

## **DESIGN AND DEVELOPMENT OF DOWN DRAFT WOOD GASIFIER**

**S. SIVAKUMAR<sup>1</sup>, N. RANJITHKUMAR<sup>2</sup> & S. RAGUNATHAN<sup>3</sup>**

<sup>1</sup>Assistant Professor, Department of Production Engineering, JIT, Thoppur, Tamil Nadu, India

<sup>2</sup>Department of Mechanical Engineering, JIT, Thoppur, Tamil Nadu, India

<sup>3</sup>Professor, Department of Production Engineering, JIT, Thoppur, Tamil Nadu, India

### **ABSTRACT**

The gasification technology is now considered to be in an advanced stage of development. Hence there is huge expectation from the user industry for its application. It is well known that wood can be used to operate internal combustion engine to produce mechanical power. For wood as gasifier which is capable of producing tar free gas has to be used or the tar has to be reduced to an acceptable level before it can be used to avoid the possibility of contaminating the engine. The aim of this paper is focused on a 10 kW down draft wood gasifier system is designed using empirical data and derived quantities

**KEYWORDS:** Down Draft Gasifier, Wood, and Gasification