

# THE 29<sup>TH</sup> EDITION OF PLEBISCITE FOR THE TITLE OF GOLDEN ENGINEER

## 29 EDYCJA PLEBISCYTU O TYTUŁ ZŁOTEGO INŻYNIERA

– *The solemn summing up of the XXIX<sup>th</sup> edition of the plebiscite for the title of Golden Engineer was the meeting of the people who have the feet firmly fixed on the ground, the people who have occurred to be very necessary at difficult time, especially those wise who should be distinguished* – Roman Czajarek, the leading journalist, Honorary Golden Engineer PT, engineer, MSc, graduate of Szczecin University of Technology stated.

Mr R. Czajarek reminded that the mentioned event, as being organized by 157 year old Technical Review, was connected this year with the celebration of the International Day of Engineer for the Sustainable Development, being called the International Day of Engineer.

The ceremony which was traditionally held at Warsaw House of Technician (3.03.2023) was opened by Ewa Mańkiewicz-Cudny, the President of the Federation of Engineering Associations of the Chief Technical Organization (NOT). She informed that this year, the celebration of the International Day of Engineer for the Sustainable Development, organized under the motto: *“Engineering Innovations for the more active world”* was commenced by unveiling the monument (March, 2, 2023 in Warsaw) of Piotr Stanisław Drzewiecki, Eng, the creator of the associative movement of engineers, constructor of the House of Technology (in Polish: Dom Technika, WDT) built in 1905, the outstanding engineer, the first President of Warsaw after regaining the independent own state in 1918.

The President of FSNT-NOT greeted all participants of the ceremony, including the special guests: Andrzej Dera, the secretary of the state at the Chancellery of the President of the Republic of Poland and Wojciech Murdzek, the secretary of the state at the Ministry of Education and Sciences and the partners, and



the persons, representing the patrons of the discussed event, together with whom the International Days of Engineer (IDE) are organized: Prof. Dr hab. Teofil Jesionowski, Eng. – the Chairman of the Conference of Rectors of Polish Universities of Technology, Rector of Poznań University of Technology; Prof. Jerzy Barglik, the President of Engineering Academy in Poland; Prof. Dr hab. Michał Kleiber, Eng., the President of Polish Committee of UNESCO. The President Ewa Mańkiewicz-Cudny reminded that the UNESCO was the patron of IDE which was established in 2019.

The guests of the International Day of Engineer were as follows: prof. Dr hab. Krzysztof Zaremba, Eng, Rector of Warsaw University of Technology; prof. Dr hab. Jan Szmidt, Eng, Honorary Chairman of the Conference of Rectors of Polish Academic Schools, “Diamond Engineer of PT (*“Technical Review”*); Prof. Dr hab. Maciej Żylicz, the President of Foundation in Favour of Polish Science; Prof. Dr hab. Marcin Palys, the Chairman of the Main Council of Science and Higher Education; Prof. Dr hab. Bogusław Smólski, Eng, the Chairman of the Committee of Electronics and Telecommunication of PAN; Marek Kłoczko, the President of Polish Economic Chamber; Stefan Kamiński, the President of Polish Economic Chamber of Electronics and Telecommunication;



Polish celebration of the International Day of Engineer gathered many participants

Prof. Dr hab. Sławomir Cieślak, Eng, the President of the Association of Polish Electric Engineers; Prof. Dr hab. Maria Kaszyńska, the Chairwoman of Polish Association of Construction Engineers and technicians; Eng. Jerzy Klimczak, MSc, the President of the Association of Engineers and Technicians of Chemical Industry; Vice-Presidents of FSNT-NOT: Stefan Góralczyk and Kamil Wójcik; Jerzy Rożek, the President of 118 years-old WDT; Martyna Jachimowicz, the editor-in-chief of Technical Review (Polish: Przegląd Techniczny); the Management of the Publishing House of SIGMA-NOT; the President Magdalena Borek-Daruk and Vice-President Anna Rybacka-Dybcio.

**HIGHLIGHTING THE ROLE OF ENGINEERS**

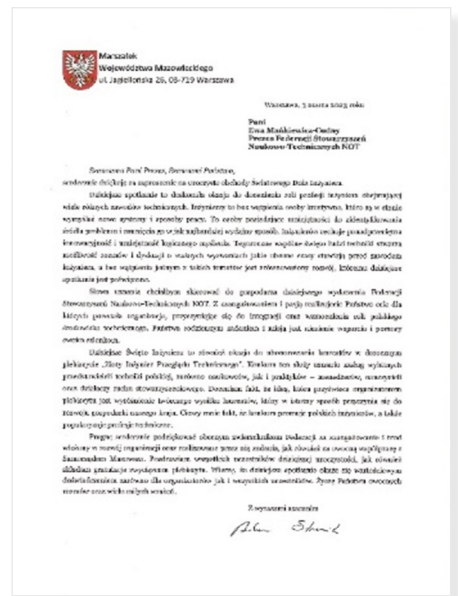
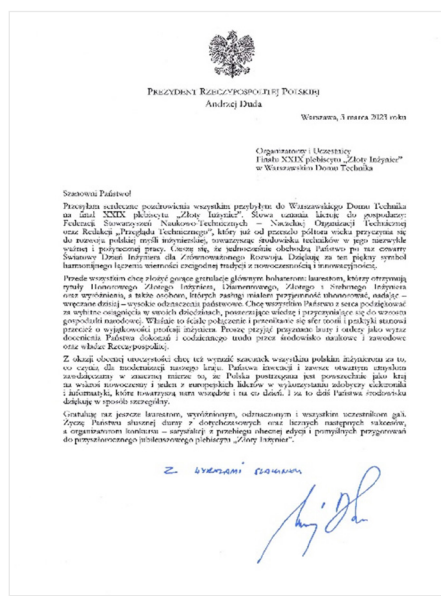
– It is only four years when the International Organization of Engineering Organizations together with UNESCO has celebrated the International Day of Engineer for the Sustainable Development whereas already 29 years ago, the "Technical Review" stated that during the system transformations, the engineers were somewhat left behind.... We do not need, however, to convince anybody that they played the important role; they are playing it now and will play it in the future all over the world. It is true not only in aspect of constructing, designing, producing, ecology and also in social aspect as engineering "went thorough" our lives. We recognised, therefore, that engineers deserve to have their own holiday. We decided it will be the day of the ceremony of summing up the Plebiscite for the title of "Golden Engineer" – Ewa Mańkiewicz-Cudny said in her inauguration speech.

*I do not need to convince the participants of this meeting about the role of engineers, but I would like their achievements to be also appreciated as it is in the case of artists, writers and painters. A beautiful picture is signed but who constructed a beautiful bridge of our building? Let's take care of our creators, let the creators of engineering to be found in the history, let their achievements be signed i.e. known. Polish engineers have the huge achievements and have contributed to the world progress, for example Pawel Baran, co-creator of Internet or Mieczysław Bekker, the creator of moon vehicle.*

*We should also help the young people, let them chose the profession of engineer which is creative and giving a lot of possibilities.*

*Our patron is Stanislaw Staszik who said that idea or concept is a "fancy of human mind until it is employed in practice".*

– Today, many specialists, social activists consider that to do in order to limit the negative consequences of bad or inappropriate application of many things. Each thing may be used for the good of man or his harm. It is not dependent on the creator of this thing but on every individual man as well as on values which we believe in. Are we able to limit ourselves? The moment came to think about it; the engineers are doing their best to make their work serve the good and could reverse the unfavourable phenomena, accompanying our development since the times of the successive industrial revolutions.



The letters sent by Andrzej Duda, the President of the Republic of Poland, and by Adam Struzik, the Marshall of the Mazovian Voivodeship



During the ceremony, the Minister Andrzej Dera handed the state distinctions to Ewa Mańkiewicz-Cudny, the President of FSNT-NOIT and Prof. Dr hab. Adam Wiśniewski, Eng, the former secretary general of the Academy of Engineering in Poland

The engineers try to do it as, according to the Staszic motto, "be useful for the nation". But when Staszic was saying his words, Poland did not exist. Today we have our country independent. All our laureates are useful for the nation" – the President of FSNT-NOT stressed.

Then, the Minister Andrzej Dera, the secretary of the State at the Chancellery of the President of the Republic of Poland, read out the letter of the President, directed to the participants of the ceremony. The successive point of the program included the state distinctions. It was led by Robert Broszkowski from the Bureau of Distinctions and Appointments of the Office of the President of Poland; the awards were handed by Andrzej Dera. **Ewa Mańkiewicz-Cudny**, the President of FSNT-NOT since 2002, the editor-in-chief of the "Technical Review" in the years 1989-2021, was honoured with the Commander's Cross of the Order of Polonia Restituta for the outstanding merits in promoting and popularization of Polish technical idea and for the contribution to the development of innovativeness of Polish economy. **Prof. Dr hab. Adam Wiśniewski, Eng.**, the former secretary general of the Academy of Engineering in Poland was decorated with the Officer's Cross of the Order of Polonia Restituta for the outstanding merits for development of mechanical engineering, for the achievements in the scientific-research and didactic activity and popularization of Polish scientific thought all over the world. He is a creator of the only Polish military patent utilized abroad: reactive armour ERAWA (Explosive Reactive Armour Wiśniewski Adam) in 1986, tested in tanks T-72 and in 1992 – PT-91(today, they are fighting at Ukraine).

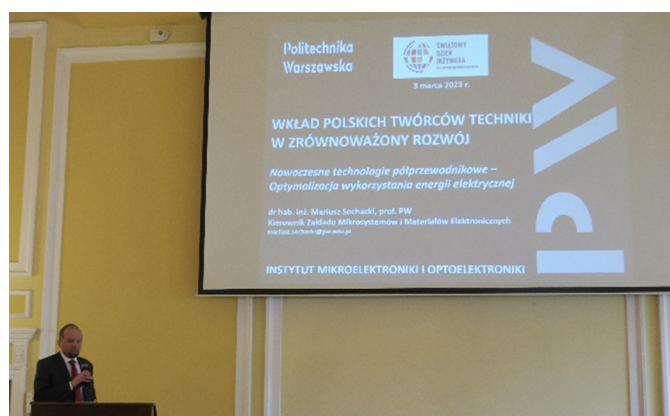
Ewa Mańkiewicz-Cudny expressed the words of gratitude to the President for the awarded distinctions and to the Academy of Engineering in Poland which applied for them. Then, Wiesław Kołodziejcki, the President of the Mazovian Fund of Credit Guarantees, read out the letter of the Marshall of the Mazovian Voivodeship, Adam Struzik.

## PRESENTATIONS

The series of the lectures was commenced by Dr hab. Mariusz Sochacki, Eng., Professor of Warsaw University of Technology (PW), the Head of the Department of Technology of Microsystems and Electronic Materials at the Microelectronics and Optoelectronics Institute of Warsaw University of Technology. He presented the lecture "Contribution of Polish creators of engineering to the sustainable development. Modern semiconductor technologies – optimization of electric energy utilization".

The lectured paid attention to the contemporary social challenges that is, the sustainable development and the increasing demands concerning the systems of processing with a high efficiency. The key role will be played by power electronics, the driving force of which is motorization industry. The heart of the electric car is the power electronics converter, constructed from the electronic components, utilizing silicon carbide (SiC) or gallium nitride (GaN).

Prof. Dr hab. Piotr Wolański, Eng, from Institute of Heat Engineering, Faculty of Power and Aeronautical Engineering of Warsaw University of Technology (PW), Łukasiewicz Research Network – Institute of Aviation, and the Honorary Chairman of the Committee of Space and Satellite Studies of PAN (Polish Acad-



emy of Sciences) delivered a very interesting lecture: "Achievements of Polish Space Science". He commenced from historical outline of the contribution of Poles to the development of space studies. Then he presented the examples of the contemporary Polish achievement in the discussed domain, such as e.g. development of module for feeding the camera CaSSIS (Colour and Stereo Surface Imaging System) in the Centre of Space Studies of Pan which sent the first images of Mars planet surface in 2016.

### THE LAUREATES TAKE THE FLOOR

The Laureates of the 29<sup>th</sup> edition of the Plebiscite for the title of "Golden Engineer of Technical Review" received the diplomas and statuettes from the hands of Ewa Mańkiewicz-Cudny, Martyna Jachimowicz and Andrzej Dera and Wojciech Murdzek.

Prof. Dr hab. Teofil Jasionowski, Eng., the „Diamond Engineer” expressed the words of gratitude in behalf of the Laureates; he wished them not only development in the field of engineering but also humanism as all engineers are humanists, knowing better or worse mathematics. If we want to control, compete and create the strong economy, let's invest in education. The future generations will be like the engineers' education, so I address the decision-makers to not forget about building the strong economy and strong engineering because the new generations are our pride. As being a person who has to deal with the university, I can say that the greatest pleasure for me is to open the doors to the young peoples who want to study not easy disciple, i.e. engineering sciences; they will be building the better future, so let's make the good.

The distinctions of the "Honorary Golden Engineer" have been handed over since the 10<sup>th</sup> edition to the persons who have a diploma of engineer but they were successful in completely different domains and are known from these "non-technical" achievements. The mentioned title is also given to the persons who do not have technical education but have contributed to the development of engineering in the outstanding way.

**Jan Krzysztof Ardanowski**, this year's Laureate, after having received the diploma, said that the future of the agriculture, the domain being especially important for human nutrition and solution of the problems, standing before our Globe, will be determined by the scientific-research in the solutions which can be introduced and implemented by the engineers. There are many problems, but the domain of the engineers is a precision agriculture, utilizing the satellite data and drones. Food production is significantly affected by reasonable management of water what can be helped by the hydro-engineers. We have also a lot to in respect of bioengineering. We have good agriculture and let's try to do our best as not to weaken it as the humanity needs food.

**Aleksandra Bednarek**, the youngest person, honoured with this title, ended her short words of thanks with her favourite quotation, coming from Patrick Süskind, German writer and screenwriter: "Aim at the Moon, because even if you don't strike a target, you will be among the stars".

During the couloirs meetings, she told me that her dream is to reach the Crown of Oceans – the swimming equivalent of

### The distinguished engineers of 2022:

Dr hab. Artur Jerzy Badyga, Eng,  
Prof. of PW; Eng. Arkadiusz Kanigowski,  
MSc, Eng. Paweł Kapusta,  
MSc, Eng. Jarosław Kuba,  
MSc, and Eng Marek Stolarski MSc.

### Silver engineers of 2022:

Prof. Dr hab. Anna Boczkowska,  
Eng, Dr hab. Andrzej Katunin, Eng.,  
Professor of Silesian Univ. of Technology,  
Dr Bożydar Neroj, Eng,  
Eng. Krzysztof Ozdarski, MSc,  
Eng. Roman Weglicki, MSc,  
Beata Wittman MSc (received by Alicja Walecka)

### Golden Engineers of 2022:

Dr hab. Włodzimierz Adamski, Eng,  
Eng. Tomasz Dębicki, MSc,  
Dr Sławomir Jasiński, Eng.,  
Eng. Andrzej Niechwiej, MSc,  
Dr Adam Rylski, Eng,  
Prof. Dr hab. Piotr Wolański, Eng,  
Eng. Lech Żak, MSc.

### Honorary Golden Engineers of 2022:

Eng. Jan Krzysztof Ardanowski, MSc,  
Eng. Aleksandra Bednarek, MSc,  
Dr Robert Perkowski

### Diamond Engineer of 2022:

Prof. Dr hab. Teofil Jesionowski, Eng.



Honorary Golden Engineers of 2022: Eng. Jan Krzysztof Ardanowski, MSc,  
Eng. Aleksandra Bednarek, MSc, Dr Robert Perkowski



The distinguished engineers of 2022: Dr hab. Artur Jerzy Badyga, Eng, Prof. of PW; Eng. Arkadiusz Kanigowski, MSc, Eng. Paweł Kapusta, MSc, Eng. Jarosław Kuba, MSc, and Eng Marek Stolarski MSc.



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Golden Engineers of 2022: Dr hab. Włodzimierz Adamski, Eng, Eng. Tomasz Dębicki, MSc, Dr Sławomir Jasiński, Eng., Eng. Andrzej Niechwiej, MSc, Dr Adam Ryński, Eng, Prof. Dr hab. Piotr Wolański, Eng, Eng. Lech Żak, MSc.



Diamond Engineer of 2022: Prof. Dr hab. Teofil Jesionowski, Eng.

the Crown of Earth, that is, the conquest of 7 most important water passages in long-distance swimming all over the world. – Two-three persons are swimming simultaneously at the comparable rate, they are accompanied by the boat so it is necessary to be patient and wait for the answer from the Federation, dealing with the organization of such passages via the La Manche Channel (CS&PF). At the end of 2017, I was informed that I could swim in ... 2021. And on 21, July, I crossed ca. 43 km during 13 h and 18 min. And now I am waiting for the answer from the Association, organizing the crosses via the Strait of Gibraltar, being more than twice narrower but characterized by considerably stronger currents on which the temperature of water is dependent. I think I will be able to try to cross it in 2024. –

Of course, I wish it to her in behalf of the readers of PT. I would like to add that after having crossed the La Manche Channel Aleksandra Bednarek got the Triple Crown of Open Water Swimming: the Triple Crown in swimming in open waters because earlier she passed Katalina Channel and went around Manhattan Island by swimming.

**Robert Perkowski** stated that for him, as manager, the received distinction was very important because engineer is someone who even if wants to fly among the clouds or approximate the stars, he must firmly stay on the earth. It is so because his decisions are based on the rules of physics, on everything what causes that the implemented undertakings are more real. And, therefore, the manager with engineering spirit is simply better.

**Wojciech Murdzek** commenced its speech from paying the congratulations to the persons, honoured with the state distinctions because they are a signal that the mission of engineer and the persons dealing with the "hard matter" serves the best to the state. – The significantly increased presence of the world of science shows that the challenge for the engineers is going up. They stand at the first line of transfer of knowledge and technology to a



The Laureates of the 29<sup>th</sup> edition of the Plebiscite for the title of Golden Engineer

real world what is referred to all of us. As the difficult things are going on, it should be precise and quick, adequate to the mentioned great challenges. The engineers can do it and they do it really. The international societies want Polish engineers. We will be needed by our neighbours in the gigantic process of reconstruction of Ukraine in which we will utilize the newest engineering knowledge and the solutions in order to help them. We have to develop more dynamically our scientific and engineering potential, improve the quality of life and functioning of our society, strengthen our international position and cause that the contribution to the economy could become the contribution of modernity to the future. Let's encourage to a hard work according to our dream, conquest of the Cosmos and entering the world of nanotechnology.

## THE LECTURES

After a short coffee break, **Prof. Dr hab. Janusz Wojtkowiak, Eng**, the director of Institute of Civil and Environmental Engineering at the Faculty of Environmental Engineering and Energy of the Poznań University of Technology submitted the lecture: "The future of Polish power system: atom, renewable sources of energy (OZE) and hydrogen". His lecture was based on the annex to the publication "Energy Policy of Poland up to 2040" where there were mentioned three key pillars: fair transformation, zero-emission power system and good quality of air and 8 detailed tasks.

He reminded that in 2022 the power of all sources of electric energy (conventional and OZE), being installed in Poland, exceeded, for the first time, 60 GW, from which 22GW (ca 36%) could be generated by OZE but due to atmospheric conditions, they delivered only ca. 17%. In respect of the power installed in 2022, the solar energy with 52%-participation in OZE exceeded, for the first time, the wind energy (34%) after which water power (9%) is unchangeably found. The sources, utilizing biogas and biomass

account somewhat for 5%. It is planned that in 2040, OZE will produce 28.5% energy in Poland. The lecturer presented also some greatest (in 2022) photovoltaic and wind farms, including the plans concerning the sea wind farms and hydro power plants and mentioned also biogas producing plants. He discussed also "Polish hydrogen strategy up to 2030 with the perspective up to 2040" and the perspectives for development of nuclear energy system in Poland.

**Engineer Wiesław Paluszyński, MSc**, as the President of Polish Information Processing Society, commenced his short lecture: "Artificial Intelligence (AI) – threat or development?" with the statement that he had already prepared experts – specialists for us. We may read in the newspapers that it enters e-learning and ChatGPT is tried in business and in the USA it gained medical competences. In the opinion of Wiesław Paluszyński, however, *ChatGPT has not caused any revolution. All techniques employed by Open AI are nothing new. It is not a technological breakdown comparable to conquest of atom. It appeared as a service being accessible to mass user but in comparison with Google browser, ChatGPT has one advantage: it gives one answer which we trust in; it makes it immediately more trustworthy – "human". It is not a technological revolution because the technologies, which created it, have been developed for dozens of years; it is not super-intelligent computer, as well.*

The official part of the ceremony was ended by the presentation of the students from the Scientific Circles under the title: "The sustainable development and transformation, as perceived by the young engineers". After the presentation, the Laureates and the guests spent time at the social meeting.

Jerzy Bojanowicz  
Photos: Janusz M. Kowalski