Automatic lubrication of the gearing via lubricating pinions

Currently the gear rims on wind energy stations (for azimuth and pitch) are greased manually. With the first circulations this lubricant is pushed into the base of the tooth or to the outside via the tooth flanks. The result is inaccurate distribution of the lubricant in the contact area, incorrect dosage, dripping of the lubricant and the subsequent environmental contamination. The system will not be supplied with fresh grease until the next service check.

For automatic lubrication Willy Vogel AG has developed a lubrication pinion which ensures dosing as required and pinpoint accurate lubricant distribution in the contact area.

Special system advantages

- Precisely adjustable dosing as required
- Pinpoint accurate lubricant distribution in the contact area
- Even lubricant distribution across the entire width of the tooth

resulting in:

- Reduced lubricant consumption
- Pinpoint accurate lubricant distribution in the contact area
- Increased system availability
- Reduced operating costs
- Environmentally friendly operation

Functional description

The lubricant is pressed into the axle of the lubricating pinion with a grease pump, and is taken through a bore hole into the lubrication channel of the lubricating pinion tooth that is in the process of intermeshing with the gear rim. All the other teeth of the lubricating pinion are not lubricated during this phase. The lubricant passing out through the tooth flanks is pinpoint accurately pushed into the contact area of the tooth flank and evenly distributed by means of the rolling movement of the lubricating pinion. The foam rubber layers ensure that the lubricant is evenly distributed across the entire width of the tooth. The metal gear wheels are resistant to wear and all lubricants and environmental influences.
Lubrication begins. First of all the lubricant spreads over the tooth flanks of the driving pinion. (The lubricating pinion is equipped with 2 foam rubber layers in this diagram.)

Moistening of the tooth flanks already begins at the height of the foam rubber layers, even before the lubricant reaches the base of the tooth.

The lubricant spreads over the tooth flank. The spreading speed depends on the fed quantity of lubricant.

More products for gear lubrication

Lubricant collector

block type and ...typ distributors

Piston pump

Documentation

WINDLUB® wind energy station (Progressive) 203/02-06/1000
Single line gear lubrication for wind energy stations 1-0300-US
Grease pump units 1-0107-2-US
Progressive distributors 1-0107-1-US
Lubricant collector 1-0303-US
Grease pump with exchangeable container DSN 0-000-05-US