

ABSTRACT

Andesite crusher mill PT. Jombor Permai Indah is located in Desa Somopuro, District Jogonalan, Klaten, Central Java. Andesite stone crushing activities in the crusher unit consists of three stages: two jaw crusher and a cone crusher. Products produced in the form of crushed stone with size:

- 1) (Sand) = 13.60 tons / hour (26.09%)
- 2) (-30 mm + 20 mm) = 10.26 tons / hour (19.69%)
- 3) (-20 mm + 10 mm) = 9.10 tons / hour (17.46%)
- 4) (-10 mm + 5 mm) = 9.21 tons / hour (17.67%)
- 5) (-5 mm) = 9.95 tons / hour (19.09%)

Currently production is generated is equal to 297.09 tons / day. Production targets set in the amount of 420 tons / day and for the percentage of the desired material:

1. (Sand): 14.74 tons / hour ($\leq 20\%$)
2. (- 30 mm + 20 mm): 11.05 tons / hour ($\leq 15\%$)
3. (- 20 mm + 10 mm): 14.74 tons / hour ($\leq 20\%$)
4. (- 10 mm + 5 mm): 14.74 tons / hour ($\leq 20\%$)
5. (-5 Mm): 18.42 tons / hour ($\geq 25\%$)

Efforts are made to meet the production target is to do two alternatives:

1. Increasing the number of bait as much as 21.56 tons / hour, from 52.12 tons / hour to be 73.69 tons / hour. Modifications I to double vibrating sieve vibrating screen deck. Opening vibrating sieve decks I Decks I and II 100 mm to 5 mm. Setting Closed Jaw Crusher I is not changed (fixed) 70 mm. Changing Setting Closed Jaw Crusher II from 45 mm to 40 mm. Having made efforts to improve the effectiveness of the tool jaw crusher II increased from 89.87% to 94.94%, and the effectiveness of the cone crusher increased from 27.57% to 67.34%.

2. Increasing the number of bait as much as 21.56 tons / hour, from 52.12 tons / hour to be 73.69 tons / hour. Using two tools crusher. Closed setting Jaw Crusher I is not changed (fixed) 70 mm. Closed cone crusher setting is also not changed (fixed) 15 mm. Having made efforts to improve the effectiveness of cone crusher increased from 27.57% to 73.55%.

The results obtained after production improvement efforts (Alternative I) is:

1. (Sand) = 13.91 TPJ (18.88%)
2. (-30 Mm + 20 mm) = 11.63 TPJ (15.78%)
3. (-20 Mm + 10 mm) = 13.54 TPJ (18.37%)
4. (-10 Mm + 5 mm) = 14.31 TPJ (19.42%)
5. (-5 Mm) = 20.30 TPJ (27.55%)

Based on the results obtained, the form of crushed stone production reached 420.033 tons / day, so that the target of 420 tons / day and percent distribution of its products in accordance with the target production target PT. Jombor Permai Indah.