Mast Chains

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

Features and Construction

Constructed of a simple link plate and pin construction, steel leaf chains is identified by a number which refers to the lacing of the links and the pitch. The chains have specific features like high tensile strength per section area, that allows the design of smaller mechanisms. There are A- and B- type chains in this series and both the AL6 and BL6 Series comprise the same pitch as RS60. Lastly, these chains cannot be driven utilizing sprockets.

Handling and Selection

In roller chains, the link plates have a higher fatigue resistance because of the compressive tension of press fits, yet the leaf chain only contains two outer press fit plates. On the leaf chain, the maximum acceptable tension is low and the tensile strength is high. Whenever handling leaf chains it is vital to confer with the manufacturer's instruction booklet so as to ensure the safety factor is outlined and use safety measures at all times. It is a better idea to exercise utmost caution and utilize extra safety guards in applications wherein the consequences of chain failure are severe.

Higher tensile strength is a direct correlation to the use of much more plates. In view of the fact that the utilization of a lot more plates does not enhance the maximum allowable tension directly, the number of plates can be restricted. The chains require frequent lubrication as the pins link directly on the plates, generating an extremely high bearing pressure. Using a SAE 30 or 40 machine oil is frequently advised for the majority of applications. If the chain is cycled more than one thousand times in a 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 conditions using RS Roller Chains will be a lot more suitable.

The AL-type of chains should just be used under particular conditions like for instance if wear is not a big concern, if there are no shock loads, the number of cycles does not go over 100 every day. The BL-type will be better suited under other conditions.

If a chain utilizing a lower safety factor is selected then the stress load in components will become higher. If chains are used with corrosive elements, then they could become fatigued and break quite easily. Doing frequent maintenance is essential when operating under these types of conditions.

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