

A large, light grey, stylized letter 'C' that forms a partial circle, serving as a background element for the title.

Thordon

Food products and drinking water

Material Handling: Screw Conveyor

End User:

City of Detroit WWT Plant

Application:

Screw Conveyor bearings

Note:

Greased bronze hanger bearings were lasting only 6 months

ThorPlas-Blue has been operating for 2 years



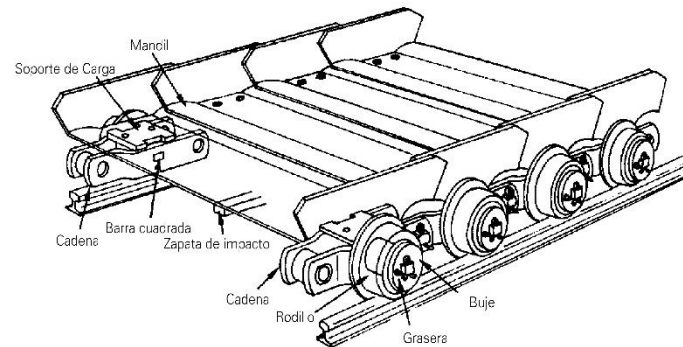
Material Processing: Sugar Cane

Application:

Sugar Cane Conveyor System-
Feeding Table Wheels

Notes:

- Wheels in the feeding tables had bronze bushings initially
- Dirt in system had caused severe abrasion
- Bronze bushings lasted maximum of 15 days
- Thordon SXL bearings were installed and achieved a service life of greater than 1 year
- Modifications to the sugar cane cleaning process were also introduced



Food Handling: Corn Wet Milling

End User

Not disclosed,
North Carolina, U.S.A.

Application:

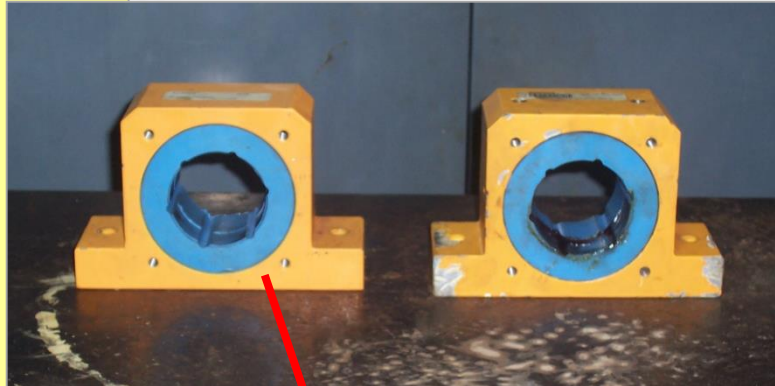
Grinder roller bearing support

Installation Date:

October 2005

Note:

- ThorPlas-Blue replaced greased SKF roller element bearings.
- Eliminated grease contamination
- Used ThorPlas-Blue due to acidic condition (sulfuric acid present during process)



Food Handling: Malting Process

End User

Canada Malting, Calgary

Application:

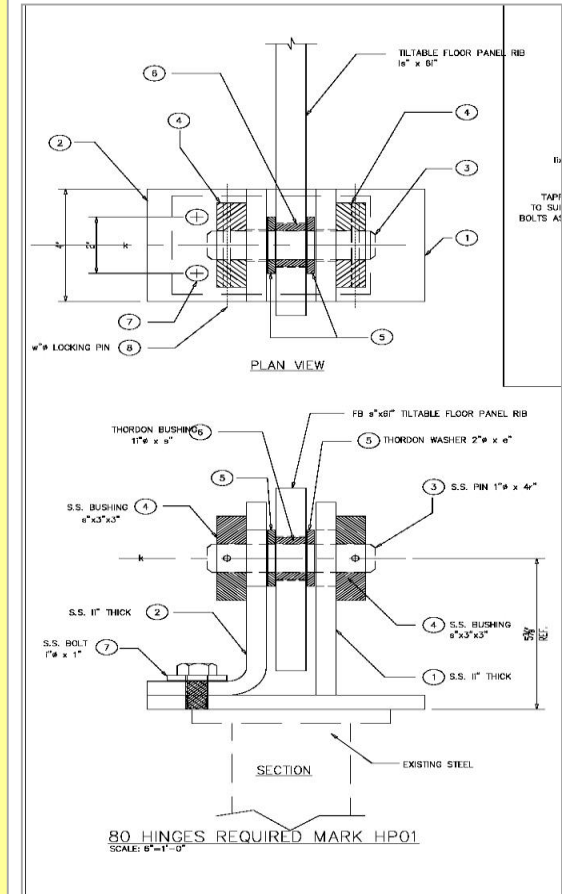
Steep Tank Hinge bearings

Installation Date:

ThorPlas-Blue installed in May 2006

Note:

- Customer has used phenolics and UHMWPE without success.
- Process product includes salt water for 95% of the time but once a month a cleaning solution is used containing:
 - Sodium Hypochlorite (25-55 ppm)
 - Calcium Hypochlorite (1%)
- Temperature can reach 176°F (80°C)



Food Processing: Pork Processing Hangers

Application:

Pig Hanger Wheels- Roller Bearings

Installation Date:

- June 2010

Notes:

- Replaced roller bearings with ThorPlas-Blue bearing solution
- One ThorPlas-Blue bearing replaced 2 Roller Bearings
- Roller bearings had to be replaced monthly, while the ThorPlas-Blue bearings had a service life of over 1 year
- Significantly reduced maintenance costs



Forklift- Hummerbee

- Trunnion bearings
- Original material was greased brass, but it was located in a position which was difficult to grease
- They also tried Nylatron which failed in 6 months
- **30 machines are now running with ThorPlas-Blue**



Beer Bottle Filler Valve

- ThorPlas-White is being tested at several breweries to replace Teflon bearings that wear out after just a few months
- Nylon and PEEK have also been tested but had very short wear life
- Thousands of bearings at each plant!



ThorPlas-Blue Self Aligning Bearing (SAB)

Application:

Hydraulic Steering System (live end – rudders)

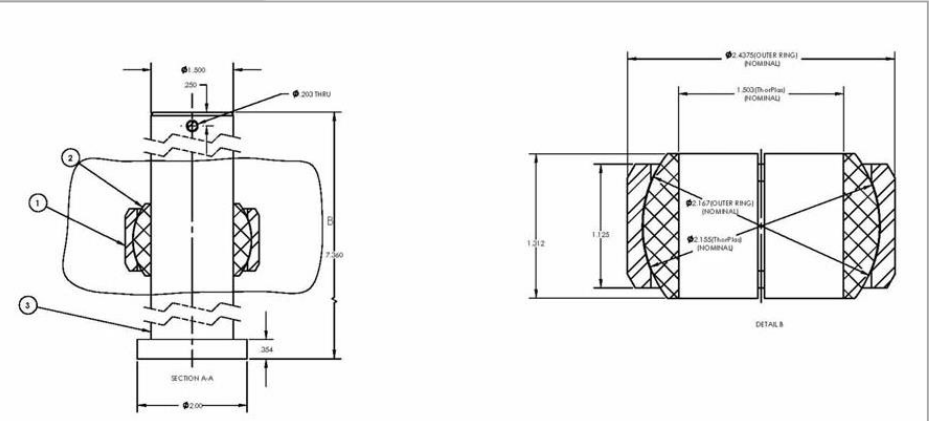
Installation Date:

First test bearing 2009-2010

-further applications have resulted in the development of 4 standard sizes:
1.5”(38.1mm), 2” (50.8mm), 2.5” (63.5mm)
and 3” (76.2mm) – custom sizes also available

Benefits:

- Operates without grease
- Easy and quick installation
- Reduces piston and cylinder damage
- Operates without binding



Fish Conveyor

End User

Sandford, New Zealand

Application:

Fish Conveyor Bearings onboard Fishing Trawler

Installation Date:

2015

Note:

- Conveyor and its components are subject to exposure to salt water and other debris
- Former nylon bearings showed excessive wear resulting in the need to grease every 2 weeks, while replacing every 3 to 4 weeks
- Thordon SXL replaced the nylon bearings in the conveyors. The equipment runs 24/7
- Thordon SXL material was tested for 53 days, while the results showed no measurable wear.



FV San Waitaki



Fish Conveyor



Greased Nylon Bearing



Nylon (Left) and SXL (Right) bearings



Greaseless Thordon SXL bearing

Industrial Pumps Handling Chemicals

End User

KSB Pumps – Brazil

Application

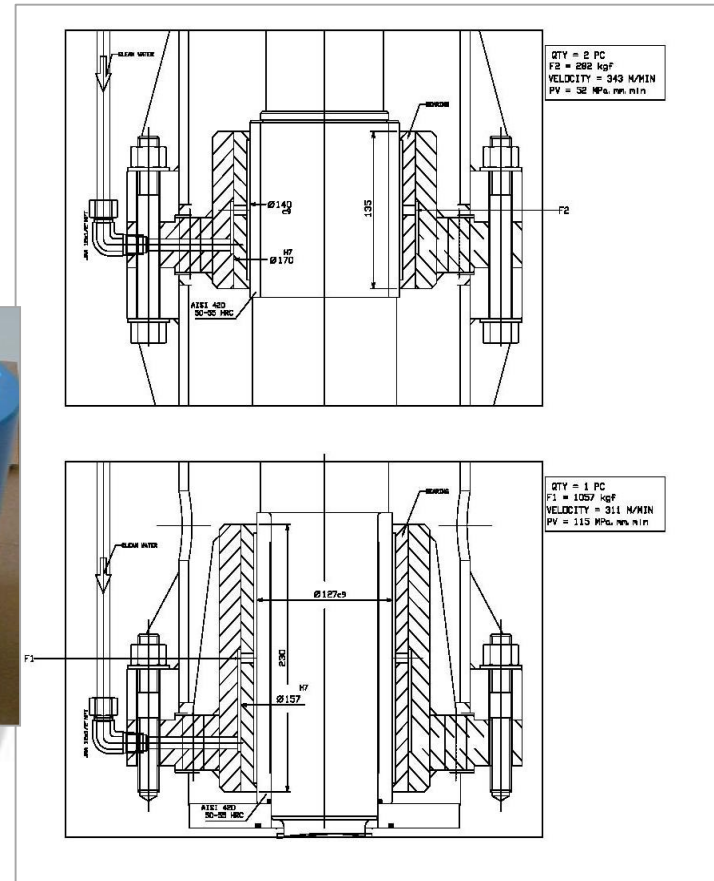
Industrial Vertical Pump.

Application Details

- Liquid composition (by volume):
 - Kerosene 70-85%
 - Copper extractant 15-30%
 - Chlorine - 1000 mg/l
 - H₂SO₄ - 50 g/l
 - Solids < 20 mg/l
 - Temperature 15 to 50°C (59°F to 122°F)

Date of Installation

Installed May 2005



THORNDON

Industrial Pumps Handling Chemicals

Distributor:

Jetco de Venezuela –end user not disclosed

Application

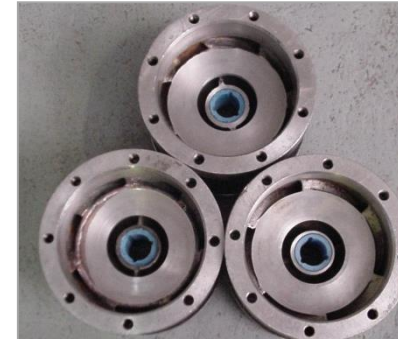
Vertical Pump- Mix of water and crude oil traces

Application Details

- Bearings installed in the stuffing box, spider, bowl and suction bell
- Replaced bronze

Installation Date

January 2006



Meat Pump

End User:

Animal by-products plant, New Zealand

Application:

- Original bearing was made of steel, and had to be removed to be cleaned
- They wanted something that would stand up in their “clean in place” process
- SXL was supplied and glued in with a high temperature epoxy



Pump End User References

- Peach Bottom Atomic Plant, PA, USA
- Salt River Project, AZ, USA
- Jacksonville Electric Authority, FL, USA
- South Florida Water Management, FL, USA
- Steel Company of Canada (STELCO)
- Shell Chemical, USA
- KoRi Nuclear Power Plant, South Korea
- Danjin Thermal Power Plant, South Korea
- Youngkwang Nuclear Power, South Korea
- Nebraska Public Power, USA

XYZ Automation

End User:

XYZ Automation

Notes:

- The equipment is used for cutting of ACM, an aluminum composite material with three layers of material: Aluminum-Polymer-Aluminum
- They tried different materials (UHMW and phenolic) in the past, but none found satisfactory. Wear life was about one month
- They were looking for something with a lower coefficient of friction
- Thordon proposed both ThorPlas-Blue and SXL, and customer chose to replace the material with ThorPlas-Blue



ThorPlas-White Applications: Building Water Supply Pump

End User:

Huizhou JingFeng Pump Industry Co., Ltd

Application:

Building Water Supply Pump

Installation Date:

August, 2016

Notes:

- ThorPlas-White replaced original bronze bearing material. Wear life was too short, so pump factory decided to replace
- Pump is used in drinking water systems, and must meet the standard certifications. At the same time, the customer wanted to extend bearing wear life. Shaft diameters 35mm and 40mm
- CY visited the customer recently where more than 100 pumps will use ThorPlas-White. Working well up until now



ThorPlas-White Applications: Pump Bearing

End User:

SMS Pumps, The Netherlands

Application:

Pump Bearing

Installation Date:

November, 2016

Notes:

- Previous bearing material had no certification for drinking water
- ThorPlas-White had the required certification and extended running time. Shaft diameters 94mm and 100mm.
- As of 2017, the bearing is currently running without any problems



ThorPlas-White Applications: Meat Processing Equipment

End User:

Olymel - Prince

Application:

Bushings for meat processing equipment

Installation Date:

April, 2016

**Notes:**

- The division Prince produces bacon. They have some bushings wearing too quickly. They tried brass and UHMW but they wear too quickly
- ThorPlas-White is FDA approved, self lubricated, it extends wear life and extends the mean time between maintenances
- Olymel bought few meters since the first installation for the same application. They are supposed to revert 30 units!

ThorPlas-White Applications: Fruit Tank Agitator

End User:

CP – Meiji, Thailand

Application:

Fruit Tank Agitator

Installation Date:

February, 2017



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NSF/ANSI 61

