

Chains.... The Importance of Lubrication

The correct lubrication of chains is essential for optimum performance, durability and maximum chain life.

Factors that assure smooth, continuous operation of chains and associated components are:

- Type and effectiveness of the lubricant
- Correct application of the lubricant
- A Maintenance programme to ensure long term service

To understand what is required of a lubricant we must first understand what a chain is and how it works. In simple terms a chain could be likened to a series of linked bearings, each of which should be properly lubricated to obtain the maximum service life.



In conveyor chain applications lubricant should be directed between the rollers and bushings as well as between the chain links.

Lubricant applied to rollers only cannot reach pin-bushing joints, and therefore, cannot prevent chain elongation due to wear.

The lengthening of chains in service results from wear on pin and bushing surfaces, not rollers. Since wear between pins and bushings cause chain elongation, proper lubrication must be maintained on all moving surfaces.

Correct lubrication forms a protective film which improves:

- Abrasion and wear
- Rolling friction
- Energy consumption

Roller Chains

Lubricants for roller chains must be selected and applied according to the application and working conditions of the chain. High temperature conveyor chains suffer wear due to the inability of conventional oils to withstand oven/furnace temperatures without evaporating rapidly, forming carbon deposits, or leaking.

The IKV range of chain lubricants are based on advanced technology to eliminate these problems and include oils, greases and dry film coatings.

IKV Group have products for chains operating in extreme environments, including aggressive chemicals, high or low temperatures, humidity and extreme loads.

Typical application include:

- Oven & furnace conveyors, bakeries etc.
- Metal finishing, paint lines and drying ovens
- Tenter frames in textile plants
- Overhead conveyors subjected to washing and high temperature ovens
- Drive chains & in-floor conveyors

Proactive lubrication of conveyors and other equipment is a significant part of an overall maintenance program and can be a major contributor to continuity of production. By using the correct lubricant and application method, significant benefits may be realised including:

- Increased chain life
- Reduction in costly downtime
- Environmental benefits & lower lubricant use
- Lower maintenance costs
- Elimination of product contamination
- Increased safety

Maintenance Programme

To achieve effective, reliable lubrication and maximum uptime, a program to service the automatic lubrication systems should be established.