

# **HAMMERMILL TROUBLESHOOTING GUIDELINES**

**TIPS OFFERED FOR LOCATING VIBRATION SOURCE, IMPROVING THE LIFE OF REPLACEMENT PARTS.**

**HAMMERMILLS, USED IN MOST FEED MILLS FOR GRINDING GRAINS OR THE COMPLETE RATION ARE SYSTEMS THAT MUST BE MAINTAINED PROPERLY TO OPERATE AT MAXIMUM EFFICIENCY.**

**PROBLEMS WITH EXCESSIVE VIBRATION, USING WORN PARTS, AND FAILING TO DIAGNOSE IRREGULARITIES IN THE GRINDING PROCESS CAN LEAD TO COSTLY REPAIRS AND OPERATIONAL INEFFICIENCIES.**

**FEED OPERATIONS THAT TRY TO CUT CORNERS END UP PAYING FOR IT FOR THE ENTIRE LIFE OF THE SYSTEM.**

**THE FOLLOWING STEPS ARE SUGGESTED AS WAYS TO HELP MILLS PREVENT THIS FROM OCCURRING.**

## ***FINDING THE VIBRATION SOURCE***

**EXCESSIVE VIBRATION IS ONE OF THE MOST COMMON PROBLEMS IN HAMMERMILLS. TO LOCATE THE VIBRATION SOURCE, YOU SHOULD FIRST REMOVE ALL HAMMERS, HAMMER RODS AND SPACERS.**

**THEN, START THE HAMMERMILL AND RUN IT AT OPERATING SPEED. IF THE VIBRATION DISAPPEARS, THEN THE SOURCE IS YOUR HAMMERS AND/OR RODS.**

**IF THE VIBRATION STILL EXISTS, STOP THE HAMMERMILL, AND CHECK THE TIGHTNESS OF THE STABILIZING BARS AND SPANNER NUTS. YOU SHOULD ALSO CHECK THE WELDS ON THE ROTORS, IF APPLICABLE.**

**NEXT, START THE HAMMERMILL AGAIN, AND RUN IT AT OPERATING SPEED. IF THE VIBRATION STILL EXISTS, HAVE THE ROTOR REBALANCED.**

**FINALLY, CHECK THE ROTOR FOR EXCESSIVE WEAR. SEE IF THE ROTOR PLATE HAMMER ROD HOLES ARE WORN. IF THE ROTOR IS WORN, IT WILL HAVE TO BE REPLACED.**

## ***REPLACEMENT PARTS***

**REPLACING PARTS BEFORE THEY BECOME TOO WORN IS ANOTHER PREVENTATIVE MEASURE THAT CAN BE TAKEN.**

**HERE'S A LOOK AT THREE CRITICAL COMPONENTS OF A HAMMERMILL AND WHEN THEY SHOULD BE REPLACED:**

- **SCREENS: WHEN THE PERFORATED HOLE EDGES BECOME ROUNDED.**
- **HAMMERS: WHEN THE CORNERS BECOME ROUNDED AND MAIN DRIVE MOTOR AMPERAGE HAS INCREASED**
- **WEAR PLATES: WHEN THE THICKNESS HAS BEEN REDUCED BY 50%.**

**ONCE THE REPLACEMENT PARTS ARE INSTALLED, YOU CAN TAKE THE FOLLOWING STEPS TO MAXIMIZE THEIR LONGEVITY:**

- **REVERSE THE ROTATION OF THE HAMMERMILL ROTOR ON AT LEAST A WEEKLY BASIS, IF NOT DAILY. DOING THIS WILL INCREASE THE LIFE OF BOTH THE HAMMERS AND SCREENS.**
- **MAKE SURE PRODUCT IS BEING FED UNIFORMLY INTO THE MILL. TOO MUCH MATERIAL IN ONE AREA AND NOT ENOUGH IN ANOTHER WILL CAUSE SCREENS AND HAMMERS TO WEAR UNEVENLY. HAMMERS THAT WEAR UNEVENLY WILL CAUSE EXCESSIVE VIBRATION.**
- **MAKE SURE ADEQUATE AIR VOLUME IS USED. AIR FLOW WILL HELP UNIFORM FEEDING AND GRINDING. TOO LITTLE AIR FLOW WILL CAUSE PREMATURE WEAR ON THE MAIN ROTOR PLATES AND FORCE YOU TO CHANGE HAMMERS AND SCREENS, BEFORE THEY NORMALLY WOULD NEED TO BE CHANGED.**

### ***THE GRINDING PROCESS***

**FINALLY, IT'S IMPORTANT TO TROUBLESHOOT THE GRINDING PROCESS ON A REGULAR BASIS, TO MAKE SURE THE SYSTEM IS OPERATING PROPERLY.**

**ONE WAY TO ACCOMPLISH THIS IS BY USING THE FOLLOWING CHECKLIST:**

- **CONFIRM CAPACITY**
- **CHECK HAMMERS AND SCREENS**
- **CHECK TEMPERATURE OF THE GRINDING CHAMBER**
- **CHECK THE AIR VOLUME.**
- **CHECK THE FEEDING DEVICE.**
- **CHECK FOR POSSIBLE DISCHARGE OBSTRUCTIONS.**
- **MAKE SURE YOU'RE NOT USING EXCESSIVE HORSEPOWER.**

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