

## Challenge

### Issue

Conventional lip seals have oil leaks due to excessive shaft wear, contaminating paper products.

### Root Cause

Continuous use of high friction and short-lasting rubber oil seals degrades the shaft causing oil leaks.

### Goal

Eliminates contamination of paper products from oil leaks.



Reduction gear

## Solution

### Overview

Application is a Paperboard plant Center drum reduction gear 1137 rpm

### Before

NOK oil seal TC type

110 x 140 x 14 mm 2 rings

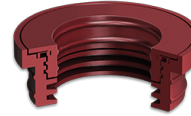
130 x 160 x 14 mm 2 rings

### After

Chesterton PLS1

110 x 140 x 14 x 8 mm 2 sets

130 x 160 x 14 x 8 mm 2 sets



Chesterton®  
Polymer Labyrinth Seal

### Chesterton® PLS—Polymer Labyrinth Seal

Made from Chesterton's proprietary polymer material technology, the Chesterton, patent-pending Polymer Labyrinth Seal (PLS) is a non-contact bearing seal designed to provide protection for pumps, motors, gearboxes, and other rotating equipment in splash applications. The unique design eliminates fretting caused by conventional lip seals, and helps increase bearing and gearbox life by extending the mean time between equipment repairs.

## Results

### Client Reported

No leakage after installation in June 2018. As of July 2021, 25 sets of PLS are used in the following applications:

- Reduction gear of high-pressure feeder
- Reduction gear of Steaming Vessel
- Caustic hot water pump
- Cleaner pump

### ROI

Oil seal replacement cost twice a year  
 $\$600 \times 2 = \$1,200 / \text{year}$   
 Total Savings =  $\$1,200$  per year



PLS 1 with flange



## About

Chesterton® is a world leader in helping process industry companies and manufacturers improve the reliability and efficiency of their rotating, stationary, and fluid power equipment platforms. We are known across a wide range of industries for our award-winning pump and valve sealing solutions, applications expertise, equipment maintenance and wear-prevention products, and knowledgeable hands-on local service.

Chesterton® products are available in Asia Pacific through our official Chesterton Distributors Partners' Channel

## Chesterton Customseal

Chesterton Customseal is a joint venture between A.W. Chesterton Company and Customseal Australia.

For over 135 years, Chesterton® has been recognised as a leading international manufacturer of industrial fluid sealing systems and industrial process industry applications. Customseal Australia has been operating for over 15 years now, building an incredible reputation servicing the hydraulic and pneumatic needs for many clients across numerous industries throughout the Asia Pacific Region.

Chesterton Customseal provides our clients with innovative solutions in high-performance seals, combining the strong capabilities of two brands in one product.

Our professionalism and highly engineered capabilities guarantee our clientele world-class products and support.

[chestertoncustomseal.com.au](http://chestertoncustomseal.com.au)

## Training

Continual development of personnel is one way of attracting and retaining a capable workforce, and it is an area which receives a great deal of attention from Chesterton.

We regard training as a value adding product which delivers tangible benefits, both short and long term. Appropriate training ensures the correct use of equipment which will deliver longer life for the lowest overall total cost of ownership, and a rapid return on your training investment.

**Contact us to know about our latest training schedule.**

## Channel Partners

In addition to its direct sales and service efforts, Chesterton has a large, established network of more than 500 authorized, independent, company-owned distributors in over 113 countries. These distributors have extensive experience in the industries we serve and provide exceptional local service and applications consulting using only genuine Chesterton products and parts. All Chesterton distributors receive extensive and on-going training in:

- Pump and mechanical sealing systems
- Valve stem and flange sealing
- Fluid power sealing and efficiency
- Industrial coating selection and surface preparation
- Industrial lubrication for plant maintenance and reliability

Chesterton distributors are backed by our own field teams and sales/support staffs as well as engineering applications and engineering teams to ensure the best customer experience possible.

Mentioned in the case study:

**Kanamori Gihan Co., Ltd.**

Exclusive Distributor of Chesterton products

Location: Japan