

CorruKamm® in Pulp Mill Black Liquor Digester

CASE STUDY

INDUSTRY DESCRIPTION

A large pulp mill in the South-east US produces:

- Pulp
- Paper
- Containerboard
- Packaging materials
- Tissue
- Plywood
- Oriented strand board and industrial panels
- Lumber
- Gypsum products
- Chemicals

BUSINESS SITUATION

The pulp mill has 16 digesters that had ongoing issues with their black liquor digester bottom flange leaking.

THE LAMONS DIFFERENCE

Lamons worked with a local distributor, the pulp mill maintenance manager, and their reliability engineer to install a CK2 CorruKamm® on a 10" - 300# black liquor digester bottom flange.

LAMONS PRODUCTS AND SERVICES

In 2019, this was the first pulp mill in the US to install a Lamons CorruKamm gasket on their black liquor digester.

Pulp and paper mills typically have a black liquor digester as part of the mill process. The bottom of the digester sees pressure and temperature cycles, as well as vibration. This can lead to the flanged connections leaking over time which is a safety, environmental, and production efficiency concern. Lamons engineers and mill engineers from the customer worked together to create a permanent sealing solution.



THE PROBLEM

The pulp mill had serious issues with most of their black liquor digesters leaking, resulting in gaskets needing to be changed out as often as three times a week.

Black liquor is a valuable by-product of the pulping process. The black liquor digester's bottom flanges experience considerable temperature cycling, pressure surges, and vibrations. This constant flange movement contributes to bolt and gasket relaxation over time and causes the flanges to leak.

"To my knowledge, we have not had a leak in three years in any flange that we have installed a Lamons CorruKamm gasket."

- Pulp Mill Reliability Engineer

THE SOLUTION

The pulp mill maintenance team installed a Lamons CorruKamm CK2 10" gasket with a 316L stainless steel core and flexible graphite facing on their black liquor digester to provide the recovery needed to compensate for the relaxation of bolt stress from the temperature changes, pressure surges, and vibration. The patent-pending design provides industry-leading gasket recovery up to 39%. The CorruKamm gasket was an immediate success and prompted the pulp mill maintenance team to install them in over a dozen other flanges that were also leaking in their SVP reboiler.

THE RESULTS

The Lamons CorruKamm provided a gasket that compensated for gasket and bolt load loss in these applications, helping minimize the effect from the loss of gasket stress. Addressing the safety concerns of black liquor digester leaks eliminated downtime and the associated maintenance cost. Additionally, the reboiler system no longer leaked steam, reducing energy loss and increasing efficiency and profitability.

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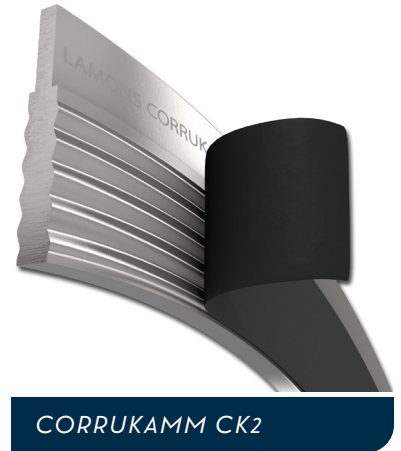
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LASTING BUSINESS BENEFITS

Over the last two years, this pulp mill has outfitted over 20 additional flanges with this gasket with similar results. The success using the CorruKamm gaskets in the black liquor digester and SVP reboiler has prompted other pulp mills in the country to install CorruKamm gaskets in their most troublesome flanges.



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

To discuss a challenge you are experiencing in your facility, contact Info@Lamons.com.

For technical assistance, contact Engineering@Lamons.com.

To contact a Lamons office near you, visit our [website](https://www.lamons.com).

