



The real cost of blinded dust screens



6.3mm aperture woven mesh

An Indonesian granite quarry operator had to stop production for around 15 mins 5 times a day to clean blinded woven mesh dust screen cloths on their Jaques 20' x 8' screen deck

Production rate for the Jaques = 150 TPH or 3000 tonnes over a 20 hr production day.
The 75 minutes downtime just for cleaning represents 6.25% or 187.5 tonnes a day lost production

With the market value of aggregate @ \$15.00 per tonne the daily lost production = **\$2,812.50**

\$2,800 lost production every day for cleaning

It would be acceptable for this operator to include more dust into the 20mm aggregate product, increasing the production of the higher value 20mm product (\$15.00 tonne) and reducing the production volume of lower value dust (\$10.00 tonne).

Reducing the aperture size to achieve this with woven mesh simply isn't possible because the screens blind over and no dust is screened out at all, contaminating the 20mm product.

This operator's blinding problem can be solved through the use of self-cleaning screening media such as Flex-mats.



5mm aperture Flex-mats will not blind and will not require cleaning stoppages

Assuming the use of self-cleaning Flex-mats increased the volume of dust in the 20mm material by a mere 5 tonnes per hour over 20 hr day, that would equate to 100 tonnes per day extra production @ \$5 tonne value or \$500 per day.

The value of production can be increased by \$2,812.50 through no stoppages plus additional \$500.00 more dust in 20mm product.

\$3,312.50 increased production value every day

Approximate cost of Flex-mats for Jaques 20'x 8' screen = \$5,500.00 for a full deck

Estimated production days to recover 100% of investment cost = 1.6 days

It is important to note that the screen cloths become progressively blinded over time and cleaning is only done when blinding reduces screening to intolerable levels. There will be losses in production and increased re-circulating load as the screens gradually blind over, however the real amount of loss is difficult to quantify in dollar value.

Not calculated into the above equation is the fact that the Flex-mats will not only solve blinding problems but they will last around 3 or 4 times longer than woven wire mesh. Flex-mats will also be 10-20% more efficient than the woven mesh screen cloths even when screening in ideal conditions of no pegging or blinding.

When analysed in this way the purchase cost of the Self-Cleaning Flex-mat screen cloths doesn't even warrant thought.

Flex-mats can possibly return 20, 30, 40 times more in profit than they cost to buy