Mast Chain

Mast Chain - Leaf Chains have several applications and are regulated by ANSI. They are designed for forklift masts, for low-speed pulling and tension linkage, and as balancers between head and counterweight in several machine tools. Leaf chains are sometimes likewise known as Balance Chains.

Construction and Features

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

Handling and Selection

Comparably, in roller chains, all of the link plates maintain higher fatigue resistance because of the compressive stress of press fits, while in leaf chains, only two outer plates are press fit. The tensile strength of leaf chains is high and the most acceptable tension is low. When handling leaf chains it is essential to check with the manufacturer's guidebook to be able to ensure the safety factor is outlined and use safety measures at all times. It is a good idea to apply utmost care and use extra safety guards in functions where the consequences of chain failure are serious.

Using more plates in the lacing leads to the higher tensile strength. For the reason that this does not improve the maximum permissible tension directly, the number of plates used could be limited. The chains require frequent lubrication for the reason that the pins link directly on the plates, producing an extremely high bearing pressure. Using a SAE 30 or 40 machine oil is normally advised for nearly all applications. If the chain is cycled over 1000 times day after day or if the chain speed is more than 30m for each minute, it will wear really fast, even with constant lubrication. Thus, in either of these conditions using RS Roller Chains will be a lot more suitable.

The AL-type of chains should only be utilized under certain situations like when wear is not a big problem, if there are no shock loads, the number of cycles does not exceed a hundred day after day. The BL-type will be better suited under different conditions.

If a chain using a lower safety factor is chosen then the stress load in components will become higher. If chains are utilized with corrosive elements, then they may become fatigued and break rather easily. Doing frequent maintenance is really important if operating under these types of situations.

The type of end link of the chain, whether it is an outer link or inner link, determines the shape of the clevis. Clevis connectors or Clevis pins are made by manufacturers but often, the user provides the clevis. A wrongly constructed clevis can reduce the working life of the chain. The strands must be finished to length by the manufacturer. Refer to the ANSI standard or call the producer.