DRIVE SYSTEMS
FOR CONVEYOR LINES

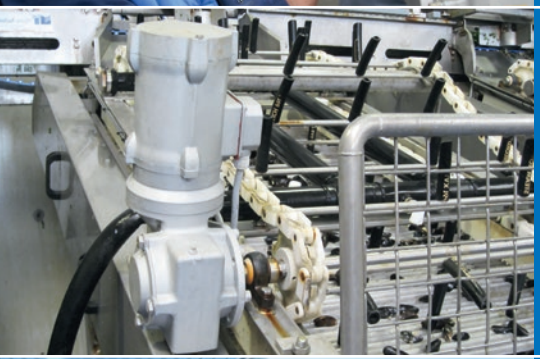
CASE STUDY: KRIJN VERWIJS

NORD DRIVESYSTEMS

Resilient solution for shellfish processing.

Conveyor drives in salty atmosphere.

Robust, economic, easy to clean.



nsd tupH surface conversion for corrosion protection.

Smooth surface geared motors with nsd tupH treatment.

In the Krijn Verwijs shellfish production center, rapid drive corrosion due to the seawater-infused atmosphere has long been a major concern. Aluminum NORD systems with a specially treated surface now provide an economical solution to resolve this issue.

FOOD INDUSTRY
Conveyor lines

GEARED MOTORS
Smooth surface motors with nsd tupH treatment

nsd tupH

PROJECT CHALLENGE

Krijn Verwijs is one of Europe's foremost suppliers of shellfish products, and blue mussels in particular. Fresh catches arriving at the factory are put into large basins with a constant flow of clean salt water, which serve to keep the product in good health while sand is thoroughly rinsed out. Given the close presence of these containers and the fact that live mussels are then conveyed wet as they come, all processing lines throughout the factory are inevitably exposed to a humid, salty atmosphere.

Aggressive environment. – This spells swift corrosion for all sorts of unprotected metal parts across process automation implements, e.g. in the various conveyor lines. In the case of conventional cast iron geared motors, rusty spots first appear on brand-new systems in a matter of weeks, and the end of life draws near for such units after only a year or two. Even special coatings or varnishes merely help to moderately delay the onset of corrosion. Stainless steel drives never qualified as a solution either, since they proved not only very costly but impractical – due to requisite disruptive cool-off periods before every hose-down.

Resilient, affordable, easy to clean. – Frequent drive replacements therefore used to be the order of the day at Krijn Verwijs until the company learned of a new design approach for drives deployed in aggressive environments: the nsd tupH surface treatment introduced by NORD DRIVESYSTEMS. This technology enables aluminum geared motors – which can very comfortably be washed down – to achieve stainless steel-grade resistance to corrosion.

FOCUS ON THE CUSTOMER

PREMIER

Krijn Verwijs Yerseke B.V. was established in 1880 as a breeding company for oysters. This family business has developed over the course of time into one of the largest players in the European crustacean and shellfish market. The company supplies mussels to supermarket chains and catering wholesalers in Europe under the brandname "Premier" and under private labels. Krijn Verwijs also offers a complete assortment of oysters, lobsters and various other types of shellfish.

“This new NORD solution means we no longer have to worry about drives all the time. We expect nsd tupH systems to last at least five times as long as the old geared motors.”

BRAM DE VISSER,
KRIJN VERWIJS TECHNICAL SERVICE

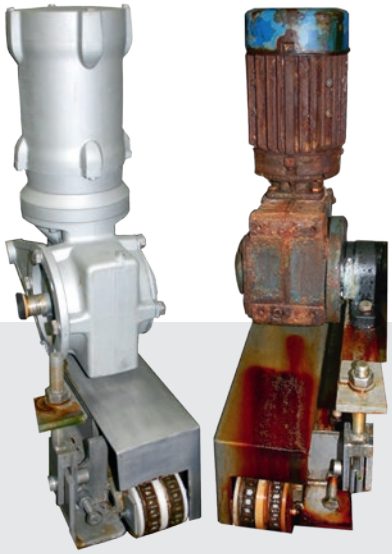
APPLICATION SOLUTION

Krijn Verwijs has begun to roll out nsd tupH systems sure to provide considerable longer service lives in the salty atmosphere. Though such aluminum geared motors do come at a premium compared to the price of conventional cast iron units, both lab trials and extensive real-life testing in the factory in Yerseke indicate that nsd tupH systems will last for the better part of the typical 10-year lifetime of a conveyor line, or even outlast the line. Krijn Verwijs will therefore no longer have to purchase five to ten replacement drives for every unit, nor bother with the expense and effort for associated maintenance work.

Physically ingrained protection. – The nsd tupH treatment is no application of a coating, but rather a surface conversion that produces a base layer permanently bonded to the substrate. Based on an electrolytic process, this treatment renders aluminum cases similarly unsusceptible to corrosion as stainless steel. The scratch-resistant surface also becomes more than six times as hard as untreated alloy, and a thousand times as hard as paint.

Smart alternative to stainless steel. – Featuring a very lightweight, compact, and self-draining design, nsd tupH systems for the food industry can be easily washed down. They are impervious to e.g. common chemical cleaning agents – neither rinsing them with acids or alkaline solutions nor applying high-pressure cleaners will do any damage. In addition, nsd tupH surface treatments are universally available for all NORD aluminum products – unlike many stainless steel geared motor series, which most manufacturers limit to a few types.

Unaffected. – In contrast to standard cast iron geared motors, nsd tupH systems suffer almost no corrosion.



Resilient. –
nsd tupH system (left) vs. regular cast iron geared motor (right).

FOCUS ON THE PROJECT

The salty atmosphere everywhere in the Krijn Verwijs Yerseke production center makes this seafood factory a textbook case for adverse environmental conditions – several hundred 1.5 kW class geared motors in various conveyor lines have long suffered from rapid corrosion. A full transition to resilient nsd tupH systems is now underway: in the months and years to come, every drive at Krijn Verwijs will eventually be replaced by an extra-durable NORD geared motor.

MORE NORD APPLICATIONS YOU MAY FIND INTERESTING:

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