

Zuper Sinter Cast News

2008 November

One of the most modern cutting edge technology in wear and tear application is “**Zuper Sinter Cast**” Introduced by IMCO Alloys Pvt. Ltd; Mumbai, INDIA. This patented product is fast becoming one of the most widely used wear component ares in the most critically affected by wear in crushing, grinding and mixing of limestone, clinker, coal, coke, glass dolomite, sugar and slag etc; in industries like Cement, Power, Mining, Sugar & Steel.

In this News letter issue we shall cover up a case study of Clinker Crusher Hammer used in M/s. Ultratech Cement Ltd; Rajula, Gujarat; INDIA.



In fig. no. 1 this is the typical Clinker Crusher Hammer made of MN Steel III has used to crush clinker.



In fig. No.2 Mn Steel hammer after 2500working Hours.

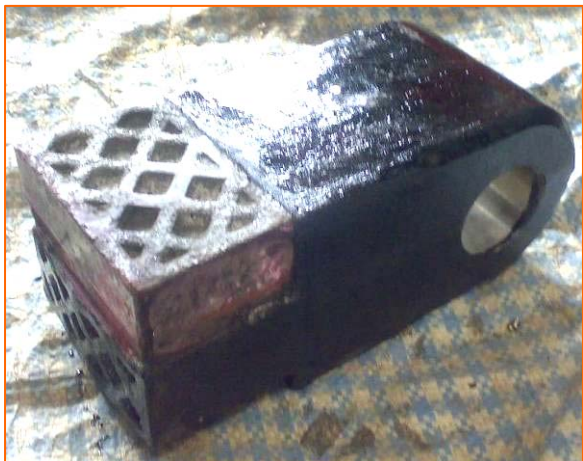
Observation: In fig. no. 1 a typical a typical clinker crusher MN Steel Gr. III hammer used and after 2500 hrs of crushing it wear out more than 25mm in the striking area as shown in fig. 2. This allowing major sizes of clinker to pass without any effective crushing and also consuming excess power to crush ineffectively thus damaging the screen etc.

IMCO Solution:

Observe in fig. no. 3, the hammer body is now a shank holder where the Zuper Block Carbide Block is fitted and shall be used to crush very effectively. This sinter blocks are further fused with Zuper Cera checkers (as shown in fig. 4) thus increasing the life of the hammer by atleast 3times more than the conventional as shown is fig.5.



Fig. No. 3 - Clinker Crusher Hammer Body & Zuper Replaceable Block Carbide tip



**ZUPER
CERA
Checkers**

Fig. No. 4 - Clinker Crusher Hammer Body with Zuper Replaceable Block Carbide tip

In this case study we have installed this hammer in M/s. Ultratech Cement Ltd; (GCW); Rajula Gujarat, INDIA and after 4500 hours of continuous crushing found to be worn out by 12mm as shown in fig. 5. Hence this hammer is effectively outperformed the life of previous MN Steel hammer by 4 times and the hammer can be further used for another 2000 hours. **Thus proving the cutting edge technology.**



Fig. no. 5 linker Crusher Hammer with Zuper Block Replaceable Carbide tip

Advantages of Zuper Sinter Tips

- 1 No welding process involves, hence heat effected zone is considerably reused.
- 2 Uniform shape, size and orientation of Zuper block tip give excellent edge retention.
- 3 Due to the slow wear rate of Sinter carbide, power saving factor is very high. Considerably saving lots of electricity charges for an effective crushing ratio.
- 4 The Size of clinkers are consistent for a longer period of working hours and also reducing wear and tear on screens.
- 5 Matrix Hardness of Zuper tip is 62 – 64 HRc. where the Primary carbides is 660Hv Secondary carbides i. e. M7C3 will have 1500 Hv. Where the MN Steel hammer does not exceed more than 35 HRc.
- 6 Very low abrasion wear occurring on the edge of tip makes change over period extended by atleast 2 – 3 times, saving lot of **downtime money.**