



NEW Z-FRAME[®]

T E C H N O L O G Y

DOUBLE D TRAILERS CASE STUDY

New Z-Frame[®] Technology

Overview

Since the creation of the first modern horse trailers in the late 1950's, manufacturers have experimented with different types of materials and building methods. The first trailers were made of steel, which had issue with rusting. With the development of aluminum for the construction of trailers in the 1980s, there was a new option on the market. Aluminum certainly offered a lightweight design, but was it better than steel? Each has their own benefits, and challenges.

As technology advanced, trailer manufacturers learned how to make trailers both safer and longer lasting by using newer alloys and materials. They did this while reducing the major drawback of aluminum - its ability to conduct heat - and the major drawback of steel - its propensity to rust.

Opportunities & Challenges

Although aluminum trailers do a fantastic job resisting rust and looking great for years and years, there are many important drawbacks and dangers that anyone looking for a horse trailer needs to be aware when considering aluminum. The list includes:

- Heat transfer - temperatures can reach 130 F – or more – inside an aluminum trailer.
- Unsafe metal floors – heat transfers from the hot roadway directly to your horse's legs. Additional vibration and noise, that is caused by the lack of insulation causes. Lastly, metal floors are prone to corrosion, since horse urine is very acidic.
- Weak material - aluminum is a very weak metal that is very easy to bend and dent. It also offers little protection in the case of an accident.

What about steel? It's heavier and safer in an accident, but it also is prone to corrosion. It seemed that there were no real alternatives.

In 2009, Brad began looking for better options. He knew he didn't want to make trailers out of aluminum – it was too weak and not at all safe. He'd seen far too many accidents and horses suffering from heat stroke. He knew that steel, although it was strong, rusted easily. He had been using galvanized steel for certain parts of the trailer, but he now wanted to find a better way to build a safer and comfortable horse trailer.

His challenge: find a way to create a trailer that was as strong as a steel trailer but one that would stay rust-free like an aluminum trailer. There had to be the perfect material that was super strong, easy to work with, very lightweight, and didn't rust. What was the solution?

Read More: [The 13 Worst Horse Trailer Flaws in History](#)

Solution

The solution was developing the exclusive New Z-Frame® Technology – a new type of material that was perfect for horse trailers - developed by Double D Trailers.

Z-Frame Technology is a special type of construction used to build the frame and inside dividers in all Double D Trailers. The material is truly unique, making it the perfect match for horse trailer construction. So, what type of metal is it?

The Z-Frame tubes are made by coating the inside and the outside of steel tubing with zinc and chromate – two metals that come together to create a thick, solid layer that resists oxidation and reduces road heat transmission. These tubes then are put together to create the durable and strong frame. The zinc-and-chromate metal combination is extremely strong but at the same time, very lightweight. Starting with the Z-Frame creates a reliable, safe, and durable foundation to then complete the rest of the trailer.

Z-Frame is simply the safest construction material and method for a horse trailer. Brad says, “the whole process behind our exclusive technology increases the tensile rating of the tubing – making it so much stronger than aluminum. And it eliminates the issue of ‘cracking’ in the welds, something that happens with aluminum materials over the years,” and it is resistant to corrosion.

There are three main reasons to look for Z-Frame technology:

1. Z-Frame trailers are stronger and more reliable as the tubes’ construction is stronger than regular steel.
2. Zinc is one of the best options for avoiding rust and corrosion.
3. A strong frame will shield and protect your horse in the case of an accident.

Z-Frame gives your trailer a protective, lightweight, reliable, and long-lasting structure that will keep your horses safe during transit. It has all the benefits of a steel trailer, and all the benefits of an aluminum trailer, without any of their weaknesses.

All Double D Trailers are built with the protective and reliable Z-Frame Technology.

Read More: [Z-Frame: The Safer Option to Aluminum Horse Trailers](#)



[Watch Now: Aluminum Horse Trailer Review by Double D Trailers](#)