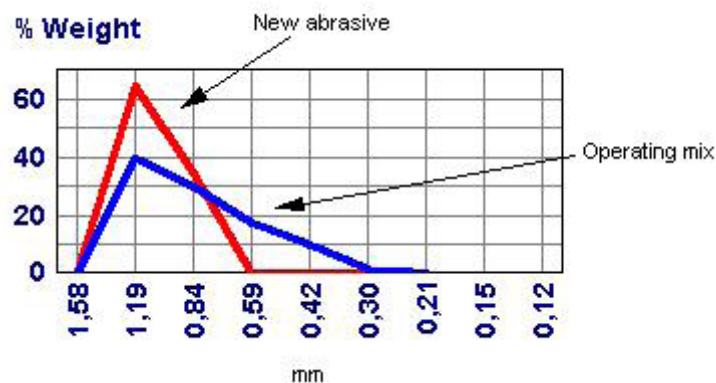


The Operating Mix is the mixture of recyclable abrasive particles used for blasting. It is characterized by its size distribution.

1. Importance of the operating mix

The particles having undergone various degrees of wear, the size distribution of the operating mix is very different from that of new abrasive although it has the same nominal size:



The average particle dimension in the Operating Mix being lower than in the new product, the number of particles per kg and therefore the number of impacts per minute and the coverage rate are higher.

As the abrasive is used for blasting the particles gradually wear - the size distribution of the operating mix is therefore very different from that of new abrasive although it has the same nominal size:

The average particle dimension in the Operating Mix is smaller than in new abrasive - the number of particles per kg, and therefore the number of impacts per minute and the coverage rate, are higher.

2. Change in operating mix

The abrasive particles in the Operating Mix gradually wear down and eventually become small enough to be extracted by the separator - the size at which particles are removed can be adjusted by the separator setting. The size distribution of the Operating Mix is a determining factor of the quality of the treatment - the Operating Mix has therefore to be checked regularly and kept constant.

To keep the Operating Mix as constant as possible the hopper has to be kept full of new abrasive - the new product must be added regularly and should not exceed 10% of the total capacity of the machine.

A change in Operating Mix size distribution not only affects the result on blasted parts but also modifies the blast pattern in a wheel machine as shown on the drawing.

The mean lifetime of abrasive, and thus consumption, depends on the hardness of the abrasive - a very hard grit or shot is more efficient on the surface but also more fragile, which means it wears more quickly.

3. A golden rule in shot blasting

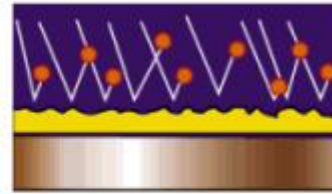
Always use the finest abrasive that will break the contamination and clean the work pieces to provide the best coverage possible. The higher the particle count, the higher the number of impacts per minute and the more efficient the work.



Operating mix too coarse
(too much new abrasive
added at once)



Good (balanced)
operating mix



Operating mix too fine
(too long without new
abrasive addition)