

# Case Study: MULTI-SWELL® 3760 Eliminates Leak Issues in Split Case Pumps at Major Refinery



## INDUSTRY

Hydrocarbon Processing – Refinery Operations

## BACKGROUND

A major refinery needed a more reliable sealing solution for split case pumps handling return condensate to a cooling tower. The site continuously struggled with leaks due to uneven, warped sealing faces on the pump case. Leaks not only disrupted operations but also created safety and maintenance concerns, requiring pumps to be taken offline multiple times a year for gasket replacement.

## CHALLENGES FACED

The existing fiber gasket material was unable to compress sufficiently to seal the warped sealing surfaces of the pump case. Recurring leaks caused unplanned downtime, increased maintenance costs, and reduced operational efficiency. Sealing failures posed safety risks by allowing water to collect around equipment and interfered with routine plant operations.

## OPERATING CONDITIONS

**Size:** 30" Flanges

**Temperature:** 100 °F

**Application:** Split case pump

**Media:** Warm return condensate water

**Pressure:** 5 PSI

## SOLUTION AND BENEFITS

Garlock recommended MULTI-SWELL® Style 3760 Compressed Fiber Pipe Flange Gaskets due to the material's controlled swell properties, which enable the gasket to form an effective seal when exposed to service water. The MULTI-SWELL® 3760 gaskets feature higher compressibility, which allows the gaskets to conform to and create a tighter, long-lasting seal in uneven, warped surfaces with less-than-ideal tolerances.

Following installation, the refinery reported complete leak elimination, reduced maintenance frequency, and improved uptime. MULTI-SWELL® 3760 provided consistent sealing performance under low-pressure conditions, saving time and labor, improving worker safety, and restoring confidence in the pump system's long-term reliability.

For more information, please visit:

<http://www.garlock.com>