Junya Nitta　(Arcadia Systems Inc., Director)

Graduated from the Department of Electronic Engineering, Faculty of Engineering, Doshisha University in 1977. After working at YAMAHA Co., Ltd.,he joined Japan Mechatron Co., During that time, he was engaged in measurement and control application program development and system engineering for about 20 years. After that, he transferred to Arcadia Systems, Inc. About 20 years ago, he encountered harmonic diagnostic technology and engaged in activities to promote it.

In the meantime, with a grant from the government, he developed a prototype of HAMOS (a harmonic-based condition monitoring system for electrical equipment).
He specializes in high-frequency mobile communications, evaluation and analysis of semiconductor properties, temperature-dependent measurement technology for material strength (Young's modulus, rigidity, Poisson's ratio, internal friction), and system development (-150 degrees to +300 degrees, RT to 1250 degrees). Currently, he is focusing on the dissemination of harmonic diagnosis surgery and the guidance of subsequent generations.

III-4　Degradation diagnosis of Heliotron components by higher harmonics diagnosis method

Abstract

In recent years, "predictive maintenance" has been attracting attention in the world of equipment maintenance. It is expected to accelerate further in the flow from conventional TBM to CBM. Even if you don't take the SDGs and the big step, it is a natural flow to use things that can still be used to the fullest of their life, and then to perform appropriate maintenance and parts replacement before they fail.

One of the most suitable diagnostic technologies for predictive maintenance is harmonic diagnostic technology. Non-contact, live-wire diagnosis is safe and simple, so it can be applied in a wide range of fields.

In this study, harmonic diagnostic technology was used to diagnose the auxiliary equipment (various pumps of the vacuum system and the cooling system) of Heliotron J. Here are some of the diagnostic cases.