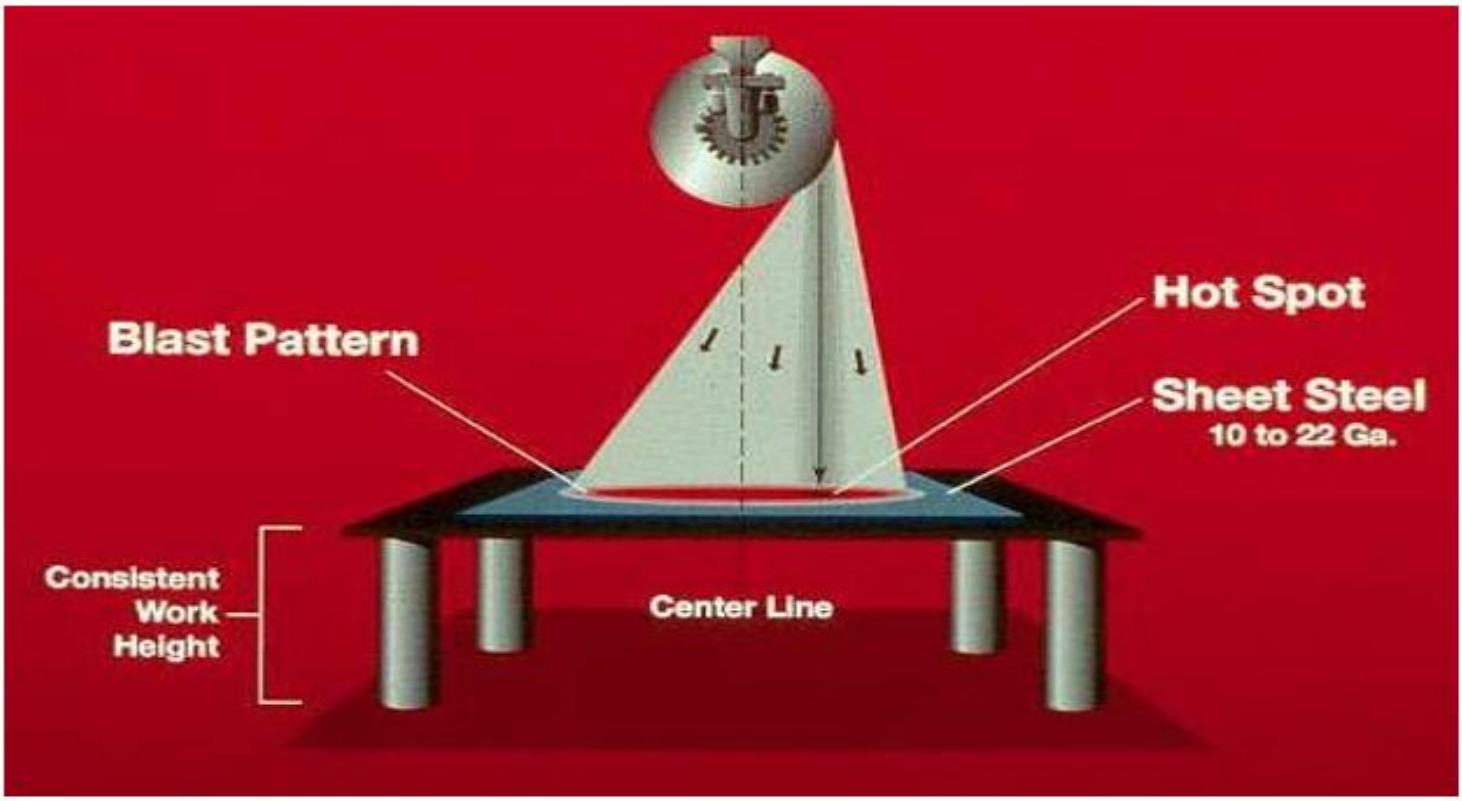
FINTEC
METAL FINISHING TECHNOLOGY

Blast Pattern Setting For a Tumblast Machine



TEST PLATE

Checking the blast pattern should be done by using a steel test plate approximately 1/8 inch thick by at least 12 inches wide by the width of the mill belt. This ensures that the complete work area is covered. The plate should be positioned directly under the blast wheel in the base of the mill belt.

SET UP

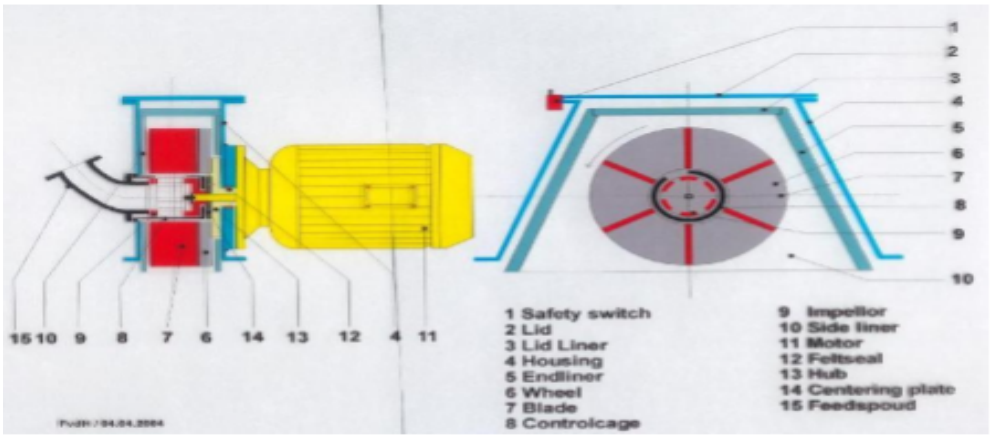
- If the machine has multiple blast wheels each wheel needs to be tested individually.
- The mill belt should then be isolated so that it does not run during the testing process.
- DO NOT PAINT THE STEEL PLATE!

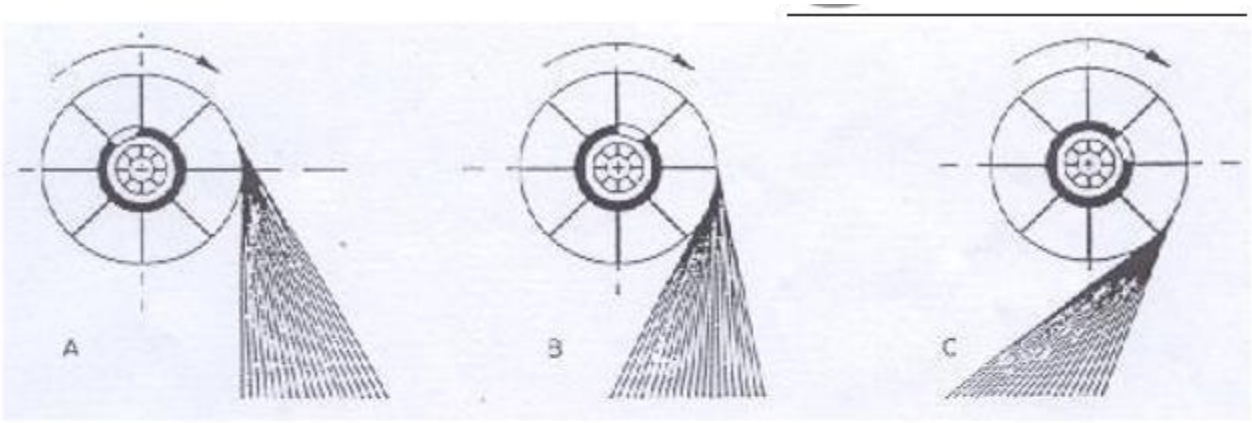
TESTING

- The plate should be blasted for approximately 30 – 40 seconds at the Rated Full Load Amperage for the blast Wheel (this information can be located on the blast wheel motor name plate) in order to generate enough heat in the plate to be detected by hand. Any longer would make it difficult to determine the position of the Hot Spot. If the only available test plate is thicker than 1/8 inch more time will be required to generate the required heat for testing.

- As soon as possible the machine door should be opened. Leave the plate inside the machine and locate the HOT SPOT by running a hand along the plate from side to side in order to determine where the hottest zone is. The HOT SPOT should be approximately 8 inches long by 4 inches wide. Mark this with a piece of chalk. This heat is generated by the transmitted energy created by a high volume of media impacts on the surface of the plate. The geometry of the blast wheel and the rotation causes a spread of media across the width of the mill belt if set correctly. Approximately 70% of the total media volume thrown is being directed onto one small area generating most heat. This 'hot spot' if set correctly should be located approximately 6 inches in front of the center line of the blast wheel (See diagram above) The complete oval shaped blast pattern should be seen on the plate if set correctly.

- ADJUSTMENT
  The blast pattern is adjusted by moving the control cage in the direction that the HOT SPOT needs to move. Please note that the ratio of movement between the control cage and the hot spot is 1- 12. If the Control cage is move ½ inch the hot spot will move 6 inches. See Diagrams Below.





BEWARE

While checking the hot spot in a blast machine care must be taken to ensure that you do not have a 'false' hot spot on the test plate. The control cage opening may be set in such a way that the shot ricochet's off the blast wheel hood end liner plates and is deflected onto the plate used for checking the HOT SPOT. This causes excessive wear on the blast wheel hood liner plates and also increases media consumption. Cycle times will also be way too long and cleaning results very poor. A good way to prevent this is to start your blast pattern setting process with the control cage opening as shown in the diagram above in position 'B'. This can be seen by removing the blast wheel housing cover and looking inside. There are normally marks on new control cages that show the position of the opening.