

DEBONDING OF ADHESIVE JOINTS - A REVIEW OF AVAILABLE TECHNOLOGIES IN THE PERSPECTIVE OF CIRCULAR ECONOMY

ABSTRACT:

Circular economy is a model of production and consumption in which existing materials and products are separated, reused, repaired, refurbished and recycled for as long as possible. In this way, the life cycle of the products is extended. In practice, this means that waste is reduced to a minimum. Once a product has reached the end of its life, resources and materials remain in the economy. They can be used productively again and again and continue to generate added value.

The recycling economy stands in contrast to the traditional, linear economic model ("throwaway economy"). This model relies

on large quantities of cheap, easily accessible materials and energy.

The "separation" manufacturing process is gaining new significance with the aim of recovering raw materials. The debonding of adhesive joints is listed in DIN 8580 under Section 3.5.8. However, the aforementioned objectives of the circular-flow economy are not addressed satisfactorily.

The aim of the paper is to provide an overview of available technologies for separating and recovering parts and adhesives from bonded joints.