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DEVELOPMENT OF A CURVED LAYER CARBON FIBER REINFORCED PLASTIC 3D PRINTER

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ABSTRACT

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INTRODUCTION

Early prior research demonstrated the superiority of ceramics for bearings (1, 2) and the existence of elasto-hydrodynamic (ehd) lubricant films at ball and roller contacts (3), the calculation of which is now an accepted part of bearing engineering. These new concepts are now used in the design of lubrication systems with solid lubricants that operate in much more severe environments than oils and greases (4, 5). Proprietary computer codes and unique patented bearing configurations for optimizing the performance of bearing/solid-lubricant systems have been developed (6, 7 and 8). In this way, patented self-contained solid-lubricated all-steel and hybrid-ceramic ball and roller bearings are now available for environments that do not contribute to their lubrication, such as in air or vacuum.

NOMENCLATURE

CF	Carbon Fiber
CFRP	Carbon Fiber Reinforced Plastic/Polymer
FDM	Fused Deposition Modeling
ABS	Acrylonitrile Butadiene Styrene
PLA	Polylactic Acid
FEA	Finite Element Analysis
FEM	Finite Element Model

MATERIALS AND METHODS

Put materials and methods used here.

RESULTS

Put results here.

DISCUSSION

Put discussion here.

ACKNOWLEDGEMENTS

Put acknowledgements here.

REFERENCES