



MT-22 Opening Speech  
12 September 2011

## BY DIRECTOR-GENERAL OSAMU MOTOJIMA

Good morning, ladies and gentlemen, distinguished guests,

First of all, it gives me great pleasure to welcome you to this 22nd International Magnet Technology Conference (MT-22). Over 850 of the world's foremost experts have gathered here in Marseille in order to discuss and advance the science and technology of magnet applications—from the MRI machines that allow for non-invasive examination of the human body ... to high-energy particle physics ... and to the manufacturing of the powerful superconducting magnets that will contain, shape, and drive plasmas in fusion devices such as ITER.

china

eu

india

japan

korea

russia

usa

Superconducting coils and related technology are indispensable for the success of ITER project which has come into the real era of construction phase. You will confirm this in this conference to hear our presentations and by site tour to Cadarache.

The conference has sessions on many other aspects of magnet technology. There will be plenary presentations in high energy physics, in medical diagnostics and in power applications. I hope that you, as participants, will enjoy and exploit the opportunity to learn from colleagues who solve different problems with similar technologies.

In parallel to the technical sessions of the conference, the ITER Organization has organized, together with the CEA, a scientific and industrial exhibition here at the conference, which will allow scientists and engineers involved in magnet technology research to interact with the companies and organizations that are responsible for building the actual hardware that comprises the world's most sophisticated and advanced magnet systems.

The energy and environmental challenge confronting the world in the years ahead is truly monumental. In this regard improvements only in our current technologies will not be sufficient to meet this challenge. New sources of energy are now in demand. This is why we are building ITER. We believe that ITER will demonstrate the feasibility of fusion power which will then provide humanity with essentially limitless energy that is safe, non-polluting and environmental-friendly. A key technology to the development of



this energy source is magnets. ITER is now building the largest set of magnets ever seen and therefore the ITER Organization is an appropriate host for this conference.

This conference coincides with the 100th anniversary of the discovery of superconductivity by Kamerlingh Onnes. One hundred years are enough long time for the development of superconducting technology. This technology has had a huge impact on magnet technology, where it is critical to future commercial exploitation. The interest in this field is large and vibrant, as clearly indicated by the record number of 979 submitted abstracts to this conference.

And now let me finish by wishing you an inspiring and successful MT-22 Conference!

Thank you.