



ISSN No. : 2321-9653

IJRASET

**International Journal for Research in Applied
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : www.ijraset.com, E-mail : ijraset@gmail.com

Certificate

*It is here by certified that the paper ID : IJRASET23090, entitled
Performance Analysis of a 4-Stroke Twin Cylinder C.I Engine using Pine Oil Methyl Esters
with Isopropyl Alcohol*

*by
P. Narendra*

*after review is found suitable and has been published in
Volume 7, Issue V, May 2019*

*in
International Journal for Research in Applied Science &
Engineering Technology*

(International Peer Reviewed and Refereed Journal)

Good luck for your future endeavors

By [Signature]

Editor in Chief, IJRASET



ISRA Journal Impact
Factor: 7.429



45.98
INDEX COPERNICUS



THOMSON REUTERS
Researcher ID: N-9681-2016



TOGETHER WE REACH THE GOAL
SJIF 7.429



ISSN No. : 2321-9653

IJRASET

**International Journal for Research in Applied
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : www.ijraset.com, E-mail : ijraset@gmail.com

Certificate

*It is here by certified that the paper ID : IJRASET23090, entitled
Performance Analysis of a 4-Stroke Twin Cylinder C.I Engine using Pine Oil Methyl Esters
with Isopropyl Alcohol*

by

S. Venkateswara Rao

*after review is found suitable and has been published in
Volume 7, Issue V, May 2019*

in

*International Journal for Research in Applied Science &
Engineering Technology*

(International Peer Reviewed and Refereed Journal)

Good luck for your future endeavors

By [Signature]

Editor in Chief, IJRASET

ISRA
JIF

ISRA Journal Impact
Factor: 7.429



45.98
INDEX COPERNICUS



THOMSON REUTERS
Researcher ID: N-9681-2016



TOGETHER WE REACH THE GOAL
SJIF 7.429



ISSN No. : 2321-9653

IJRASET

**International Journal for Research in Applied
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : www.ijraset.com, E-mail : ijraset@gmail.com

Certificate

*It is here by certified that the paper ID : IJRASET23090, entitled
Performance Analysis of a 4-Stroke Twin Cylinder C.I Engine using Pine Oil Methyl Esters
with Isopropyl Alcohol*

by

Ch. Naveen Kumar

*after review is found suitable and has been published in
Volume 7, Issue V, May 2019*

in

*International Journal for Research in Applied Science &
Engineering Technology*

(International Peer Reviewed and Refereed Journal)

Good luck for your future endeavors

By [Signature]

Editor in Chief, IJRASET

ISRA
JIF

ISRA Journal Impact
Factor: 7.429



45.98
INDEX COPERNICUS



THOMSON REUTERS
Researcher ID: N-9681-2016



TOGETHER WE REACH THE GOAL
SJIF 7.429



ISSN No. : 2321-9653

IJRASET

**International Journal for Research in Applied
Science & Engineering Technology**

IJRASET is indexed with Crossref for DOI-DOI : 10.22214

Website : www.ijraset.com, E-mail : ijraset@gmail.com

Certificate

*It is here by certified that the paper ID : IJRASET23090, entitled
Performance Analysis of a 4-Stroke Twin Cylinder C.I Engine using Pine Oil Methyl Esters
with Isopropyl Alcohol*

*by
Dr. K. Prasada Rao*

*after review is found suitable and has been published in
Volume 7, Issue V, May 2019*

*in
International Journal for Research in Applied Science &
Engineering Technology*

(International Peer Reviewed and Refereed Journal)

Good luck for your future endeavors

By [Signature]

Editor in Chief, IJRASET

ISRA
JIF

ISRA Journal Impact
Factor: 7.429



45.98
INDEX COPERNICUS



THOMSON REUTERS
Researcher ID: N-9681-2016



TOGETHER WE REACH THE GOAL
SJIF 7.429