



Institut of
Composite Structures
and Adaptive Systems

TESTING AND ANALYSIS OF OMEGA STRINGER DE-BONDING

The interface strength between omega stringers and the skin was tested at DLR Braunschweig. Therefore the stringer is teared-off with a new test device using a standard test machine. Pull angle can be varied from 0° to 45°. With the help of this device omega stringers can be tested according to stresses dominated by fracture Mode I and stresses from combined fracture Mode I and Mode II. This allows to compare different omega stringer geometries and bonding technics. In parallel a de-bonding analyses was made using different numerical approaches (e.g. 3D continuum damage model).

Picture:
Omega Stringer Tear-off Test Device with Specimen



DLR

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für Luft- und Raumfahrt e.V.
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