

TEST CERTIFICATES – WHAT ARE THEY AND DO I NEED ONE?

In this commentary we will be looking at Test Certificates in relation to chains but the same information applies to the associated fittings and many other products. We'll take a quick look at why, how they are produced and why you maybe interesting in seeing one yourself. We will also take a quick look at a real one and point out all the good information they can tell you.

What is a Test Certificate?

A Test Certificate is a document stating all sorts about the product it is associated with. Many things have Test Certificates, for example Chain, shackles, ropes, wire and the list can go on for a very long time.

Why would anyone want a Test Certificate?

Quite simple really, it tells us what the item is, to what standard it was built (if applicable), what materials were used, what loads have been applied, who and where it was made and so on. From this we can see if the product is up to what we want it to do.

We can also get a Test Certificate on a used item. This is quite common in some industries as part of ongoing safety checks and the like. Take cranes for example, not the birds, the big ones used to build the skyscrapers. After a certain time frame or amount of use they are required to have the chain slings they use inspected and re-certified as being safe to use. During this process the chain slings are load tested. Once this is done a Test Certificate will be issued, be it good, bad or bloody ugly.

In these days of the Global Village things are not always what they seem. It is far from unusual for people to be selling a product without knowing exactly what and where it came from. Asking for a Test Certificate may inform you the chain you are about to buy is actually from somewhere, made from or something else completely different from where the vendor thinks it is, which may have a big bearing on it's performance and quality.

Do I need a Test Certificate for my chain?

Generally no you don't unless you are in survey, a Classification Society i.e. Lloyds Register, DV and others or you are just nosey. There is the odd Insurance Company who does discount the rates a little if you have a Tested chain so that could be a good reason in itself.

How do I get a Test Certificate for my chain?

Ask the person selling or testing your chain for one, it should be that simple. All good reputable manufacturers provide Certificates with their product. The chain vendor may not have a Certificate for your specific length of chain with them in the chandlery but should be able to ask their supplier to fire one over to them.

Are all Test Certificates equal?

Nope. We have seen more than a few that my 7-year-old daughter could knock up in 3 minutes. As we will see shortly there is good and bad Certificates. Unfortunately you may have to make a judgement call as to whether you believe what you see. Often most specialists are well aware which Certificates can be believed and which can't.

Lets have a look at 2 sample Certificates and see what we are being told.

First off we have a typical dodgy Certificate.

- Just the look of it seems to be a bit 'knocked up quickly'.
- No reference to what the test procedure was. Maybe it was 2 donkeys, we just don't know.
- No independent organisation seems to be involved in any way i.e. an outside eye keeping an eye on things.
- Lots of numbers that are not clearly defined. Looks flash but means nothing.
- No material composition i.e. was it a good steel or recycled beer cans.

- o No Certificate number. How many times has this one Certificate been used?
- o No traceability. This Certificate cannot be related to any specific piece of chain, does it relate to the bit in your hand or not?
- o No Standard is defined even though one is implied.
- o Did your child knock this up or can you trust it?

Note: We covered the company name (which was just a stamp) and what we think was a signature just in case this outfit has improved their output. Far be it for us to trash someone who may have got their act together.

CERTIFICATE				
WELDED LINK CHAIN				
Date:	11/03/2005			
Size	Weight	Proof Load	DIN766/A Break Load	DIN766/A Working Load
6mm	0.75 kg	600 kg	1600 kg	400 kg
8mm	1.3 kg	1200 kg	3200 kg	800 kg
10mm	2.2 kg	2000 kg	5000 kg	1250 kg
[REDACTED SIGNATURE]				

What the above also tells us is that someone was trying hard to make his or her product look better than it actually is.

As being bold highlights one column one would expect that to be the key number to look at, in this case 3200kg is correct (as is the WLL) for well-made 8mm BUT it's only a trick really.

Looking in the 'Proof load' column we see, taking the 8mm, a Proof Load of 1200kg. Industry standards for chains of this type is to have a 4:1 Safety Margin from WLL to the Break load. The standard is also to have a Proof Load of twice the WLL or half the break load. See other documents for expanded info on that subject.

So to be able to say your chain has a WLL of 800kg and a Break of 3200kg you must Proof Load the chain to 1600kg, not the 1200 that this one has.

According to Industry Standards, amongst others, this 8mm chain has a WLL of only 600kg and a Break of 2400kg. Far below what the highlighted column is trying to make you believe. This is a common 'Certificate' (and numbers) from some Eastern countries.

So many chandleries see the highlighted column and think that's the real break number, tell the customer who happily fits the chain without realising it is 25% weaker than they think it is. Often this is not a big worry but if you are pushing chain size on your boat it very well maybe at 3am on a real crappy night.

Now to a Real Test Certificate

This one is from the Maggi Group in Italy and is for a 8mm DIN766 chain. It is reasonably representative of a good quality believable Test Certificate.

Straight away it has a very professional look about it, has all sorts of well-identified numbers and the name of a man willing to put his reputation on the line.

Lets have a closer look at what this Certificate can tell us.

We can see straight away Maggi is kept an eye on by an outside Quality Control company and operates to ISO9001 or better. This easily implies Maggi are very quality aware and knows the need to keep very high standards.

This Certificate has a unique number for traceability, which goes hand in hand with the reference number and the Company it was supplied to. 'Sample Company' has replaced those for commercial reasons.

Below the Certificates number is the testing standard they use.

The manufacturers mark is shown. In this case Maggi has it's own range of 'marks' depending on use as many companies do.

Note: Regional differences mean chains, especially 8mm and smaller, can be marked very differently, if at all.

Here is a photo of a Maggi Group mark.



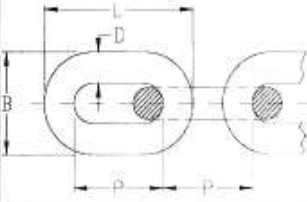




Next we see what size each link is made to, the weight per metre and with what tolerance. Even a nice diagram for those who don't know what measurement is what.

Then we get Maggi's code number for this particular chain – CA76ZIF080.

What length this run was, this one being 2400mts.

If it was a singular item the next 2 boxes would have something in them but as this will be cut into shorter lengths that is not needed in this case.

 MAGGI CATENE spa 23854 OLGINATE (LC) Italy - Via Milano 2/4 tel (0341) 605235 fax (0341) 605352 Internet: http://www.maggigroup.com E-mail: info@maggigroup.com						
ORDINE N° - ORDER NO./CUSTOMER REFERENCE			TEST CERTIFICATE NR°			
SOCIETA' - FIRM Sample Company			0378/2006			
MARCO PRODOTTORE - MANUFACTURERS MARK MAGGITALLY			ACC.TO UNI EN 10204 '92 +A1 '97 (2.1 - 2.2 - 2.3)			
DIMENSIONI DELLA CATENA CHAIN'S DIMENSIONS	Diametro Diameter D (mm)	Passo Pitch P (mm)	Larghezza Width B (mm)	Peso Weight kg/m		
	8	24	26	1.35		
TOL. TOLS		+2.5 -0.5				
DESIGNAZIONE - DESIGNATION		LUNGHEZZA LENGHT MT	PESO WEIGHT KG	PEZZI PIECES N.		
CA76ZIF080		mt 2400	kg			
MATERIALE - MATERIAL		METODO SALDATURA METHOD OF WELDING	TRATTAMENTO TERMICO HEAT TREATMENT			
C10		RESISTANCE	HOT DIP GALVANIZED			
CARICO DI LAVORO WORKING LOAD LIMIT		CARICO DI PROVA MANUFACTURING PROOF FORCE	CARICO DI ROTTURA BREAKING FORCE			
kg 1000		kN 20.48	kN 41			
RISULTATI DELLA PROVA RESULT OF TESTS DIN 766 CHAIN MM. 8x24x10 HOT DIP GALVANIZED 					TIMBRO - FIRMA MAGGI CATENE SPA 22057 OLGINATE ITALY FIRMA DELLO SPERIMENTATORE SIGNATURE OF THE TESTER Dip. Ing. Alessandro Conti 	
<small>WE DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE PRODUCT TO WHICH THIS DECLARATION RELATES IS IN CONFORMITY WITH THE REGULATIONS OF EN 10204 AND ITS AMENDMENTS</small> <small>EN 10204-2:2004</small>					DATA - DATE 30/05/06	

Next we see the chain was made from C10 steel, Resistance Welded and then Hot Dip galvanised.

Now the important stuff at 3am in F10 winds, the Loads.

Maggi have given this chain a Working Load limit of 1000kg. The Proof Load Maggi applied in the factory during the Inspection and testing process was 20.48 kilo newtons or 2088 kilograms of force. As mentioned above Industry standard Break Load is twice the Proof Load and Maggi is telling us that is 41 kN or 4180 kilograms.

Next we have the results. In this case it is a DIN766/A standard chain measuring 8mm x 24mm x 10mm and it has been Hot Dip Galvanised.

How can we be sure about this?

Obviously you'll never be 100% sure as you never saw it happen but a bloke by the name of Alessandro Conti and the Company he did it for, was willing on May 5th 2006 to put his name right next to the bit that says;

'We declare under our sole responsibility that the products to which this declaration relates is in conformity with the regulations of 89/392/EEG and its amendments'

Test on Metrocom 8067-86

That is written just under where we have put 'Sample certificate only'.

All the details you need to find him, and the company willing to put their name to this chain, are all there. Very transparent.

What is with the 'Sample Certificate Only' bit?

We put that on there as a Test Certificate relates to a specific bit of chain. As anyone reading this won't have that bit of chain it makes no difference.

The main reason we put that on, as there are some dodgy characters out there that have used reputable manufactures Certificates to try and slide dodgy chain past a Surveyor and others. We note sample on it just to make it harder for them.

Summery

So as you can see a real Test Certificate gives you all the information you need about your chain. You can also see all test Certificates are not equal if indeed some are Test Certs at all.

If you are not sure what you are being supplied ask for a Test Certificate and now you know what you're looking at you will have a better understanding of what the chain is you are looking at.

Go hard, shop smart and try not to bamboozle the poor salesperson with your new found knowledge. Could be a bit of fun though, couldn't it ☺

NOTE: This article has been written for informational purposes only. In no way does it cover the entire subject in great depth or is meant as being correct for every manufacturer in every situation. In no way does this article mean to imply all comments made are 'law' even if some maybe. The intent of this article was to inform a little. Be aware regional differences in standards, laws and procedures will mean things maybe a little different from place to place even if the same basic principals apply.