



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



ISRA Journal Impact  
Factor: 7.429



45.98  
INDEX COPERNICUS



THOMSON REUTERS  
Researcher ID: N-9681-2016



10.22214/IJRASET  
doi  
crossref



TOGETHER WE REACH THE GOAL  
SJIF 7.429

## Certificate

*It is here by certified that the paper ID : IJRASET48751, entitled  
Analysis of Artificially Roughened Solar Air Heater Duct Using Computational Fluid  
Dynamics*

*by  
N. Dilipsharma*

*after review is found suitable and has been published in  
Volume 11, Issue I, January 2023  
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



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](http://www.ijraset.com), E-mail : [ijraset@gmail.com](mailto:ijraset@gmail.com)

## Certificate

*It is here by certified that the paper ID : IJRASET48751, entitled  
Analysis of Artificially Roughened Solar Air Heater Duct Using Computational Fluid  
Dynamics*

*by  
N. Vadivel*

*after review is found suitable and has been published in  
Volume 11, Issue I, January 2023  
in*

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

*(International Peer Reviewed and Refereed Journal)*

*Good luck for your future endeavors*

*By* 

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](http://www.ijraset.com), E-mail : [ijraset@gmail.com](mailto:ijraset@gmail.com)

## Certificate

*It is here by certified that the paper ID : IJRASET48751, entitled  
Analysis of Artificially Roughened Solar Air Heater Duct Using Computational Fluid  
Dynamics*

*by  
K. Ramesh*

*after review is found suitable and has been published in  
Volume 11, Issue I, January 2023  
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



10.22214/IJRASET



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](http://www.ijraset.com), E-mail : [ijraset@gmail.com](mailto:ijraset@gmail.com)

## Certificate

*It is here by certified that the paper ID : IJRASET48751, entitled  
Analysis of Artificially Roughened Solar Air Heater Duct Using Computational Fluid  
Dynamics*

*by  
D. Kulandaivel*

*after review is found suitable and has been published in  
Volume 11, Issue I, January 2023  
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-9581-2016



10.22214/IJRASET



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](http://www.ijraset.com), E-mail : [ijraset@gmail.com](mailto:ijraset@gmail.com)

## Certificate

*It is here by certified that the paper ID : IJRASET48751, entitled  
Analysis of Artificially Roughened Solar Air Heater Duct Using Computational Fluid  
Dynamics*

*by  
M. Shoban Babu*

*after review is found suitable and has been published in  
Volume 11, Issue I, January 2023  
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-9581-2016



10.22214/IJRASET



TOGETHER WE REACH THE GOAL  
SJIF 7.429