

The True Cost of a Quality Engineering Class Chain

Quality materials and precision manufacturing techniques create a higher quality chain; purchasing chain based on price can cost you more in the long run.

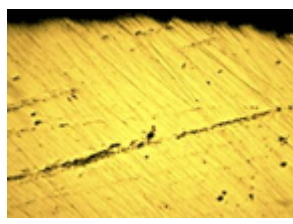
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In today's business world manufacturers are required to produce products faster and more efficiently than ever before, while keeping costs to a minimum.

Easier said than done, right...

Selecting an engineering class chain that meets all your high performance needs, to keep running at maximum speeds, holds up to high shock loads and destructive conditions can be a challenge to say the least. As the old saying goes, "You get what you pay for" and it couldn't be truer when it comes to chains. Proper material selections and precision manufacturing and heat treatment practices truly make a difference when it comes to a quality manufactured engineering class chain that exceeds highly demanding production requirements.

Selecting your chain based on price:



Keeping your operating costs down is always a challenge, but all too often, chains are selected based on price and not quality or performance. When selecting an engineering class chain, price should always be the last consideration... I know that's an easy statement to make, and the boss may say different, but it's the true reality when it comes to engineering class chain.

When selecting your next chain ask yourself, "Do I want a long service life out of my chain, or is a shorter period okay?" "Do I want a trouble free chain with maximum performance, or can I deal with a premature failure that may cause me to have to replace my chain much sooner than expected?" Here comes the big question... "Do I want to deal with a chain failure at 2:00 A.M. in the morning with looming production deadlines?"

You can avoid dealing with any of these tough situations if you select a chain based on materials and superior manufacturing processes, not price.

Three Common Causes of Catastrophic Chain Failure

Problem: Poor Quality Materials

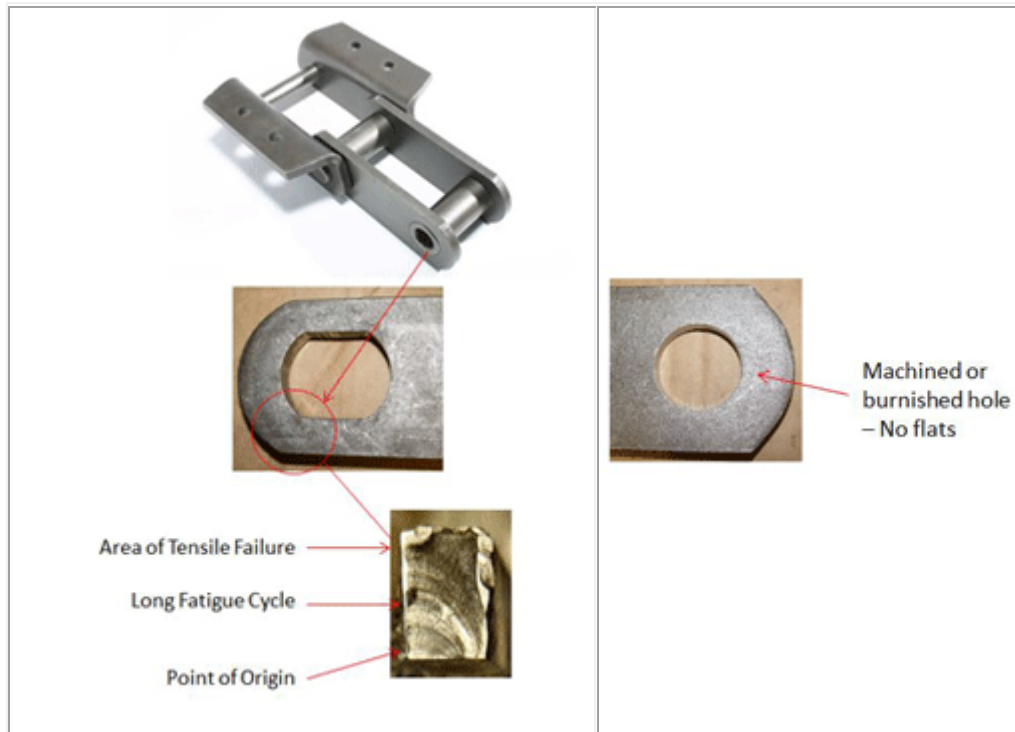


We live in a global economy with products coming from many different countries. While this creates a more favorable economic climate for buying millions of different products, we must remember not all materials are of the same quality. To put this into perspective, let's say you want to build a deck on the back of your home, and you go to your local hardware store to buy the lumber you need. Before buying that lumber you inspect the lumber for straightness, knots, and imperfections – looking for the best quality pieces of wood to put in your cart.

Let's say you couldn't see all the imperfections on the surface of the lumber – The imperfections were throughout the middle of the wood – cracks, knots, and other imperfection - Unless your superman you're not going to be any wiser to the difference, or will you? The lumber you paid big bucks for, and all the hard work, you now have this great looking deck on the back of your house. Over the next several weeks the deck boards are starting to warp. A few weeks later, the boards start to crack and break – did you get what you paid for?

Solution: High quality materials – clean from imperfections and impurities can prevent failures. Cheaper materials will reduce upfront cost, but can lead to major cost when failure occurs.

Problem: Side Plate Failure



Side plate fatigue failure is one of the most common modes of failure that occurs with chains used in highly demanding applications. Poor pitch hole quality, or old designed punched holes with flats, result in scoured holes through the thickness of the side plates – creating concentrated stress areas that can lead to side plate fatigue failure.

Solution: Machined or burnished pitch holes will solve your problems with side plate failure. Not only will this more precise manufacturing process solve the fatigue failure, tighter tolerances can be achieved over the old traditional way of just punching pitch holes. Machined or burnished holes provides the maximum interference fit “press fit” between the pins and bushings, resulting in higher fatigue strength and providing you with a longer service life for your chain.

Problem: Severe Pin Wear



Extreme load conditions, high bearing pressures, and abrasive material in the joint area cause excessive pin wear. In some cases, premature pin wear can result in major chain failure.

Solution: Induction Hardening – Increasing the hardness by induction hardening the pins will provide superior strength and longer life and increased durability. The induction hardening process creates a chain pin with increased strength, ductility, and wear ability for the maximum service life.

In summary, getting a great price on chain can seem like a great idea, to production and accounting departments, in the short term. But on down the road, a poorly constructed chain can end-up costing you in replacements and lost production time on down the road. By making sure that you are purchasing a chain that has been manufactured to the highest quality standards, using precision manufacturing techniques you can save yourself a lot of money, and headache in the long run.