

Live

Recent Development in Phase Converter Technologies and VFDs

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Abstract: Founded in 1999, Phase Technologies developed Phase Perfect® digital phase converters, the first major advance of phase conversion technology in decades. Recognized as the world's leading manufacturer of phase converter technologies, the company expanded its product offerings to include variable frequency drives (VFD).

Specializing in VFD with Active Front End technology, Phase Technologies produces the only low harmonic, fully regenerative, phase-converting VFD that complies with IEEE 519, the international standard for allowable harmonic levels on utility mains. The company has an extensive product line-up of low harmonic, fully regenerative drives in both three-phase and phase-converting models.

Phase Technologies relies on a team of in-house power electronics and mechanical design engineers to develop innovative products, encompassing all aspects of hardware and firmware design. All products are manufactured at our facilities in the USA under exacting quality standards. In-house processes include printed circuit board population and custom magnetics fabrication. The company operates a certified UL 508A panel shop to integrate our drives into rugged outdoor panels with custom options for applications including irrigation, oil and gas production and general industrial control.

Phase Technologies was founded by one of the SDSMT alumni, Dr. Larry G. Meiners and his associates. Dr. Meiners was Professor in Electrical Engineering and Physics departments at SDSMT. This presentation provides unique opportunity to students and faculty to learn about the product development and quality control aspects.

Biography: **Peda V. Medagam** received the B.Tech degree in electrical and electronics engineering from the JNTU College of Engineering, Kakinada, India in 2000, M.Tech degree electrical and electronics engineering from the National Institute of Technology, Warangal, India in 2002 and Ph.D. degree in controls and power electronics from the Southern Illinois University, Carbondale, IL, USA in 2008. Since June 2008, he has been with Phase Technologies, Rapid City, SD, where he is currently Chief Engineer. His research interests include AC drives, active harmonics filters, DC – DC converters, nonlinear control and Phase converters.

Jack Yang received his B.S. and M.S. degrees in physics from Jilin University, Changchun, China. He received his M.S. in physics and M.S. in electrical engineering from SDSM&T. He has been working for Phase Technologies LLC for the Past 15 years as a senior design engineer. Before joining Phase Technologies, he worked as a test engineer for Sanmina-SCI for close to two years. He is currently also a Ph. D student of the MES program of SD School of Mines. His advisor is Dr. Charles Tolle of the ECE department.

Tuesday Feb 28, CB#204W at 11 am