22nd Informative & Training Symposium

DIAGNOSTICS & OVERHAULS OF POWER EQUIPMENT

Diagnostics as a base for operation strategy

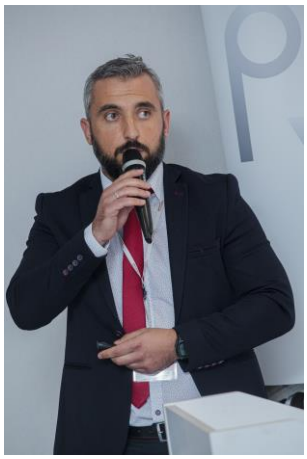
The 22nd Informative & Training Symposium DIAGNOSTICS AND OVERHAULS OF THERMO-MECHANICAL POWER EQUIPMENT – Diagnostics as a base for operation strategy organized by Przedsiębiorstwo Usług Naukowo-Technicznych 'Pro Novum' Sp. z o.o. took place on 8-9 October 2020 in Hotel Courtyard® by Marriott® Katowice City Center, Katowice (Poland).

The Patronage of Honour over Symposium was provided - as in previous years - by the Office of Technical Inspection and the Economic Society Polish Power Plants. The Substantive Partners of this year's edition of the Symposium were TAURON Wytwarzanie SA and ENEA Elektrownia Połaniec SA.

The media patronage over 22nd Symposium was taken by all the most important industry magazines: Energetyka, Energetyka Cieplna i Zawodowa, Nowa Energia, Dozór Techniczny and by a web portals cire.pl and kierunekenergetyka.pl., as well as the Europerspektywy magazine.

Due to this year's limitations resulting from the epidemic situation, the number of participants of the Symposium was significantly reduced, but this did not affect the program of the event. During the two days of the Symposium, 6 sessions were held, during which 14 papers were delivered.






The Pro Novum Symposium once again showed that in the power sector there is a need for a comprehensive discussion on technical topics and exchange of experiences, and a more intimate group of participants encouraged lively discussions and taking up important topics.

The subject of the 22nd Symposium turned out to be actual and important for the Polish power sector, just like the one from its previous editions. The power sector or, more broadly, the economy of the European Union has a vision resembling a strategy until 2050. The horizon of the strategy for our power sector is 2025 - it is determined by the Capacity Market and the planned, significant increase in generation from RES until 2030. However, the economic and social impact of the epidemic could modify these plans. One thing seems certain, conventional units have entered a very unusual regulatory phase of operation. They will work shorter, with lower power, they will be activated more often. They will work under strong economic pressure and with declining technical competences, especially in the field of technical maintenance. Long operated power units entered the last stage of operation. It may take from 3 to 15 years for individual power units. During this time, diagnostics should not only be a source of information. Properly performed, it can be a source of knowledge, and this in turn a source of strategy, especially in terms of safety and availability. Directly and indirectly, in many reports it was pointed out that the amount of research does not have to translate into the quality of knowledge. Then their cost may turn out to be unacceptable. However, the knowledge needed to ensure safety and availability can be obtained at an acceptable cost. For this purpose, we should use many years of experience and protect competences against their faster exhaustion than the durability of devices. In particular, remote diagnostics and modern methods of advanced analytics and artificial intelligence should be used. This approach to diagnostics was visible in many papers, perhaps the most delivered by the representatives of Enea Elektrownia Połaniec SA, TAURON Wytwarzanie SA, Pro Novum sp. z o.o. and AGH. Pro Novum has been offering remote diagnostics for thermo-mechanical equipment for over 15 years. Its latest versions are equipped with advanced analytics, crack mechanics and artificial intelligence algorithms. This form of diagnostics improves the safety of devices, supports the competence of personnel, and some of its versions implemented in the scale of one class of power equipment and power units also enable the exchange of experiences. This is the best approach to ensure the safety and availability of power units and power equipment in the last phase of their service life, while increasing the Operator's requirements.