

INTERNATIONAL DAY OF ENGINEERING OF SUSTAINABLE DEVELOPMENT

interview with Ewa Mańkiewicz-Cudny, president of FSNT-NOT

ŚWIATOWY DZIEŃ INŻYNIERII ZRÓWNOWAŻONEGO ROZWOJU
wywiad z Ewą Mańkiewicz-Cudny, prezes FSNT-NOT

Engineering has, for centuries, played a key role in civilization development of our Globe and, also in solving of the most important local and global problems, including, *inter alia*, ecological safety. It decides on technological, social and economic progress in all domains, with the consideration of the principles of sustainable development. The contemporary world necessitates more and more modern engineering knowledge in order to minimize the consequences of devastation of natural environment and climatic changes, reduction of contamination, introduction of zero-emission industrial production and improvement of living standard and health level of inhabitants.

– The celebration of the International Day of Sustainable Development Engineering is the occasion for debate on the mentioned subject in the environment of scientists and practitioners – Ewa Mańkiewicz-Cudny, the President of FSNT-NOT says.

Jolanta Czudak: *The achievements of the engineering creators have been known for centuries; why as late as now are we celebrating the International Day of the Sustainable Development?*



Ewa Mańkiewicz-Cudny: Engineering is undoubtedly one of the basic domains, deciding on civilization progress of the world, with the consideration of the principles of sustainable development. Such practices have been appreciated for a long time in various branches of industrial and constructional production, energetic systems, transport, waste management, or

environment restoration. Each sector that utilizes resources and natural raw materials should employ such measures. The role of engineers in the discussed activity was always a leading one but until the recent time, they had not their holiday. Such resolution was adopted as late as during the International Congress of Engineering in 2019, in Melbourne, being organized by the World Federation of Engineering Organizations (WFEO) and UNESCO.

Who was the initiator of introducing the International Day of Sustainable Development Engineering?

WFEO and UNESCO in common suggested proclaiming 4 March as the International Day of Sustainable Development Engineering during the debates of the mentioned above Congress, participated by ca. 3 thousand delegates from more than 100 countries. In the speeches of the participants, it was stressed that the question of sustainable development was most frequently discussed by economists and lawyers in the context of legal regulations or financial operations. The most important aspect, concerning the indication of the direction for civilization development which is dependent on the scientific-technological progress, was omitted. That's exactly that the scientists, engineers and technology creators have a deciding voice in the implementation of ideas of the sustainable development. The participants of the discussed Congress recognized that the world listened them not enough, and focused the attention mainly on the economic consequences; therefore, the introduction of the International Day of Sustainable Development Engineering will become the occasion for appreciation of the role of engineering creators and their achievements. It will allow a more comprehensive discussion on the challenges standing before the engineers, with the consideration of the principles of combining the development and ecological conditions, and with the indication of the role of engineering activity in the life of the societies and single persons.

What are the most important challenges for the engineering environment in respect of implementation of the sustainable development idea?

The increasing climatic changes generate many problems, requiring their solution by the engineers. Reduction of greenhouse gas (GHG) emission, development of new technologies in respect of reasonable water management (treatment and saving), unquestionable savings of energy, natural resources and raw materials, minimization of the consequences of natural disasters, development of circular economy system are only certain examples of the mentioned activity. The list is long and

includes introduction of technological changes not only in the industrial, urbanistic, transport or economic activities but also in biotechnology, telemedicine and many other domains. The change in social awareness in respect of utilizing our Planet resources is also meaningful. Practical utilization of engineering achievements improves living standard, facilitates a wide access to culture property, modern diagnostic and treatment methods. Pandemic COVID-19 showed the meaning of engineering creators, not only in creation of technologically advanced equipment for human life saving but also in development of informatics tools which ensured the possibility of remote communication of the society and the possibility of conducting education and vocational work. Engineering plays a deciding role in the implementation of the assumptions of sustainable and civilization development. The common holiday of the engineering environment creates the possibility of discussion on the mentioned achievements and challenges and, what is also important, of showing them to the society.

Are the engineers eager to join in the celebration of their holiday?

We organized it only twice and, moreover, in rather unfavourable situation due to pandemic but the members of Polish delegation in Melbourne accepted enthusiastically information on the establishment of the International Day of Sustainable Development Engineering. Polish delegation during the Congress in Melbourne was quite numerous. It was 23-person representation of scientific, engineering and industrial environment. We all decided to join actively in the celebration of the discussed holiday which has to emphasize the role of engineering creators and the meaning of their work for the society and economy. In 2020, Poznań University of Technology was the partner of FSNT-NIT. The first celebration of the discussed holiday was held in Poznań under the motto of "Sustainable development". It was dedicated to the perspectives for artificial intelligence and resembling the contribution of Polish engineers to development to the world civilization. In 2021, the ceremony was organized under the motto "Healthy Planet" and was organized together with Silesian University of Technology but in "on-line" formula.

What will be the motto of this year's celebration of the International Day of Sustainable Development Engineering?

This year, the celebration of March, 4 is carried out under the motto "Let's reconstruct better engineering for the future"; our partner is Warsaw University of Technology. Better engineering is understood as such technology which serves people well, improves living standard, ensures safety and eliminates hazards. We live, unfortunately, in the world of increasing military, climatic,

ecological, health, existence and cybernetic threats and many other dangers. It is dependent on the engineering creators how we will cope with the mentioned problems. It is the civilization is to survive, it is the last moment for reconstruction of better technology. It is our main subject; apart from it, we want to talk about the contribution of engineers to the development of science, medicine, technology and economy. The inaugurating speech of Prof. Mariusz Malinowski, the Vice-Rector of Warsaw University of Technology for scientific matters will be dedicated to new technologies in energetics as the answer to the challenges of the European Green Deal. From among many important issues, there will be found the problems connected with the utilization of the crucial medicinal solutions in diagnostics and treatment of patients, including, inter alia, the persons with hearing defects. Prof. Henryk Skarżyński will share with his knowledge and achievements. He is not only the outstanding physician but also the creator and inventor of implants and modern hearing equipment which serve the patients all over the world to come back to the world of sounds. He created the transnational centre in Falenty where the treatment of the patients as well as education of specialists is carried out. We want to show that everything is possible owing to engineering. We will also focus on digitalization, internet of things, industry 4.0, and standardization which optimizes all process, and on perspectives for education of engineers for the future. During our conference, the appearance of the representatives of Student Circles of Warsaw University of Technology is provided. They will tell us about their achievements as young creators. The celebration of the International Day of Sustainable Development Engineering will be commenced at 10.30 a.m. The conference will be held in the on-line system. It is possible owing to NOT Informatics company, functioning in the structures of the Federation of Science and Engineering Associations (FSNT)-NOT. The mentioned company created a perfect informatics system and various applications aiming at the support of our statute activity and of the associations acting in the Federation. We have a safe communicator for the remote organization of events and secret voting system. Owing to the mentioned instruments, we may successfully implement the on-line meetings. This year's celebration will be also prepared in the mentioned formula.

We invite to the participation in the discussed event, after the filling the previous formalities connected with the registration at the page of FSNT-NOT (sdi.enot.pl)

It was the interview with Ewa Mańkiewicz-Cudny, the President of the Board of FSNT-NOT, carried out by Jolanta Czudak (03.03.2022)

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