MOTION & CONTROL™
NSK

EXPERIENCE IN YOUR INDUSTRY

AIP is a well-proven asset improvement programme that combines your own knowledge of the working environment, culture, processes and problems in your business, with the engineering expertise and innovation of NSK. The programme provides real answers to your problems; answers that are quantifiable and measurable in terms of lowered costs, increased efficiency and reduced downtime. Thus increasing your profitability and helping to keep you competitive in your field of operation by focusing directly on solving problems that are costing you valuable time and money.

Proven customer cost savings is the best reference of our AIP success. Below we have provided you with a list of example case studies, by industry. Should you want more details about a particular case study, please don´t hesitate to contact us.

Agriculture

› Gearing for windrowers: Replacement of the existing pulley bearings with NSK pulley bearings with MA7 grease produced optimum results in this application.

Automotive Production

› Automotive machinery centre - spindle breakdowns reduced nearly 5 fold
› Bevel gearbox for buses: individual and customer-specific design of a double row complete assembly reduce the individual parts
› Part harmonisation at a leading Automotive Machinery Centre
› Reducing administrative costs by part number conversion, standardisation and rationalisation.
› Specialised on-site training covering the fitting of machine tool spindle bearings.

Cement, Plaster & Concrete

› Catastrophic failure of a crusher wheel in a cement plant
› Continual contamination problems causing wear and unplanned maintenance in a cement screw pump conveyor
› Lubrication type and methods to reduce failure of spherical roller bearings in a cement plant
› Repeated bearing failure on a pipe slotting machine
› Unacceptable failure rate of a cement plant fan operating at 150°C

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Construction & Building Materials

› Bearing improvement in the kiln cars of a large ceramic manufacturer
› Ingress of plastic shavings on a pipe cutting saw causing regular failure and downtime.
› Mechanical failures on quench drives cause poor quality heat treatment.
› New bearing & wheel design on concrete floor manufacturing cassettes improve productivity and reduce downtime.

Food & Beverage

› Food Industry Kiln Car Wheels
› Heat-stabilized bearing reduces downtime by more than 90% in canning equipment
› High load capacity on dough mixing spindles resulted in premature wear.
› High-pressure washdowns create failures on a food production conveyor.
› Ingress of water & dirt on end rollers of potato peeling machine.
› Lubrication problem due to inaccessible bearings on IHS conveyor.
› Molded Oil extends conveyor life on a battered fish processing line
› Molded-Oil™ helps reduce bearing changes in water, soil & grit environment
› Molded-Oil™ reduces lost production & downtime on an automatic sausage linking machine
› Molded-Oil™ stops premature failure of de-skinning machine.
› Premature failure of bearing mounted on a spindle of the can inner coating machine
› Severe wear on Dough Mixer drive bearings
› Short bearing life on conveyor carrying boiled sweets
› Silver-Lube extends the life of a fish processing conveyor line
› Stainless Steel Molded-Oil™ ball bearing successful in washdown down applications
› Sugar Mill Locomotive - Molded-Oil™ provides longer life & more environmentally friendly solution
› Sugar Mill Slurry Pumps - Molded-Oil™ bearings reduce maintenance costs
› Sugar crystallisation on conveyors in a confectionery manufacturing facility
› Under extreme temperatures HLT Self-Lube inserts extend application life in food processing production plant
› Water ingress on food conveying auger results in contamination from metal debris.

Forestry

› Re-designing obsolete bearings for a fabricated wooden i-joist machine

General Industry

› High temperatures cause failures in mounted units with oven cooling fan application.
› Surface Treatment rollers in Ammonium Bicarbonate solution - SPACEA bearings help extend life

Machine Tools

› Continuous performance problems were found in an horizontal machining centre
› Ultra Speed Electro-Spindle: Technical support from NSK helped solve the problem of high running temperatures

Material Handling

› Gearing for elevators: bespoke design of a double row assembly reduce the number of components and eliminate irregular and unplanned shutdowns

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Metalworking
› Laser cutting machine - Ball screw productivity improvement
› Material substitution in wire forming production saved the customer over €1.000.000

Packaging & Bottling
› Tin Capsules Manufacturer: NSK new VV non-contact seal solved problems with the slide of material on the free roll.

Petrochemical
› Petrochemical group repetitive problems with bearings assembled in centrifuge equipments
› Recurrent failure of a centrifugal pump in petrochemical refinery

Power Generation (fossil, wind, wave)
› OEM machine design for micro-wind turbines

Power Tools
› Electric Powertool - Festool OF2200: bearing life reached over 1000 hours

Pulp & Paper
› Discontinued bearings redesigned for large paper mill
› Failure analysis of excessive downtime in a paper mill
› NSK identify and improve the current cost savings program of a global paper company
› Paper Mill - Hybrid bearings resolve temperature problem in Calendaring machine rotary joints
› Paper Mill Dryer Cylinder - TL Series provides more reliability in high temperature conditions

Quarry, Mining
› New unit design aids productivity increases at a screen manufacturer
› Quarry Conveyor in an Arduous Environment
› Reducing unexpected downtime on a chain mill

Rubber & Plastics
› Ball screws in injection molding machinery with extreme load and high speed
› Tyre Production: reduced maintenance, no unexpected bearing failure and no unplanned downtime anymore

Semiconductor
› Aluminum wheel assembly carousel for casting gas turbine blades

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Steel

› Cold Rolling Mill: Costly unplanned shutdowns and a reduction in production ratios.
› Contaminated production process in a Steel Mill
› In a Stainless Steel Pilger Mill heavy loading and severe lubrication conditions resulted in a very short bearing life
› Invaluable productivity increase for a Steel Bar Manufacturer
› Modification and harmonisation of parts in a problematic cold rolling mill redesign
› NSK's end user know-how reduces down time by over half in a blast furnace
› NSK's preventative maintenance program saves a major shutdown in a steel factory
› Sealed clean technology helps prevent problems with open work roll bearings in a steel mill
› Stainless tube mill - Heavy loading and severe lubrication conditions result in very short bearing life
› Steel Industry - Reduced maintenance costs in Continuous Casting
› Steel Industry purchasing process - Rationalisation of references for a large Steel Group
› Unplanned downtime and increased maintenance costs of continuous annealing process line accumulator.

Transport Equipment

› Underground trains: Situation analysis increased time between overhauls

Utilities (waste, water)

› Re-design of Bridge Drive bearing reduces maintenance by increasing bearing life to 10 years
› Repeated seal failure in water pump application effected locating bearing

Woodworking

› Linear Guides in Woodworking Industry
› Table guidance for wood processing machines: individual tolerances make it possible to run the machine without any faults.

Other

› Constant bearing failures resulted in damage of surrounding hardware (housings and axles).
› Gear Manufacturer - NSK's responsiveness & quick turn-around time for ball screw repair significantly reduces customer downtime.
› Manufacture of personal hygiene items: NSK's changes double the bearing life
› Pick and place unit