

“Wind Energy Manufacturing”

Prof. Frank Peters

**Associate Professor, Department of Industrial & Manufacturing Systems Engineering
Iowa State University**

Abstract

Major advancements in manufacturing are needed to reduce the weight of components, increase throughput, and reduce costs to a level that is more competitive with other energy sources. An overview of the manufacturing processes and systems used to produce the large wind energy components will be given with discussion of what is needed in the future to achieve the weight and cost goals. This talk will also provide some initial findings of a new project to improve the productivity, throughput and reliability of blade manufacturing operations.

Interest Statement

Manufacturing system and process improvements is the common theme of Dr. Frank Peters' research work. He has worked with a variety of industries to develop solutions to improve quality and deliverability. Specific examples in the metalcasting field include heat treatment control and optimization, rapid patternmaking, decreasing product variability, and reducing the measurement error associated with visual inspection. Other areas of interest include dimensional variability of products, metrology and fixturing. Most recent work is on manufacturing system improvements and automated solutions for the manufacture of large composite wind blades.