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Selected publications of Dawn C. Jegley:

Stein, M. and Jegley, D. C.: Effects of Transverse Shearing on Cylindrical Bending, Vibration, and Buckling of Laminated Plates. AIAA Journal, vol. 25, no. 1, 1987, pp. 123- 129.

Jegley, D., Tatting, B., and Gürdal, Z., "Optimization of Elastically Tailored Tow Placed Plates with Holes," Proceedings of the AIAA/ASME/ASCE/AHS/ASC 44th Structures, Structural Dynamics and Materials Conference, Norfolk, VA, April 2003, AIAA 2003-1420.

D.C. Jegley, B.F. Tatting, and Z. Gürdal.Tow-steered panels with holes subjected to compression or shear loading. In Proceedings of the AIAA/ASME/ASCE/AHS/ASC 46th Structures, Structural Dynamics and Materials (SDM) Conference, Austin, TX, April 2005. AIAA 2005-2017

Dawn C. Jegley (Mail Stop 190, NASA Langley Research Center, Hampton, VA 23681, USA), "Improving strength of postbuckled panels through stitching", Composite Structures, Vol. 80, No. 2, September 2007, pp.298-306, doi:10.1016/j.compstruct.2006.05.024
ABSTRACT: The behavior of blade-stiffened graphite–epoxy panels with impact damage is examined to determine the effect of adding through-the-thickness stitches in the stiffener flange-to-skin interface. The influence of stitches is evaluated by examining buckling and failure for panels with failure loads up to 3.5 times greater than buckling loads. Analytical and experimental results from four configurations of panel specimens are presented. For each configuration, two panels were manufactured with skin and flanges held together with through-the-thickness stitches introduced prior to resin infusion and curing and one panel was manufactured with no stitches holding the flange to the skin. No mechanical fasteners were used for the assembly of any of these panels. Panels with and without low-speed impact damage were loaded to failure in compression. Buckling and failure modes are discussed. Stitching had little effect on buckling loads but increased the failure loads of impact-damaged panels by up to 30%.

Dawn C. Jegley (NASA Langley Research Center, Hampton, VA 23681, USA), "Study of compression-loaded and impact-damaged structurally efficient graphite-thermoplastic trapezoidal-corrugation sandwich and semisandwich panels" (publisher and date not given, ProQuest-CSA)
ABSTRACT: The structural efficiency of compression-loaded trapezoidal-corrugation sandwich and semisandwich composite panels is studied to determine their weight savings potential. Sandwich panels with two identical face sheets and a trapezoidal corrugated core between them and semisandwich panels with a corrugation attached to a single skin are considered. An optimization code is used to find the minimum weight designs for critical compressive load levels ranging from 3000 to 24,000 lb/in. Graphite-thermoplastic panels based on the optimal minimum weight designs were fabricated and tested. A finite element analysis of several test specimens was also conducted. The results of the optimization study, the finite element analysis, and the experiments are presented. The results of testing impact damage panels are also discussed.

Dawn C. Jegley; Andrew E. Lovejoy, "The Use Of The Stags Finite Element Code In Stitched Structures Development", AIAA Paper AIAA 2014-0845, 55th AIAA Structures Meeting, January 13-17, 2014