



Baosteel Hotform Blanks

Tailor Welded Blanks made of ultra high strength steel

Creation Beyond Vision



PERFORMANCE

Crash safety meets lightweight construction

When it comes to reconciling crash safety and lightweight design, Hotform Blanks are used increasingly in car body engineering. Hotform Blanks bring tailored blanks technology to hot stamping operations. Laser welding allows the combination of boron sheets in different thicknesses and strengths. The classic advantages of a tailored product can be realized: cost reduction and reduced weight.

But it is not just that. Boron sheets can also be combined with other steel grades. The combination of boron sheets with ductile micro-alloyed materials delivers improved crash performance. While micro-alloyed materials allow for energy absorption in case of a crash, the hard materials remain strong, protecting the passenger cabin.

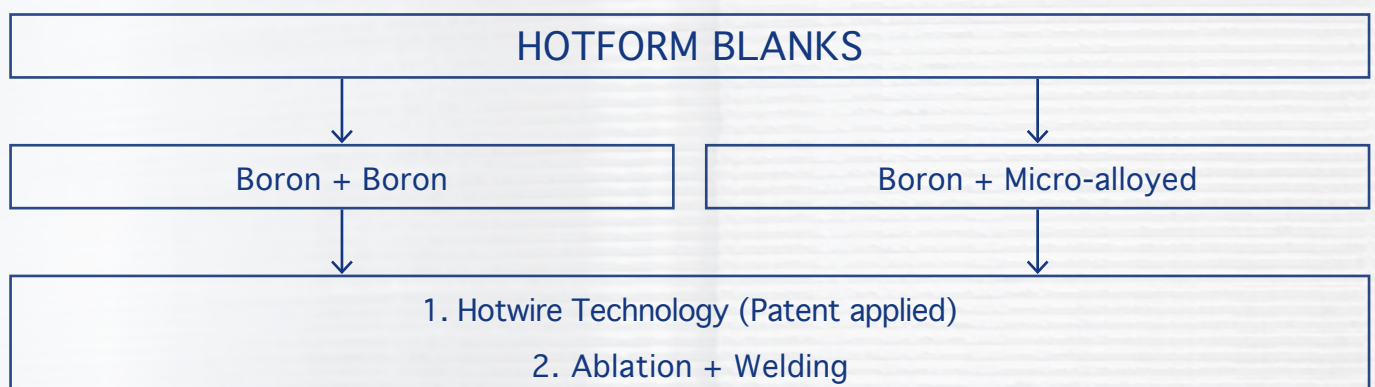
INNOVATION

HotWire technology: A new solution for Hotform Blanks

It was common practice to remove the AlSi coating prior to welding to avoid the formation of brittle intermetallic phases and ferritic areas in the weld. However, we successfully developed an alternative technology which eliminates the need for ablation, reducing cost significantly. The HotWire techno-

logy, developed and validated in 2015 for the combination of boron steel and micro-alloyed steel, is already used by many OEMs. Today, we can also offer this technology to our customers in the combination of boron steel to boron steel. We also applied for patent in 2019.

We can produce Hotform Blanks for our customers by using both, either the conventional process or the HotWire technology.

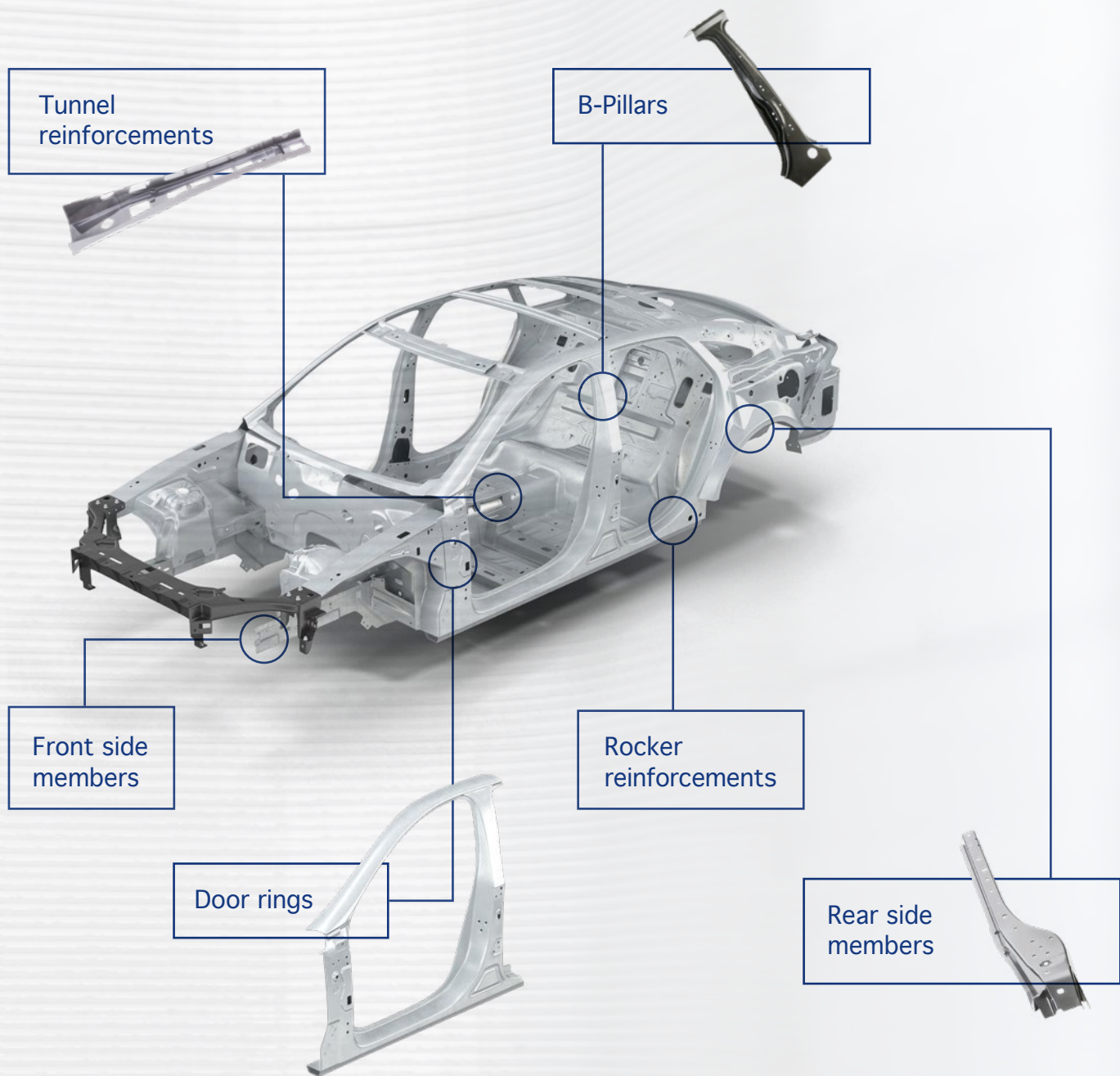


CUSTOMER BENEFITS

- Higher strengths and lower part weight
- Combination with ductile steel grades provides residual elongation in crash-relevant areas
- HotWire technology eliminates the need for ablation, reducing cost
- Combination of Hotform Blanks with Tailor Rolled Blanks possible

PRODUCT APPLICATIONS

Hotform Blanks are ideally suited for structural parts that protect the passenger cabin



TECHNICAL DATA

Steel grades	Manganese-boron steel Manganese-boron steel with non-hardening micro-alloyed steel
Coating	uncoated +AS150 +AS80 +Z
Thicknesses	0.7 – 3.0 mm
Welding process	HotWire technology Conventional (ablation + welding)

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As a supplier to the automotive industry, one idea drives us: To make automobiles lighter using laser-welded products. We developed and welded the first Tailored Blank in 1983. Since then, we have brought numerous innovations into action and are the market leader for tailored products – customized parts made of steel or aluminum – and always one step ahead of our competitors.

Today, we are an international company with 17 production sites in Europe, Asia and America. All around the world, one thing unites us: Our passion for lightweight construction. We find reliable and high-quality solutions for parts such as inner door panels, B-pillars and side rails and meet the needs of our customers in car body assembly with lighter products. From part development through production of prototypes to production of series parts: We provide our customers with customized parts concepts.

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Baosteel Tailored Blanks.**

