The interface strength between omega stringers and the skin was tested at DLR Braunschweig. Therefore, the stringer is tear-off with a new test device using a standard test machine. Pull angle can be varied from $0^\circ$ to $45^\circ$. 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 analysis was made using different numerical approaches (e.g. 3D continuum damage model).