

Concepts to Facilitate Very Large Blades

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Sandia National Laboratories (SNL) is developing concepts that will enable the utilization of longer blades that weigh less, are more efficient structurally and aerodynamically, and impart reduced loads to the system. Several of these concepts have been incorporated into subscale prototype blades. The description of these concepts and the results of prototype blade fabrication and testing are covered here.

I. Introduction

Sandia National Laboratories (SNL) is developing concepts that will enable the utilization of longer blades that weigh less, are more efficient structurally and aerodynamically, and impart reduced loads to the system. Several of these concepts have been incorporated into subscale prototype blades. The description of these concepts and the results of prototype blade fabrication and testing are covered here.

The SNL wind energy department focuses on producing innovations in blade technology. But, what is so important about blades? Blades are the only unique wind-turbine component, and they capture all of the energy and produce all of the system loads.

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