UNLOCK THE CHAMBER OF SECRETS
FEED IT RIGHT
PART 2
If your feeding conditions are wrong, all other actions will be in vain. It’s as simple as that.

Feed issues are among the most common crusher problems. The feed arrangement should always be the first thing to check if output is not as desired or you want to extend chamber lifetime. There is often great potential for performance improvement.

Installing feeding alignment devices is an investment that often pays for itself very quickly. Extra maintenance is required, but this does not compare with the cost of prematurely changing manganese.

**SEGREGATION**

Finer and coarser particles separate and concentrate in different parts of the chamber. Typically, the coarser material accumulates at the top and the finer material at the bottom.

**Common causes**

Material segregates when it hits a horizontal surface. Vibrations increase segregation further. Two conveyors feeding directly into crusher.

**Fixes**

Correct the feeding device. A feed box, splitter, hit plate or centring chute might solve the issue. In fine crushing applications, a divider can be used to spread the material in the feed hopper.
Horizontal segregation is difficult to correct with simple measures. A rotating feed distributor can be used, but it is usually simpler to correct the problem at an earlier stage of transportation.

**MISALIGNMENT**

The material is fed more toward one part of the crushing chamber inlet, creating a big risk of uneven wear. Crusher operation becomes uneven, with power and pressure peaks. Misalignment is fairly easy to visually detect.

**Common causes**

- Feeding with belt conveyor
- Poor alignment of vibrating feeder

**Fixes**

- Correct the feeding device. Using a feed distributor or hit plate can help.

  A splitter can be used in coarse and fine crushing application. This spreads the material in the feed hopper. While this can handle misalignment, it does not help with segregation.
EXPERIENCE CRUSHOLOGY

Material gets stuck in the hopper and does not enter the crushing chamber.

**Common causes**
- Coarse feed – single sized material makes it worse
- Flaky or elongated material
- Edges and other mechanical obstructions in the feed hopper and crusher.

**Fixes**
- Address the process to change the feed. Changing the feed arrangement to alter the direction of the material shape can have an effect. Remove any protruding edges that stop the material from entering the chamber. Some softer rubber materials can cause problems, as sharp stones may penetrate the rubber and become lodged.

TRICKLE FEEDING

The amount of material entering the crushing chamber is not sufficient to fill it. This results in uneven wear and poor output.

**Common causes**
- Control system problems
- Faulty equipment, such as feeders or sensors
- Lack of staff training

**Fixes**
- Fix any equipment faults causing the problem.
- Ensure everyone understands the importance of choke feeding.

BRIDGING

Material gets stuck in the hopper and does not enter the crushing chamber.

**Common causes**
- Coarse feed – single sized material makes it worse
- Flaky or elongated material
- Edges and other mechanical obstructions in the feed hopper and crusher.

**Fixes**
- Fix any equipment faults causing the problem.
- Ensure everyone understands the importance of choke feeding.
For more information on how to improve your operations, contact your local Sandvik team or call our global head office on +46 (0) 8 456 11 00.

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