MicroPoly®

LUBRICANTS

FOOD PROCESSING FILLED BEARINGS

CASE 1: Potato chip sizer

BEARING TYPE: 1" housed bearings

CONDITIONS: During the sizing operation, salt and other seasonings are added. These solid particulates contaminated the bearings, causing bearing failure in 6-8 weeks. Downtime costs customer $25,000 per hour.

RESULTS: MicroPoly filled bearings have been running for 2 years without any problems. Estimated annual savings is $660,000.
MicroPoly is now used on all of the sizing lines and inclines.

CASE 2: Feather picker - chicken processing

BEARING TYPE: Single row ball bearing

CONDITIONS: Wash down of the bearings with water and detergents causes premature bearing failure. Bearing life 3-4 weeks.

RESULTS: Customer discontinued monitoring after 9 weeks; results exceeded expectations. Estimated savings is $170,000.

CASE 3: Converging conveyor & wrapping machine - pizza manufacturer

BEARING TYPE: SealMaster ER 205

CONDITIONS: Wash down caused corrosion of bearings. Bearing life 4-6 months.

RESULTS: MicroPoly filled bearings are lasting 8-12 months.

CASE 4: Conveyor - meat packing plant

BEARING TYPE: Flanged bearing

CONDITIONS: Heavy wash down. Bearings were very difficult to replace. Bearing life 3 weeks.

RESULTS: MicroPoly filled bearings provided 7 months of life, with a considerable cost savings.

CASE 5: Litter chain bearings on depanner - bakery

BEARING TYPE: Torrington needle bearing #HJ-202816

CONDITIONS: Bearing life 2 weeks. Speed 150 feet per minute. Failure was caused by high heat (up to 200°F) and constant use.

RESULTS: Bearing life has been extended to more than 18 months.

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CASE 6: Filling operation - yogurt processing facility

BEARING TYPE: Stainless steel ball bearing, 20 mm bore

CONDITIONS: Absolutely no lubrication could be used in valve, and no bacteria contamination permitted. Speed is 35 cycles per minute, 90 degree turn. Temperature
160-180°F. Bearing life 2 weeks.

RESULTS: The life of the MicroPoly filled bearing has increased to 8-10 weeks with no bacteria contamination found.

CASE 7: Agitator drive in man-made fish pond

BEARING TYPE: Dodge SC 2-5/16" ball bearing pillow block

CONDITIONS: Continuous water splash. Speed 80 RPM. Temperature 90-105°F. Bearing life 3 months maximum.

RESULTS: MicroPoly filled bearings have lasted over 1 year.

CASE 8: Tomato incline bulk dump conveyor

BEARING TYPE: Rex 5207Z tapered spherical

CONDITIONS: Wash down; bearing was mounted on tail pulley of incline receiving line. It was then submerged in dirty water, running 24 hours a day 7 days a week for 120 days. Conveyor speed is 65 fpm with an average weight of 175 lbs. per foot. Bearings were replaced every 90 to 120 days (each harvest season).

RESULTS: MicroPoly filled bearings are in their second season. After inspection it is believed that three seasons will be possible.

CASE 9: Lift gate for tomatoes

BEARING TYPE: Link Belt wash down flanges; various sizes

CONDITIONS: Water sprayed into bearings along with dirt and contaminants, as well as tomato acid, resulting in loss of bearings for half the harvest season.

RESULTS: Food grade MicroPoly installed and bearings are lasting through the harvest season.

CASE 10: Fish canning equipment

BEARING TYPE: 5202, 7206, 6002, CR101UU, DDFIF814ZZ

CONDITIONS: Heavy wash down. Bearings expensive to change out during fishing and canning season and are typically replaced during production.

RESULTS: Bearings lasted a full fishing season, saving cost of bearing replacement, labor, and down time.

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CASE 11: Canning Line

BEARING TYPE: 1" housed ball bearing

CONDITIONS: Water and wash down chemicals cause premature bearing failure at 6 months. Speed is 100 RPM. Temperature 80°F.

RESULTS: MicroPoly filled bearings have been in service for more than 1 year.

CASE 12: Transfer conveyor for fruit concentrate processor

BEARING TYPE: B1065-1 needle roller bearing

CONDITIONS: Heavy water wash down and citrus juice exposure. Bearing life 2 weeks.

RESULTS: MicroPoly filled bearings have been in service for more than 6 months.

CASE 13: Potato cutter heads

BEARING TYPE: Kaydon slim line bearing KD050CPO

CONDITIONS: Bearings are subject to a very heavy wash down. Bearing life 1 month.

RESULTS: Bearings have continued to run through harvesting and production season. Bearing life has been extended to more than 5 months.

CASE 14: Proof box conveyor – bakery (cuts and places dough in baking pans)

BEARING TYPE: RCTJ 1-1/4" pillow block, VCFT207 H-2, 2-bolt flange

CONDITIONS: Warm, moist environment.

RESULTS: MicroPoly has eliminated the need to grease and, therefore, has reduced the consumption of grease and its cost.

CASE 15: Dough mixer

BEARING TYPE: Single row ball bearing

CONDITIONS: Flour and dough particles get into the bearings, causing premature bearing failure. Customer used an oil/lube tube to try to lubricate the bearing. Speed 800 RPM. Temperature 100°F.

RESULTS: MicroPoly is providing lubrication and at the same time is keeping the flour and dough out of the bearing. Customer has eliminated the lube pipes for the bearing.

CASE 16: Sugar beet processing

BEARING TYPE: ZA2115

CONDITIONS: Dirt contamination and wash down. Had to replace bearings at least twice a season.

RESULTS: No replacement during current season. MicroPoly has tripled bearing life.

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CASE 17: Trout farm fish processing - gutting, cutting, packaging equipment

BEARING TYPE: 608-2RS

CONDITIONS: Heavy wash down, water and cleaning chemicals. Continual replacement of various bearings was occurring. The fish oil caused bearing failures.

RESULTS: MicroPoly has tripled life of bearings.

CASE 18: Packaging conveyor - brewery

BEARING TYPE: 1-1/4" housed ball bearings

CONDITIONS: Moisture and wash down solution caused corrosion of bearings and housings. Bearing life varied.

RESULTS: Replacing bearings with Linkbelt Klean-Gard bearings, filled with MicroPoly, has eliminated failures.

CASE 19: Packaging equipment - both brewery and cereal manufacturers

BEARING TYPE: Housed ball bearings, 3/4" to 1-1/4"

CONDITIONS: Bearings failed prematurely due to contamination by small cardboard particles. Grease was leaking out of the bearings, causing the manufacturer to scrap some product.

RESULTS: The bearing life was increased sixfold and eliminated cardboard scrap caused by grease contamination.

CASE 20: Wheel bearings in stainless steel carts used for moving meat within plant

BEARING TYPE: Tapered roller bearing, 1" bore

CONDITIONS: Wash down after each shift.

RESULTS: Threefold increase in wheel bearing life with MicroPoly food grade formulation.

CASE 21: Angle gearbox in a sausage processing plant

BEARING TYPE: 5206 double row ball bearings

CONDITIONS: Application is on a V Mag stuffer in an angle gearbox. The speed is 200 RPM. The bearings are contaminated with a caustic meat emulsion and washed down every evening. Normal greased bearings are replaced after 4 months.

RESULTS: MicroPoly filled bearings have been in for over 1 year.

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CASE 22: Oven dryers in potato chip processing

BEARING TYPE: 1-7/16 flange bearings

CONDITIONS: Slow speed, some heat and normal wash down of equipment. Normal life for greased bearings is one year.

RESULTS: 16 bearings have been in for over 2 years and were still running.

CASE 23: Steam peeler agitator in potato chip processing

BEARING TYPE: Two 2-15/16 SKF pillow block bearings

CONDITIONS: Steam, high temperature (300°F), and moisture contamination. Normal greased bearings last six months.

RESULTS: Two bearings with High Temperature MicroPoly have been in for 9 months and were still running.

CASE 24: Onion cage mill

BEARING TYPE: ER-32 and ER-28 inserts

CONDITIONS: Bearings were failing due to lack of lubrication. The speed is 350 RPM. They would replace the bearings 2-3 times per harvest season.

RESULTS: Bearings fitted with MicroPoly are now in their second harvest season.

CASE 25: Proofing line - bakery

BEARING TYPE: McGill pillow blocks

CONDITIONS: The bearings operate at 50 RPM and 180°F. Bearings had to be greased four times per year.

RESULTS: MicroPoly filled bearings have been in for over 1-1/2 years, eliminating the cost and labor for greasing the bearings.

CASE 26: Filling operation – bottling equipment

BEARING TYPE: 6000-2RS stainless steel ball bearing

CONDITIONS: Water and beverage syrup run over the bearings. Bearing life 2 months.

RESULTS: Food grade MicroPoly was installed in the bearings. Bearing life extended to at least 8 months.

CASE 27: Guide rollers for fish cutting saw

BEARING TYPE: 6206-2RS single row ball bearings and 5206-2RS double row ball bearings

CONDITIONS: Bearings are exposed to fish and fish scale residue, cold temperatures, and water wash down. Bearing life 3-4 weeks.

RESULTS: Bearings filled with MicroPoly now last 3-4 months, cutting both bearing replacement cost and downtime.

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CASE 28: Conveyor feed roll in steam block – animal food processing

BEARING TYPE: RAF Fafnir pillow block 1-1/4 shaft

CONDITIONS: 100 degree steam lowers viscosity of grease in bearings, causing the grease to leak out of the bearing. Bearing life 3 months.

RESULTS: MicroPoly solved the leakage problem. Bearing life extended to 1 year.

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