
Case Study

Fan Motor - Protein Factory



CERAMICSPEED

Energy-saving of more than 4000 kWh/year

The frequency converter driven 630 kW motor is directly coupled to a centrifugal fan, critical for the evaporator in a large-scale protein factory.

Problem

After just one year in action, this fan motor was down with bearing failure, even though the motor was originally equipped with coated competitor bearings.

Solution

CeramicSpeed Insulate bearings are custom made for electrical motors and resistant against damage caused by stray currents. The ceramic balls used for this product series are non-conductive and have an insulating ability of 15 kV per mm - higher than that of atmospheric air. All of the above result in very strong and resistant bearings, with a long lifetime and lower energy consumption than conventional bearings.

Result

With the implementation of CeramicSpeed Insulate, the bearing position is now immune to any form of harmful bearing currents and therefore the company reduced its downtime costs remarkably. It has saved more than 4000 kWh per year and increased the bearing life with 3 times.

Technical Highlights

- Suitable for moderate contaminated environment
- Rotation speed: < 3000 RPM
- Bearing temperature: 70°C-90°C
- Lubrication: grease with mineral base oil

