LEAD-FREE FERROELECTRIC MATERIALS SELECTION AND ENERGY HARVESTING INVESTIGATIONS

A THESIS

submitted by

GAURAV VATS

for the award of the degree

of

MASTER OF SCIENCE

(BY RESEARCH)

SHOOL OF ENGINEERING

INDIAN INSTITUTE OF TECHNOLOGY MANDI

FEBURARY 2014

Dedicated to
my Teachers
and
Family

DECLARATION

I hereby declare that the work reported in this thesis entitled **"LEAD-FREE FERROELECTRIC MATERIALS SELECTION AND ENERGY HARVESTING INVESTIGATIONS"** is entirely original. It was carried out by me under the supervision of Dr. Rahul Vaish, School of Engineering, Indian Institute of Technology, Mandi, Himachal Pradesh, India. I further declare that it has not formed the basis for the award of any degree, diploma, membership, associateship or similar titles of any University or Institution.

February 2014 **Gaurav Vats**

THESIS CERTIFICATE

This is to certify that the thesis titled **LEAD-FREE ERROELECTRIC MATERIALS SELECTION AND ENERGY HARVESTING INVESTIGATIONS TO IIT MANDI**, submitted by **Gaurav Vats**, to the Indian Institute of Technology Mandi, Mandi for the award of the degree of **Master of Science (Research)**, is a bonafide record of the research work done by him under my supervision. The contents of this thesis, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

Dr. Rahul Vaish
Chairperson
School of Engineering
IIT-Mandi, Mandi
Himachal Pradesh-175001 Date:

TABLE OF CONTENTS