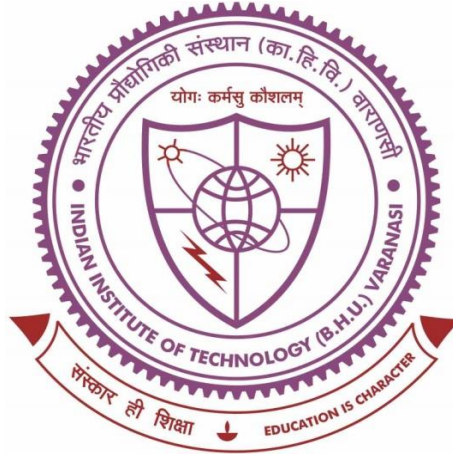


# TRIBOLOGICAL PERFORMANCE OF COPPER-GRAPHITE- TiC SELF LUBRICATING COMPOSITES



Thesis submitted in partial fulfilment for the  
Award of Degree

**Doctor of Philosophy**

By

**Ankit**

DEPARTMENT OF METALLURGICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY  
(BANARAS HINDU UNIVERSITY)  
VARANASI-221005  
INDIA

17141501

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## CHAPTER 7

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### **MAJOR CONCLUSIONS**

Based on the experimental findings and important observations in the present investigation, few major conclusions have been drawn and are summarized as follows:

- High wear resistance and high COF of composite in dry working conditions with high wt.% of reinforcement suggests it is suitable for clutch applications in auto industry.
- High wear resistance and low COF of composite in lubricating working conditions with high wt.% of reinforcement makes it suitable for bearing and bushing applications.
- Central composite design of RSM can be effectively applied to develop a mathematical model to optimize the tribological parameters and reduce the number of experiments, which could save the overall time and resource consumptions.



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## **SUGGESTIONS FOR FUTURE WORK**

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The following suggestions are made based on the present investigation:

1. Surface of graphite can be modified by various metal coatings of Ni, Cr to enhance wettability and interface adhesion with copper.
2. Different compaction techniques like hot compaction and advance sintering methods like SPS, microwave sintering can be employed to fabricate the composites to improve the properties.
3. Study of corrosion behavior of Copper- Graphite-TiC composites can be done to widen the applications in marine environment.