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Mechanical Inspection Report

46/42DD4000 M-1680

Customer Information

**Customer: Canam
Location: Fitchburg, MA
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Distribution

**Send Report to: Dan Nigrosh
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Equipment Information

**Beloit 46" DD4000 Refiner
Originally Manufactured by: Beloit Corp. FSD Dalton, MA
Beloit Jones Shop Order: n-a
Serial Number: n-a
Model Number: n-a
Integral/Coupled: Coupled**

Modifications

**Previously rebuilt by J&L
Modified to Floating Rotor on Spline in this rebuild**

Lamcor Shop Order: M1680

Report Prepared by: LS

Issue Date: July 9, 2021

Inspection/Work Performed – Double Disk 46”DD4000:

This is a coupled 46/42DD4000 modified to a floating rotor

General Visual:

This refiner was in overall fair/good condition. Overall levels of rust, wear etc are typical and no major damage was visible. The onboard instruments were connected. The adjusting mechanism was 1 ¼ turns.

Scope of rebuild:

The following is description of the work that was done on this refiner:

Castings:

The door casting, base casting and bearing housing support had no visible cracks or broken pieces. The mounting feet were intact. These were inspected on arrival and again after sand-blasting to ensure that no defects were hidden by paint, rust, pulp etc. Surface rust was removed.

Base - Mating Surface:

The base was in overall good condition.

The base door mating surface was cleaned and the surface was machined.

Base – Door Hinge Area:

The hinge area was in reasonably good condition – the bolt holes and jacking bolt holes were intact. It was skimmed along with mating surface to ensure that these surfaces are clean and parallel.

Base - Refiner Cavity:

The refining cavity had no visible cracks. It was hand-cleaned to remove surface rust etc.

There was wash-out which was repaired, together with some minor impact damage and scratches.

New 42” stainless steel liners and rings were installed.

Base – Plate Wear:

In a refiner, plate wear patterns often give clues suggesting the surfaces are not parallel and/or there is run-out of the shaft. The old plates installed in this unit did not show any abnormal wear pattern.

Base - #1 Plate Mounting Surface:

Heli-coils were installed in any bad bolt holes.

New 42” stainless steel liner was installed.

Bearing Housing:

Canam supplied a storeroom spare rotating assembly which was installed to replace the one on the refiner.

The shaft was locked as part of the conversion to floating rotor.

Base – Inlet and Packing Box:

New lantern ring and packing were installed.

Drive – Shaft – Sleeve:

The shaft run-out measurements indicate it was straight.

A new sleeve was installed

Sliding Head (rotor) and Spline:

Canam supplied a spline and rotor which were installed

Adjusting Mechanism Support (Door) – Mating Surface:

This was machined to be flat and parallel to the closing surface on the base.

Door – Sliding Head:

All holes were checked, new inserts were installed as required.

Sliding Head Seal was replaced and new one installed. Keys were replaced.

Door – Hinge:

New thrust washers and bushings were installed

Door – Adjusting Mechanism:

The bearings and seals on the worm shaft were replaced.

New clutch parts and new limit switches were installed

Pressure Gauge Panel:

The pressure gauge panel was rebuilt with new gauges installed

New oil piping was installed

Inspection:

Run-out was within tolerance -- +/- 0.0015

Tram was within tolerance -- +/- 0.003

Adjusting mechanism turns were 1 ¼ -- within tolerance -- < 2

