

Greetings From the Chair of the JSME Power Energy Systems Division (PESD)



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I would like to say a New Year's greeting to readers, reviewers, and editors of ASME *Journal of Nuclear Engineering and Radiation Science* (NERS) as a Chair of the Power and Energy Systems Division (PESD) of the Japan Society of Mechanical Engineers (JSME).

Currently, natural disasters due to climate change, such as high temperatures, heavy rainfall, dryness, increased number and size of typhoons, are becoming more frequent all over the world, which has a great impact on the harvest of crops and the reproduction of organisms. From the perspective of preventing global warming, which is a major cause of this problem, the reduction of greenhouse gases has become an urgent issue around the world. In Japan, the Prime Minister announced two years ago that the country would be carbon neutral by 2050. In order to realize such a society and make it sustainable, it is important to establish technologies by promoting the development of new technologies such as hydrogen utilization and electricity storage in cooperation with the rest of the world.

In Japan, where energy self-sufficiency is less than ten percent, it is important to use all types of energy, including renewable energy. In order to achieve a decarbonized society, we need to reduce our dependence on fossil fuels. However, our country cannot survive on renewable energy alone, which is difficult to supply in a stable manner. Especially, we need to quickly restart nuclear power plants, many of which have been shut down since the Great East Japan Earthquake in 2011. In order to restart nuclear power plants, we need to take measures to ensure safety, and we also need to widely send our achievements to the public so that the public will accept nuclear power. The ASME Journal of NERS is an important and powerful source of information for this purpose. We, the JSME PESD, will also send information on trends in many technological issues, such as the stable supply of energy and technological development of new power generation methods.

In our country, the number of young engineers is decreasing. In particular, the decrease in the number of engineers involved in nuclear power becomes a problem, and putting a stop to it—is also an important issue. In order to increase the number of young engineers and support their development, it is important to create a place where they can develop new technologies and conduct research in an intriguing way, and present their findings to a wide

audience. One of the things that play a role in this is the ASME Journal of NERS. The JSME PESD is also working to increase the number of young engineers by sending the results of new technological research on its website, in academic journals, and in other media.

The annual International Conference on Nuclear Engineering (ICONE) is also a place to present and share technical information. Considering the importance of the ICONE, the conference was successfully held under the efforts of many people involved, including ASME, CNS, and JSME. I hope that ASME will continue to provide opportunities for students and young researchers to make presentations and disseminate information regardless of the conference format.

Two years ago, COVID-19 has greatly changed our living and working environment. Meeting and other gatherings are disappearing, and there are fewer opportunities for people to share physical space with others and more online and remote gatherings, not only for business and meetings but also for cultural entertainment such as music concerts. The same is true for academic activities, domestic and international symposia, and conferences are now online. While there are advantages in not having to spend time traveling, there are also disadvantages such as not being able to have face-to-face discussions, but the current situation will become mainstream in the future and the previous situation will never return. However, despite these changes, the ASME Journal of NERS will continue to be an important journal that sends forefront information to the world as it always has.

I hope that ASME will continue to be a top organization that contributes greatly to the world by sending out a lot of important technical information and that the ASME Journal of NERS will continue to be a journal that sends out information to the world. We, the JSME PESD will continue to contribute to the development of society by cooperating with ASME NED in the development of the fields of nuclear engineering and radiation science.

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