Wind gust generator

Wind gust generator

Design, Testing and Numerical Modelling of a Low

This work presents the design, experimental characterisation, and numerical modelling of a low- speed gust generator based on oscillating vanes, capable of producing high-amplitude gusts in strongly ...

DESIGN AND EXPERIMENTAL CHARACTERIZATION OF A ...

Notably, to obtain a gust flow in wind tunnel experiments, a specific device is needed - a so-called gust generator.

Artificial wind gust generation based on an adaptive nozzle design

First steps to generate these types of wind gusts by an artificial wind gust generator were proposed by Wood et al. (2022) and are based on a rigid plate mounted on a fast-moving tooth belt axis.

Development of a Novel Small-Scale Gust Generator Research ...

In this paper, a novel small-scale gust generator research facility was designed and examined for generating Sears-type gusts. The design scheme, integration with the wind tunnel, ...

DESIGN AND TESTING OF A LOW SUBSONIC WIND TUNNEL ...

Figure 1: The generator intends to reproduce discrete gust in the wind tunnel for load alleviation experiment on a semi-wing with a free end tip. vref is the free stream flow speed and vgust the gust ...

Designing, Manufacturing, and Testing a Wind Gust Generator

A gust generator is a necessary feature for a wind tunnel because the response of a system can be analyzed when it is introduced to specific gusts parameters. Wind gusts change the pressure ...

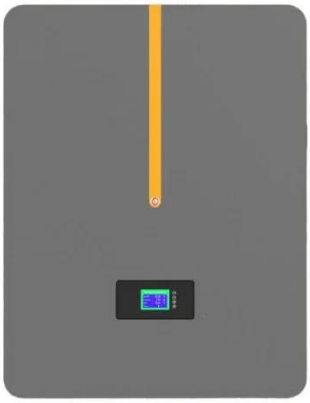
Experimental study on a novel wind gust generator based on

an ...

The paper presents a novel design of a wind gust generator based on an adaptive nozzle for wind tunnel applications and its experimental investigation. The key feature of this design is the ...

Simulation and Modeling of Flow Generated by Gust Generator in ...

Due to the cross-section size limitation and the requirement of the generated gust magnitude, a four-vane gust generator configuration is suitable for this wind tunnel.



Development of a Low-Turbulence Transverse-Gust Generator in a ...

This work demonstrates the viability of a novel transverse-gust generator that is capable of producing a controllable time-varying gust without increasing the turbulence level within a large ...

A numerical method to mimic an experimental wind gust generator: ...

The aim of the present setup is to create a numerical counterpart of the experimental wind gust generator of Wood, Breuer, and Neumann 1 (i.e., the paddle). This shall facilitate a deeper ...

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