Mast Chains

Used in different functions, leaf chains are regulated by ANSI. They can be used for forklift masts, as balancers between counterweight and heads in several machine tools, and for low-speed pulling and tension linkage. Leaf chains are sometimes also referred to as Balance Chains.

Construction and Features

Leaf chains are steel chains with a simple pin construction and link plate. The chain number refers to the lacing of the links and the pitch. The chains have certain features such as high tensile strength for each section area, that enables the design of smaller machines. There are B- and A+ type chains in this series and both the AL6 and BL6 Series have the same pitch as RS60. Lastly, these chains cannot be powered with sprockets.

Selection and Handling

In roller chains, the link plates maintain a higher fatigue resistance because of the compressive stress of press fits, yet the leaf chain just has two outer press fit plates. On the leaf chain, the most allowable tension is low and the tensile strength is high. Whenever handling leaf chains it is vital to check with the manufacturer's handbook to be able to ensure the safety factor is outlined and utilize safety guards at all times. It is a great idea to carry out utmost care and utilize extra safety measures in functions where the consequences of chain failure are serious.

Higher tensile strength is a direct correlation to the utilization of more plates. Because the use of much more plates does not improve the utmost acceptable tension directly, the number of plates can be limited. The chains need regular lubrication because the pins link directly on the plates, generating a very high bearing pressure. Utilizing a SAE 30 or 40 machine oil is frequently advised for most applications. If the chain is cycled over one thousand times day by day or if the chain speed is over 30m for every minute, it would wear really quick, even with continual lubrication. So, in either of these situations the use of RS Roller Chains would be more suitable.

The AL-type of chains should just be utilized under certain conditions like for instance if wear is really not a big problem, when there are no shock loads, the number of cycles does not exceed a hundred every day. The BL-type would be better suited under other situations.

If a chain using a lower safety factor is chosen then the stress load in components would become higher. If chains are utilized with corrosive elements, then they can become fatigued and break somewhat easily. Performing frequent maintenance is important if operating under these kinds of conditions.

The outer link or inner link type of end link on the chain will determine the shape of the clevis. Clevis connectors or Clevis pins are made by manufacturers, but the user normally provides the clevis. An improperly constructed clevis could reduce the working life of the chain. The strands must be finished to length by the manufacturer. Check the ANSI standard or contact the maker.