

VIBRATION AMPLITUDE AS A FUNCTION OF FILLING RATIO AND DIMENSIONS OF BALL MILLS COMPARISON BETWEEN THE MODEL MECHANIC APPROACH

PRICHICI Mariana Adriana, INDRIE Liliana, GHERGHEL Sabina
University of Oradea
mprichici@uoradea.ro

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ABSTRACT

This paper wants to demonstrate how is possible, by tree model approach for the movement of grinding in vibrating ball mills to design of the vibrating ball mills . With three model mechanic approach can be determined vibration amplitude A as a function of filling ratio η , for different dimension of grinding chamber D and L , and the filling ratio of grinding elements . These models are: ***Mechanic Model nr.1 , of “dividing mass in tow cylinder”*** Prichici (2007) : ***Mechanic Model nr.2 , of “dividing mass in tow half cylinder”*** Prichici (2005): ***Mechanic Model nr.3 , of “divided mass in n barr”*** Prichici (2005)

After applied these tree model approach for the movement we obtain the conclusions about the influence of filling ratio and dimensions of ball mill of vibration amplitude.

REFERENCES

- 1.Prichici, Mariana. (2005), *The calculus of optimum filling ratio of grinding elements in vibration bolts mills with a mechanical model of dividing mass in two half cylinders*, Oradea University, ISSN 1583-0691, Oradea
- 2.Prichici, Mariana; Indrie L ; Gherghel S ; (2007) „*The dynamic study of vibrating tube mills. The calculus of operating range with the model mechanic approach of - Dividing mass in tow cylinder*” Anals of the University of Oradea, Fascicle of Management and Technological Engineering, pp.409-414,
3. Prichici M,A , Indrie L, Gherghel S (2008), *Model mechanic approach of “divided mass in N bar” for the calculus of vibration Amplitude* Anals of the University of Oradea, Fascicle of M T E , Volume VI (XVI), pp. 383-392, Oradea,
- 4.Prichici, M.A. (2008). The Calculus of the Vibration Amplitude with the Mechanic Model Approach for Vibrating Tube Mills 1143-1144, Annals of DAAAM for 2008 & Proceedings of the 19th International DAAAM Symposium, ISBN 978-3-901509-68-1, ISSN 1726-9679, pp 572, Editor B. Katalinic, Published by DAAAM International, Vienna, Austria 2008
- 5Rajamani R., K., Herbst J., A., (1991)-*Optimal control of a ball mill grinding circuit I I* .Feedback and optimal control, Journal Annoncement nr 9112 ISSN:0009-2509 p.871-879 Tehniche Universitat Graz, Austria