

	<h1 style="text-align: center;">Technical Information</h1> No. 06/1
Subject	Shroud chain plate – Maintenance checks and overhaul
Rubric	Rigging and Sails
Introduction	This information includes a ‘best practice’ of how to replace a broken shroud chain plate on a Trintella IV, Regular maintenance checks and attention paid to the state of the shroud and chain plates is essential to prevent dismasting and other unsafe situations.

1. Introduction

The water sports media frequently pays attention to the theme ‘rigging.’ Partly due to the many questions and the experience sailors have in dealing with the theme. Usually, besides the ship owners, two other important parties control the debate surrounding topic. The ‘rigging’ companies (riggers) who are commercially interested, and the insurance companies who often have unclear or imprecise policies in case a mast would fall overboard.

It is recommended, as sailboat owner, to not only regularly (annually) inspect the standing shroud and chain plates but also have this done frequently (biannually or so) by a rigging expert and have them draft an inspection report. Check the policy conditions of your insurance and, when in doubt, ask for clarifications from your insurer.

The personal experience and approach that is described in this Technical Information bulletin, is generic so as to be relevant to many Trintella owners.

2. Experiences of a Trintella owner

“A Trintella IV can simply not break... Or can it?”

We bought our Trintella IV from 1972 late 2009 and sailed the standing mast route from Zeeland to Friesland in the Netherlands. Finally we could gain some speed on the IJsselmeer, as the wind in the sails made us try to reach 8 knots. The previous owner had not really sailed for a while, but a Trintella IV; it can handle a bit of wind...



Once we were coming closer to our new mooring place, we stayed the night in a Marrekrite place to only have to sail another quarter of an hour to get to the harbor and take public transport home. We started the engine, made a plan to leave and the engine failed. We soon found the cause: water in the diesel pipe. From the tank to the jets, all filled with water. A few hours later, as I am washing my hands and look out into the side deck, I see a strange shroud chain plate:

Apparently, we had been a bit too enthusiastic on the IJsselmeer, because this was not wrong when we bought the boat. I did not think about it much: just buy a new one, put it on, and done. However, you cannot just buy a new shroud chain plate. It was custom made in those days. So, after being creative with some stainless steel and having made a new one, remove the old one, put in the new one and done. That was all the attention I paid to it as I chalked it up to being ‘just something that can happen.’

Until, earlier this year (2017), the mast of my sister-in-law’s Contest falls overboard. The insurance expert comes in to appraise the damage and mentions that this is an incredibly common sight nowadays: “Many ships from the 70s and 80s have this problem, one after the other mast falls overboard.” Damage worth €12k and the insurance company concludes: “ordinary wear and tear due to the beating of the elements, corrosion, etc. no coverage. No insurance payout.”

Before, I put the broken shroud chain plate to one side and drew a quick conclusion that it was a bad weld. I did wonder why the part above deck was welded onto the screw thread below rather than being made up of one piece. I took the broken shroud chain plate back out and looked at it more closely to determine what was wrong. It appears that the cylinder gland studs below deck are made up of one piece with the part that is above deck. It is possible that the plate was welded to the brace on the deck to prevent leakage. On the bottom of the plate.

My further research is the reason I am writing this piece. Stainless steel from those days was not exactly of the same quality as it is now. Welding Stainless steel had to be prevented as much as possible, because the heating changes the structure of the Stainless steel which damages it quite severely. What remains is steel. As the next photo indicates in more detail:



Due to a construction error a piece of screw thread was broken, we were very lucky that the stay hadn't come off the deck! The bolt was tightened too much and wrong positioning meant that the holes of the screw thread had already partly broken off. I have attached a mounting plate below deck as well:



This helps keep the screw thread ends in place.

Of course, I realized now that this problem is likely also there for the other 11 shroud chain plates... So I will be replacing all of them shortly to prevent any accidents from happening. With Stainless steel type -316/A4, as it should be. And without any welds, waterproofing is also perfectly doable with Sikaflex. Making one shroud chain plate was possible, making 11 is a bit much. It needs an expert eye to recognize these issues, so consider asking a professional for help. Or, do as I did and replace them all. You should not expect any support or understanding from your insurance...

I am going to draw a model in which the shroud can keep the same measurements so that does not have to be replaced. Even though Stainless steel 316 from 2017 can stand welding much better than Stainless steel from the 70s or 80s, I will stick with a brace and a Stainless steel plate above deck and a finish with Sikaflex below deck rather than welding. Including Stainless steel self-locking nuts.

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