WELCOME
RESPECTED CONTROLLER GENERAL
SHRI RANJAN SAHAI ,
ALL IBM OFFICIALS AND ALL RESPECTED DIGINATORIES AND INDUSTRY PERSONNELS AND THEIR REPRESENTATIVE

FOR

PRESENTATION ON

LATEST CHANGES IN USE OF IRON ORE AND NEED OF HOUR TO REDUCE PRESENT THRESHOLD VALUE

PRESENTATED BY

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THRESHOLD VALUE OF IRON

- **Definition of Thresh hold value of minerals((AS PER MEMC 2015)** :- Means the limits prescribed by the Indian Bureau of Mines from time to time based on the beneficiability and marketability of a mineral for a given region and given time which the material obtained after mining can be discarded as waste
- **Existing thresh hold value of Iron ore (Ref T-45031/CGBM/2007(PF) :-**

  (i) Hematitic Iron ore :- 45% Fe(Min) (ii) Hematitic siliceous Ore (for Ore of Goan Origin) 35% Fe (Min)
- **Requirement of reduction of present threshold value of Iron ore from present + 45% Fe to 35-45 % for Jabalpur Region .**

Why there is need of change of threshold values

- 1. Use of Iron ore

  Earlier and presently Laterite is being purchased by the cement plants now few of cement plants purchasing the Low grade Iron ore in place of laterite

Range of Fe of Iron ore : 35-45%

- 2.Technological up gradation

  Low grade iron ore being purchased by the beneficiation plant and present technology like grinding and hydrocycling upgrading the Fe percentage for 10-15%

Range of feed of Fe of Iron ore : >+35%

3. Physical blending of low grade iron ore with high grade iron ore

Range of Fe of Iron ore : >+ 35%

GENERAL PRACTICE FOR USE OF LOW GRADE IRON ORE IN JABALPUR REGION

(Fe :+35%)

- 1. ROM of Iron ore being purchased by the plants having crusher /screener where desired screening of material is in practice
- Coarser material has higher Fe percentage while fines have lower side Fe material
- Boulder to pebble sized material is generally with higher Fe values and being sorted separately while lesser pebble size is further put under grinding and followed by hydro cycling and gravitation process thus Fe percentage increased for 10-15%
- Over all in this practice material between 35-45% beneficiated and sold to the market
- Conclusion: Relook over the threshold values between 35-45% of Fe.

WHY THERE IS NEED OF CHANGE OF THRESHOLD VALUE

- As earlier said in Jabalpur Region there are 20-25 Mines of Iron ore where Fe percentage is varying from 35-55% and few of then they have own plant and few are selling at pit mouth .
- There are only 3-4 mines where Fe percentage is 35-55% while rest of mines have Fe percentage 35-50%
- As per information ROM of Iron ore between 35-55% , higher side Fe boulder/pebble are manually sorted then left out ROM put under crusher followed by desired screening and further finer material again put under grinding-hydro cycling -gravitational process thus entire ROM is beneficiated for 10-15% up gradation of Fe.
- Thus considering the beneficiation the Threshold value should be reconsidered and should be lower down from 45%.

RELOOK OVER THE FACTS

- Any lease area having iron ore < 45% Fe then it will be a waste for the lessee
- If threshold values reduce then it will be beneficiatory to Lessee and Government
- Further lowering threshold values will offer upliftment of socio economic status , industrial up liftment .
- Further it will be a great tool for Mineral Conservation and Development
- If material below 45% Fe considered as iron ore in such case royalty / taxes benefits to govt. and sale value benefit will be for lessee. DMF . socio economic benefits to society , increase in employment etc
- Will increase the yearly production capacity of mines and enhancement in mine life.

ROYLAITY MATTER SHOULD BE RECONSIDERED

- As per lowering of threshold value of iron then reelook over the royalty issue.
- Presently range of royalty of Iron ore is restricted for >55% and <55% of Fe
- Royalty slab recommended for Fe % i.e. >+35%,.+45% >55% &+65%

GENERAL PRACTICE OF BENEFICIATION OF IRON ORE IN JABALPUR REGION

- The average grade of mineral considered from the mine is Fe 35% to 48% , it will be feed to plant hopper , moisture will vary from 8-12% .
- The feed material passes through screening and crushing unit then crushed material is further screened i.e. below 10mm, thereafter -10mm material goes to classifier. Classifier separates material into two Parts first -150 Microns and second +150 Microns to -10mm.

BENEFICIATION AT A GLANCE

- First part -150 micron goes to the hydro cyclone and Second part material goes to ball mill. Ball mill grinds material -150 micron and this material is also feed to the hydro cyclone.
- Material retained in hydro cyclone is divided into two parts, underflow and overflow. The overflow material goes to thickener tank because in this material Fe% is very Low, within the range of about 25 to 30%Fe, and in the underflow material Fe % increases as compared to ROM, (concentration of feed material) , such material is not suitable for sale therefore this material further pass/ process through separator.

- Separator divides material in two parts , first is with Fe percent between 58% to 60% while second part is tailing .

CONCLUSION

- **Considering the present use and adopted technology**
- **It is requested that thresh hold value should be reduce for iron ore and it must be between at 35%-40% Fe**

- THANKS

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