Mast Chains

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

Features and Construction

Constructed of a simple pin construction and link plate, steel leaf chains is identified by a number that refers to the pitch and the lacing of the links. The chains have specific features like high tensile strength per section area, which allows the design of smaller mechanisms. There are A- and B- type chains in this series and both the BL6 and AL6 Series comprise 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 due to 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 permissible tension is low. If handling leaf chains it is important to confer with the manufacturer's manual to be able to guarantee the safety factor is outlined and use safety measures always. It is a better idea to apply utmost caution and use extra safety measures in applications wherein the consequences of chain failure are serious.

Higher tensile strength is a direct correlation to the utilization of more plates. For the reason that the utilization of much more plates does not enhance the utmost acceptable tension directly, the number of plates may be restricted. The chains need frequent lubrication because the pins link directly on the plates, generating an extremely high bearing pressure. Using a SAE 30 or 40 machine oil is normally advised for the majority of applications. If the chain is cycled more than one thousand times on a daily basis or if the chain speed is more than 30m per minute, it would wear extremely rapidly, even with continual lubrication. Thus, in either of these conditions the use of RS Roller Chains will be much more suitable.

The AL-type of chains should only be used under certain conditions such as when wear is not a huge problem, when there are no shock loads, the number of cycles does not go beyond a hundred day after day. The BL-type will be better suited under other situations.

If a chain using a lower safety factor is selected then the stress load in components will become higher. If chains are utilized with corrosive elements, then they can become fatigued and break rather easily. Doing frequent maintenance is essential when operating under these kinds of situations.

The kind of end link of the chain, whether it is an inner link or outer link, determines the shape of the clevis. Clevis connectors or otherwise called Clevis pins are constructed by manufacturers but often, the user supplies the clevis. An improperly constructed clevis can decrease the working life of the chain. The strands must be finished to length by the maker. Check the ANSI standard or contact the manufacturer.