

Plastic welding: the next step in strong, reliable customised packaging

In recent years, Faes has taken major steps to improve and modernise its production processes. One of the most important developments is the introduction of plastic welding and laminating as an alternative to traditional adhesive bonds. This step did not come out of nowhere: customers were increasingly asking for plastic packaging, which required new techniques and new skills on the shop floor.

Why plastic welding is becoming increasingly important

The demand for plastic packaging has clearly increased in recent years. This forced Faes to invest in new production methods. The technique of plastic welding — similar to metal welding — makes it possible to connect plastic parts **more strongly** and **sustainably**.

The advantage is immediately noticeable: a welded joint is often **stronger than the base material itself**, while adhesives can be sensitive to factors such as temperature changes. It is precisely this sensitivity that has caused problems in the past, for example when adhesive layers came loose in the field. Plastic welding offers a robust and reliable alternative here.

Laminating as an alternative to adhesives

In addition to plastic welding, **laminating** is also being used more and more. This is basically a form of welding foam parts, using heat and extra material to join parts together.

The advantages:

- a connection that is stronger than the original foam layer,
- much better resistance to temperature changes,
- less risk of human error because the method is more consistent than gluing,
- and therefore greater reliability in practice.

This approach almost completely solves the previous problem of adhesive bonds coming loose.

Manual work versus automation

Although automation in the factory is increasing, plastic welding remains a **manual skill** for the time being. This is mainly due to the wide variation in piece production — many orders consist of a few pieces, which makes full automation unprofitable or unfeasible.

Welding is therefore done ‘by hand, but according to fixed standards’. Where possible, parts are prepared automatically, but the actual welding process still requires craftsmanship.

The same applies to lamination: partly automated, partly manual. In both cases, the combination of technology and craftsmanship is essential for quality.

Building knowledge: training and certificates

The introduction of plastic welding was not just a technical change. It also meant that employees had to be **educated, trained and certified** to ensure that the work was consistent and of a high standard.

Faes therefore invested in courses and official welding certificates to ensure that the skills matched the quality requirements of customers and the complexity of the products.

The impact on quality and reliability

The switch from gluing to welding/laminating has had a major impact on quality assurance. Whereas adhesive bonds were sensitive to variable factors (pressure, temperature, processing speed), welding delivers consistent results.

What's more

- welding eliminates human variation (every part is processed under the same conditions)
- joints are stronger and more resistant to (temperature) stress
- and the final packaging better meets the requirements of customers who demand high reliability in transport and use.

Future: more opportunities through vertical integration

The development of plastic welding does not stand alone. It is part of a broader movement towards **vertical integration** and greater control over the company's own production chain. Think of splitting and laminating foam yourself, milling panels yourself and bringing steps that were previously outsourced back in-house.

Plastic welding makes it possible to work faster, more flexibly and more consistently — exactly what is needed in customised production where there is a lot of variation.