PURDUE INNOVATES | Office of Technology Commercialization

Fan Proof Goal Post With Optimally Offset Support Structure

A dual gooseneck football goal post design provides enhanced strength, stiffness, and durability to safely support significant fan loading while maintaining a familiar aesthetic.

Football goal post are typically fabricated in a "slingshot" shape with a single gooseneck. Celebrating fans often tear down goal posts, even those that are marketed as being able to withstand fan loading, presenting a clear danger to the celebrating fans and a potential liability to athletic departments.

Researchers at Purdue University have developed a design for a goal post that consists of a dual gooseneck construction with the crossbar mounting locations carefully chosen for strength, stiffness, and durability. The additional material preserves an aesthetic appearance similar to the single gooseneck construction. The choice of placing the crossbar to gooseneck connections at the optimal offset distance gives several non-obvious advantages. This technology is designed to support the weight of 80 fans, each weighing 250 pounds.

Advantages:

-Preserved aesthetic appearance

-Possesses strength, stiffness, and durability

Potential Applications:

-Football stadiums

TRL: 9

Intellectual Property:

Provisional-Patent, 2002-12-16, United States | Design Patent, 2002-12-23, United States | Design Patent, 2004-11-22, United States

Technology ID

62136

Category

Buildings, Infrastructure, & Construction/Structural Health Monitoring
Materials Science & Nanotechnology/Materials Testing & Characterization Tools

Authors

Eric Harpenau
Zachary Millikan
Joel Morris
Richard Polk
Kraig Strange
William Szaroletta

Further information

Joe Kasper
JRKasper@prf.org

Nathan Smith
nesmith@prf.org

View online

Keywords: Football goal post, dual gooseneck construction, goal post design, fan loading resistance, stadium equipment, athletic department liability, goal post safety, crossbar mounting, slingshot goal post, durable goal post, Mechanical Engineering