Abstract Submitted
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First experimental results from DC/DC and AC/DC plasma-based power transformers[1] AARON MCEVOY, WILLIAM GIBSON, RICHARD NEBEL, Tibbar Plasma Technologies, Inc. — A plasma-based power transformer has been built and operated in both DC/DC and AC/DC mode. The proprietary Tibbar Plasma Technologies, Inc. transformer design consists of two cylindrically symmetric helical primary electrodes surrounding a low temperature plasma within which a secondary axial current is generated. Initial experimental results have compared well with simulations and moderate conversion efficiencies have been observed. A new proprietary device is currently being constructed that will utilize 3-phase 480 VAC input to achieve higher conversion efficiency and output power. A description of the apparatus and several potential applications will be presented along with preliminary experimental data demonstrating the DC/DC and AC/DC conversion processes.

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Aaron McEvoy
Tibbar Plasma Technologies, Inc.

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