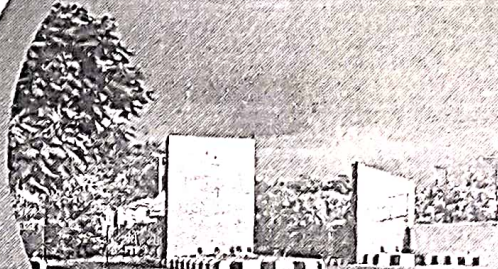




# e-BOOK OF ABSTRACTS



## 8<sup>TH</sup> INTERNATIONAL AND 47<sup>TH</sup> NATIONAL CONFERENCE ON FLUID MECHANICS AND FLUID POWER FMFP-2020

December 09-11, 2020



Organized by

Department of Mechanical Engineering  
Indian Institute of Technology Guwahati, India

HEAD  
Dept. of Mechanical Engg.  
Widyawardhini's College of  
Engineering & Technology  
Vasal Road-401202.

# Contents

Preface	3
Director's Message	5
NSFMFP President's Message	7
HOD's Message	9
About	12
FMFP-2020 . . . . .	12
Organizing committee . . . . .	13
Technical Committee Members . . . . .	13
Conference Track Chairs . . . . .	14
Bio-Sketches	15
List of Papers	33
Contributory Papers . . . . .	33
Timetable	254



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## Experimental Evaluation of Vortex Tube Type Jet Wind Turbine Performance

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Owing to the crisis of electricity throughout the world, the attention has been paid towards the renewable source of energy generation. This includes solar energy, fuel energy, hydro energy and wind energy. There are numerous research reported in extraction of energy from wind source. The main focus of this study is to design and develop a jet wind turbine of capacity 1 kW which could be more efficient one as well as easy to install. As the name suggests jet wind turbine uses the principle of jet propulsion to operate a wind turbine. The jet wind turbine will be smaller in overall dimensions than conventional wind turbine. The added advantage of jet wind turbine is to harness as maximum wind energy as possible with the help of vortex shaped casing surrounding the rotor called lobe mixer. The design of jet wind turbine includes the rotor design, blade cross-section and all dimensions, outer casing design. The wind velocity assumed to be 5-10 m/s based on the statistical data collected around Vasai, Maharashtra. The developed model with experimental facility will be further tested in laboratory for its performance. The performance parameter includes the brake torque, brake power, overall efficiency of the system.





# CERTIFICATE

THIS IS TO CERTIFY THAT

*Abhishek J. Chaudhary*

HAS ACTIVELY PARTICIPATED IN THE

## 8th International and 47th National Conference on Fluid Mechanics and Fluid Power

Organized (in virtual mode) by  
Department of Mechanical Engineering  
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