

# Kammpro Wedge Gasket Critical to Complete Turnaround

## CASE STUDY

### INDUSTRY DESCRIPTION

A refining company in Western US produces gasoline, jet fuel, and other products refined from crude oil.

### BUSINESS SITUATION

When coming to the end of a turnaround in their Field Catalytic Cracking Units (FCCU) in October 2021, the oil refinery realized that one of the last flanges they needed to bolt up had a major flange misalignment. The flanges were not parallel to each other. The customer did not want to take the time to fix this issue, as it would delay the refinery in getting the FCCU back up and running.

### THE LAMONS DIFFERENCE

The Lamons engineering team discussed the flange misalignment with the refining engineer. Together they determined the dimensional data for the gap and Lamons engineering created a gasket drawing for them to review and approve.

### LAMONS PRODUCTS AND SERVICES

Lamons engineers designed a custom Kammpro wedge gasket to fill the gap while ensuring fasteners would engage properly. Our Houston facility manufactured this Kammpro wedge gasket and was able to air freight them to the Western US in less than 24 hours.

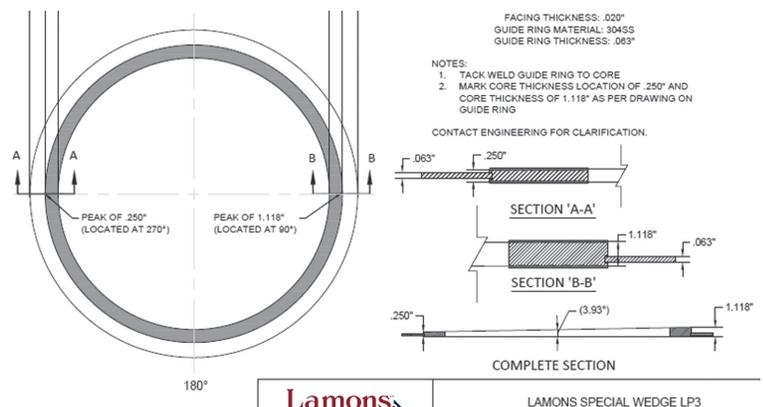


Oil refineries typically use traditional gaskets in shut down and maintenance situations in the event of a flange misalignment. A flange misalignment not only delays the ability to get their units running as they should, but using a traditional gasket to try and fix the issue does not provide a tight enough seal and can cause future complications as a result. Lamons engineers and refinery engineers often work together to create a better, safer, easier solution in the event of a flange misalignment.

### THE SOLUTION

Tapered Kammpro wedge gaskets provide a safe and easy solution for a gasket to be installed to compensate for flange misalignment. Custom machining of the Kammpro to match the flange gap is critical. This also helps ensure the highest quality of seal as the clamping load for the connection is now more focused on sealing the gasket rather than aligning the flanges.

This solution provides multiple benefits. The first is that you do not need to cut off or remove the existing misaligned flange and reattach. Another is that if you don't replace the misaligned flange, you are using the bolting to pull the flanges into alignment rather than loading the gasket. Many refinery injuries occur when contractors try to bend pipe to install gaskets on unparallel flanges. The third benefit is that the Kammpro wedge gasket engages both flange sealing surfaces as intended for the flange.



*Kammpro wedge gaskets are designed to address flanged connections where one or both flanges have fallen out of parallelism. The unique angled profile of the Kammpro core allows for even compression without the load loss required to straighten flanges.*

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### THE RESULTS

Startup of the FCCU on time was critical to the customer. Overcoming the unexpected misalignment issues was paramount. Lamons was able to design, manufacture, and expedite delivery of the Kammpro wedge gasket to the refinery. In terms of engineering assistance, reduction of downtime, and reduction of maintenance work, using Lamons Kammpro wedge gasket yielded a direct cost savings of over \$75,000.

### LASTING BUSINESS BENEFITS

Lamons has utilized the machining capability at our Houston facility to manufacture Kammpro wedge gaskets and solve flange misalignment issues for customers for over a decade and is the only known manufacturer in the industry to produce Kammpro-style wedge gaskets.

Manufacturing tapered Kammpro wedge gaskets is not just a quick fix. Some customers have left them in service for the duration of the maintenance cycle and have even reordered them to prevent the cost of flange replacement. Other customers have utilized it until they can fix the misalignment in a planned fashion.

Learn more today by contacting your Lamons representative or by visiting [Lamons.com](https://lamons.com).



LAMONS LP3 WEDGE GASKET

To discuss a challenge you are experiencing in your facility, contact [Info@Lamons.com](mailto:Info@Lamons.com).

For technical assistance, contact [Engineering@Lamons.com](mailto:Engineering@Lamons.com).

To contact a Lamons office near you, visit our website.

