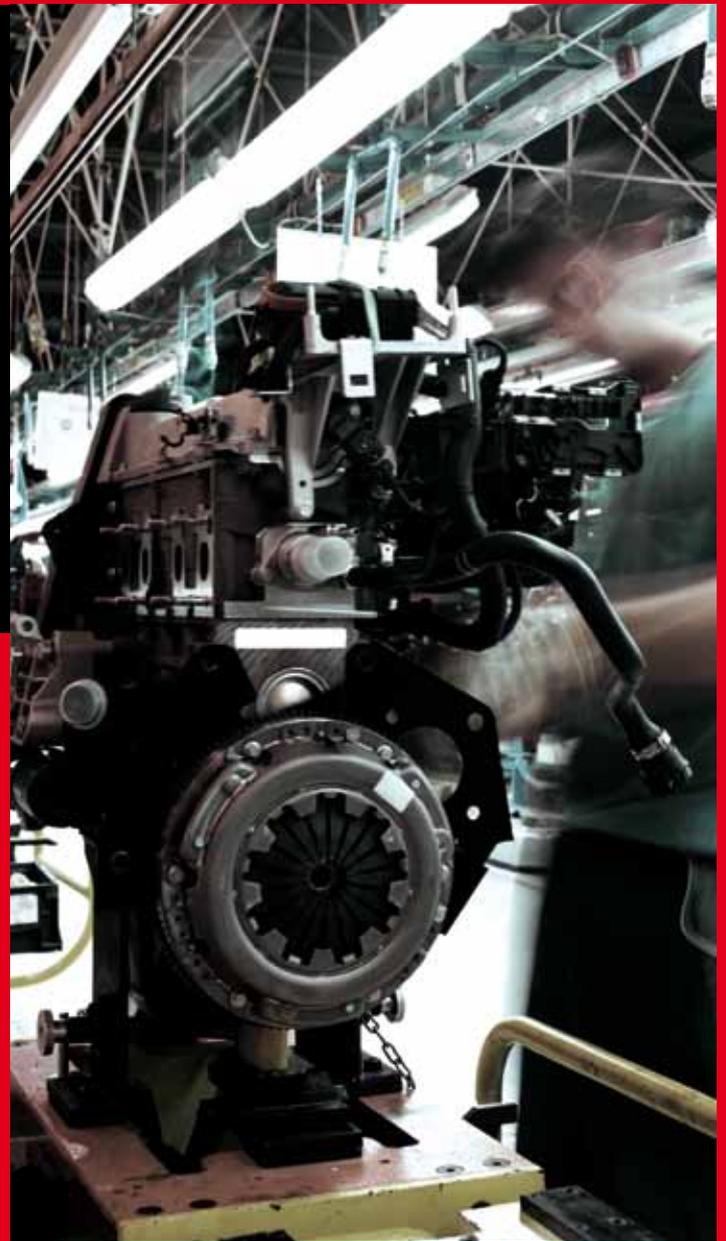
Hydrogen instead of petrol? Now it is possible. Scientists from the Lublin University of Technology, led by Professor Mirosław Wendeker, have developed a universal system of vehicle power supply with hydrogen. Thanks to this, it is possible to use this gas in any engine which has a spark ignition. A car running on hydrogen is environmentally friendly and cheaper. A litre of hydrogen is ca. 4 PLN – and of petrol – 6 PLN. Additionally, it is not necessary to install a special hydrogen engine – it is enough to install a gas tank in the boot of the car.

After two years of tests, in May 2012, scientists presented a prototype of a car of Opel brand adjusted in that way.

TWO-FUEL DIESEL ENGINE

Diesel engine powered with diesel oil and compressed natural gas? Modern solution may in the future prove extremely useful for car owners. It will enable a reduction in oil consumption, and hence it should be cheaper and more ecological. Michał Biały, a doctoral candidate of the Lublin University of Technology, for the concept of two-fuel power supply with direct fuel injection of compressed natural gas to engines with automatic ignition, won 3rd place in the national competition „Student – Inventor” and received a bronze medal at the 40th International Exhibition of Inventions in Geneva.

The idea has a real chance for implementation. Thanks to a grant of 3 million PLN from the National Centre for Research and Development, the team of Professor Mirosław Wendeker from Department of Mechanics of University of Technology in Lublin conducts further research.



ENGINE WITH MODERN SYSTEM OF COMBUSTION

Is it possible to combine a petrol engine with Diesel engine? Engines with an automatic petrol ignition, known as HCCI (homogeneous charge compression ignition) or CAI (controlled auto-ignition) are characterized by a perfect fuel economics and even one hundred times lower nitrogen oxides emission as compared to engines used today. It is expected that in a few years' time this innovative technique of combustion might be found in engines of mass-produced vehicles. Research in this direction is currently a dominant world development trend and the team of scientists from the Lublin University of Technology under the supervision of engineer Jacek Hunicz, who has a post-doctoral degree, who joined this elite group, pursuing pioneering scientific works in Poland. Research is now financed from the funds of the National Science Centre.

LEADERS IN THE SECTOR

Daewon Europe Sp. z o.o.

www.resory.pl

Manufacturer of rims, springs and coil springs. The Company was established as a result of connection of D&D RESORY Polska Sp. z o.o. and Daewon Poland Sp. z o.o. from Wrocław which is a part of a Polish-Korean concern.

MW Lublin Sp. z o.o.

/until recently Magnetto Wheels/

www.magnetto.pl

Manufacturer of steel rims for passenger cars, vans and off-road vehicles, for various types of lorries, as well as motorcycles and bikes. MW rims are manufactured from high quality materials and have appropriate certificates (e.g. TUV). Representative of CLN group - international corporation with 60-year long experience.

Inergy Automotive Systems Poland Sp. z o.o.

www.inergyautomotive.com

Manufacturer of fuel tanks. The company was established in 2000 after Solvay Automotive and Plastic Omnium - top players in the sector of fuel systems – merged.

Kuźnia Matrycowa Sp. z o.o.

www.kuznia.lublin.pl

Manufacturer of steel forgings, meant above all for automotive industry and especially for the producers of suspension, steering, drive systems and engines manufacturers. Products are manufactured at high technical level, on the basis of Quality Management System compliant with technical specification ISO/TS 16949: 2009.

Car Factory HONKER

www.honker.com.pl

The manufacturer of HONKER 4x4 brand vehicles and lorries of HONKER CARGO brand as well as pressed and welded metal parts, insulation and internal elements of car equipment.



ZOMECH - Mechanical Treatment Plant Sp. z o.o.

www.zomech.lublin.pl

Manufacturer of parts and components for passenger cars and delivery vans. A company with great experience in mechanical treatment, according to the individual requirements of the client. It operates on the basis of an implemented and certified Quality System consistent with the requirements of Technical Specification ISO/TS 16949:2002 and standard ISO 9001: 2000.

ABM Greiffenberger

www.abm-polska.pl

Producer of electrical drives and gearboxes. The company is planning to launch production in its new facility in Lublin in the end of 2013. For decades, it has specialized in manufacturing drive solutions for lifting technology and forklifts.

Odlewnia Żeliwa Lublin Sp. z o.o.

www.odlewniazeliwalublin.pl

Odlewnia Żeliwa Lublin (Lublin Cast-iron Foundry) is a manufacturer of high quality casts from grey and spheroidal cast iron, for the needs of automotive, machine, agricultural industry and industrial fittings. The main assortment produced in the foundry are: casings of fly-wheels, sumps, hubs, discs and brake drums, bodies and valves tenons, controls casing, manholes, grates, drains, clamping rings, gear casings and others. The recipients of castings are domestic contractors and contractors from the EU (Great Britain, the Netherlands, Germany, and Hungary). Export of the company reaches the level of ca. 80%.



SUCCESS STORIES

URSUS S.A.

www.ursus.com.pl

We are the oldest brand of Polish vehicles, with a 120-year long tradition for machines and devices manufactured for the needs of agriculture, known not only in the country, but also abroad.

We gradually strengthened our market position. Currently we are the only company in the segment of machines and devices for agriculture listed on the Warsaw Stock Exchange.

In the Lublin branch, operating since 2010, agricultural tractors are produced and Chinese GRAND TIGER pick-ups are assembled, which were the first in Europe to obtain a certificate of homologation.

While selecting the location of an investment in Lublin, the decisive factor was the already existing large-industry infrastructure in the district of Zadębie. Industrial halls adjusted to receive high-parameter electricity deliveries, new strategic goals, proper production technology and qualified staff are necessary parameters for innovation development. These conditions have been met. The implemented and planned production of URSUS S.A. is based on the needs of the regional market. The Lublin region is mainly of agricultural character, production of tractors is thus particularly justified. Lublin is also a city in which the largest trolleybus fleet has been functioning for years. For this reason, our company has also invested in development programmes for this type of means of transport. Using the possibility of cooperation with Lublin scientific centres, the company also plans to develop subsequent programmes concerning electrical drives and alternative sources of power supply for vehicles. Finally, the favourable atmosphere created by the authorities of Lublin is also valuable.

Jan Wielgus
Board Member
Development Director

SIPMA S.A.

www.sipma.pl

SIPMA S.A., a producer of farming machines, has operated on the Lublin market for nearly 25 years. We continue the rich industrial traditions of the region where due to climatic and geographical conditions there have been many end users of our products. High saturation with modern working equipment and IT systems as well as perfect work organization guarantee the achievement of goals set in the mission of the company.

Today we not only participate in the most important events devoted to the sector in Poland but also organize presentations of our machines on a regular basis. In May we organize SIPMA OPEN DAYS during which we present the whole range of our products and innovative solutions we apply in construction, technology and production process. Our efforts result in numerous distinctions granted during prestigious branch events: we were the only Polish company to win 8 gold medals during POLAGRA International Poznań Fairs. In the same time we introduce our machines to the foreign markets. In 2008 we established SIPMA RU in Russia whereby we pursued the strategy to expand to eastern markets. One of our successes has been the qualification of SIPMA S.A. to the elite companies participating in the realization of the offset agreement on the purchase of F16 aircraft by the Polish Government from Lockheed Martin or achievement of the PZL Świdnik Qualified Supplier status in transactions with CESSNA. What guarantees high standards of our products is compliance with the regulations of the Integrated Management System which we implemented and obtained a certificate of, and which aside from ISO 9001:2009 Quality Management System also encompasses Environmental Management System and Safety and Work Hygiene Management System. Moreover, we continually strive to innovate the production process and broaden our offer. With this in mind we actively search for grant opportunities to co-finance our research and we established a modern research and development centre.

The philosophy of corporate social responsibility is dear to us and that is why we try to be active in the local community, i.a. through sponsoring Lublin sport teams. We also cooperate with the local government to work together on the solutions which will facilitate conducting business in the city.

Leszek Kępa
President of the Management Board