

CREATE AN OPTIMAL STRESS DISTRIBUTION WITH ADHESIVES

It is obvious that that using adhesives results in a better distribution of stress than when screwing, nailing or riveting.

Increasingly, designers, engineers and R&D departments are looking at using adhesives as the first option in the design phase. Bonding with adhesives gives various advantages compared to traditional joining techniques.

An advantage of using adhesives is that the stress distribution in the material is equal after assembly. Where you find an irregular tension and peak stress in a mechanical or welded joint, an adhesive joint gives an uniform tension over the entire surface.

A mechanical or welding connection leads to deformation of the material, and therefore to weakening. Firstly, because a hole has to be drilled for the bolt or pop nail. And secondly because moisture can enter into such a connection, which can lead to corrosion.

Adhesives do not affect the material at all. The substrates remain completely intact, so no problems need to be prevented.

The first glue joints in the airline industry were already used in fifties. That this method is sustainable is demonstrated by the fact that the first models are still used. In the meantime, other sectors have been tackling the use of adhesives, such as the automotive sector, the railway industry and finally the façade industry for almost four decades now.

TWEHA, 2020