

Tensile and Low Cycle Fatigue Behavior of Modified 9Cr–1Mo steel



Thesis submitted in partial fulfillment
for the Award of degree

DOCTOR OF PHILOSOPHY

By

Preeti Verma

**DEPARTMENT OF METALLURGICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY
(BANARAS HINDU UNIVERSITY)
VARANASI–221005**

CERTIFICATE

It is certified that the work contained in the thesis titled "*Tensile and Low Cycle Fatigue Behavior of Modified 9Cr-1Mo Steel*" by "*Preeti Verma*" has been carried out under our supervision and this work has not been submitted elsewhere for a degree.

It is further certified that the student has fulfilled all the requirements of Comprehensive, Candidacy and SOTA.

Dr. Vakil Singh, Professor (Emeritus)
(Supervisor)

Department of Metallurgical Engineering
Indian Institute of Technology
(Banaras Hindu University)

Prof. N. C. Santhi Srinivas
(Co-Supervisor)

Department of Metallurgical Engineering
Indian Institute of Technology
(Banaras Hindu University)

DECLARATION BY THE CANDIDATE

I, "*Preeti Verma*", certify that the work embodied in this thesis is my own bona fide work and carried out by me under the supervision of "*Dr. Vakil Singh, Professor (Emeritus) and Prof. N. C. Santhi srinivas*" from "*July 2012*" to "*June 2016*", at the "*Department of Metallurgical Engineering*", Indian Institute of Technology (BHU), Varanasi. The matter embodied in this thesis has not been submitted for the award of any other degree/diploma. I declare that I have faithfully acknowledged and given credits to the research workers wherever their works have been cited in my work in this thesis. I further declare that I have not willfully copied any other's work, paragraphs, text, data, results, *etc.*, reported in journals, books, magazines, reports dissertations, theses, *etc.*, or available at websites and have not included them in this thesis and have not cited as my own work.

Date

Place

Preeti Verma

CERTIFICATE BY THE SUPERVISORS

It is certified that the above statement made by the student is correct to the best of our knowledge.

Dr. Vakil Singh, Professor (Emeritus)
(Supervisor)

Department of Metallurgical Engineering
Indian Institute of Technology
(Banaras Hindu University)

Prof. N. C. Santhi Srinivas
(Co-Supervisor)

Department of Metallurgical Engineering
Indian Institute of Technology
(Banaras Hindu University)

Head

Department of Metallurgical Engineering
Indian Institute of Technology
(Banaras Hindu University)

COPYRIGHT TRANSFER CERTIFICATE

Title of the Thesis: *“Tensile and Low Cycle Fatigue Behavior of Modified 9Cr–1Mo Steel”*

Name of the Student: *Preeti Verma*

COPYRIGHT TRANSFER

The undersigned hereby assigns to the Indian Institute of Technology (Banaras Hindu University) Varanasi all rights under copyright that may exist in and for the above thesis submitted for the award of the *"PhD Degree"*.

Date:

Place:

Preeti Verma

Note: However, the author may reproduce or authorize others to reproduce material extracted verbatim from the thesis or derivative of the thesis for author's personal use provided that the source and the Institute's copyright notice are indicated.