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PROPERTY INDIA

G.A.R.6 [See Rule 22(1)] RECEIPT

Docket No 129255

Date/Time 2022/11/18 15:44:50

Anuj Raturi Gyananand Bhawan, Kalinka Vihar, Lane No. 3, Majrimafi, IIP Mohkampur Kala-248005, Dehradun, Uttarakhand, India Email: doon.ip.solutions@gmail.com

| Sr.<br>No. | Ref. No./Application<br>No. | App. Number                 | Amount<br>Paid | C.B.R.<br>No. | Form<br>Name | Fee<br>Payment | Remarks  |
|------------|-----------------------------|-----------------------------|----------------|---------------|--------------|----------------|--|
| 1          | E-106/7360/2022/DEL         | 202211066176                | 0              | -1            | FORM28       | Full           |  |
| 2          | 202211066176                | TEMP/E-1/76433/2022-<br>DEL | 1600           | 44964         | FORM 1       | Full           | AN APPARATUS<br>FOR<br>CONTROLLING<br>PARTICULATES<br>OF A DIESEL<br>GENERATOR |
| 3          | E-12/6128/2022/DEL          | 202211066176                | 2500           | 44964         | FORM 9       | Full           |  |

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application: 18/11/2022

(21) Application No.202211066176 A

(43) Publication Date: 25/11/2022

### (54) Title of the invention: AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL GENERATOR

| (51) International classification | :B01D0053940000, F01N0013000000, F01N0003200000, F01N0003080000, B01D0053900000 | (71)Name of Applicant:  1)J B INSTITUTE OF TECHNOLOGY  Address of Applicant: NH-72, VILLAGE SHANKARPUR, |
|-----------------------------------|---|---|
| (86) International                | :NA   | CHAKRATA ROAD, DEHRADUN, Uttarakhand, 248197, India.  |
| Application No                    | :NA   | Dehradun  |
| Filing Date                       | ina .   | Name of Applicant: NA   |
| (87) International                | : NA  | Address of Applicant : NA   |
| Publication No                    |   | (72)Name of Inventor:   |
| (61) Patent of Addition           | NI A  | 1)Dr. Sandeep Kumar Chaudhary   |
| to Application Number             | LINES.  | Address of Applicant: Department of Applied Science, J B  |
| Filing Date                       | :NA   | Institute of Technology, Dehradun. Dehradun   |
| (62) Divisional to                | .NTA  | 2)Dr. Santosh Kumar Joshi   |
| Application Number                | :NA   | Address of Applicant :Department of Applied Science, J B  |
| Filing Date                       | :NA   | Institute of Technology, Dehradun. Dehradun   |
| Filing Date                       | ****  | Institute of Technology, Dehradun. Dehradun   |

(57) Abstract:

An apparatus for controlling particulates of a diesel generator (100) comprising: a mesh element (101); a NOX reduction element (102), wherein said NOX reduction element (102) made of a NOX reduction compound to remove NOX compounds from the exhaust emission; and a muffler element (103) configured to release the treated emission into the air. Wherein the method (101) for trapping soot emission comprising: in a step (201) the removal of particulate matter; in a step (202) eliminating NOX compounds; and in a step (203) releasing treated emission into air.

No. of Pages: 16 No. of Claims: 5

| FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 2 |                        |  |                 | (FC                         | OR OFF  | FICE USE   | ONLY    | )                                     |
|--|------------------------|--|-----------------|-----------------------------|---------|--|---------|---------------------------------------|
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| Ordinary (✓)   |                        | Convention (                                 | ()              |                             | PCT     | -NP()  |         |                                       |
| Divisional ( )   | Patent of Addition ( ) | Divisional ()                                | Patent<br>Addit |                             | Divi    | sional ()  | Paten   | t of Addition ( )                     |
| 3A. APPLICA  | NT(S)                  |  |                 |                             |         |  | l       |                                       |
| Name in Ful  | 11                     | Nationality                                  | 1               | Country of Add<br>Residence |         | ress of the  | e Appli | cant                                  |
| J B INSTIT<br>TECHNOL  |                        | Indian                                       | India           |                             |         | NH-72, VILLAGE<br>SHANKARPUR, CHAKRATA<br>ROAD, DEHRADUN,<br>Uttarakhand, 248197, India. |         |                                       |
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| Natural Person ()  |                        | Small Entity ()                              | Sta             | ırtụp ()                    |         | Educationa nstitution  |         | Others ()                             |
| 4. INVENTO   | R(S) [Please ti        | ick (🗸 ) at the app                          | propriate       | categor                     | yl      |  |         | 191. 7 <u>1</u> 1.                    |
| Are all the inventor(s) same as the applicant(s) named above?  |                        | Yes ()                                       | es ()           |                             | No (✓)  |  |         |                                       |
| If "No", furnis  | sh the details o       | f the inventor(s)                            |                 |                             |         |  |         |                                       |
| Name in Ful  |                        | Nationality                                  | Count<br>Reside |                             | Ad      | dress of tl  | ie Inve | entor                                 |
| Dr. Sandeep Kum  | ar Chaudhary           | Indian                                       | India           | D                           |         | ent of App<br>of Techno  |         | ience, J B                            |

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| Dr. Santo                             | sh Kumar Josh           | i Indian                     | I                | ndia   | ľ                         | epartment of Applied Science, J B stitute of Technology. |  |  |
|---------------------------------------|-------------------------|------------------------------|------------------|--|---------------------------|--|--|--|
| 5. TITI                               | LE OF THE IN            | VENTION                      |                  |  |                           |  |  |  |
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| 6. AUT                                | HORISED REC             | GISTERED                     |                  | IN/P/  | A No.                     | IN/PA: 4266  |  |  |
| PATEN                                 | NT AGENT(S)             |                              |                  | Name   | e                         | Anuj Raturi  |  |  |
|                                       |                         |                              |                  |  |                           | +91-9808414112   |  |  |
| 7. ADDRESS FOR SERVICE OF APPLICANT   |                         |                              |                  | Name   | ·                         | Anuj Raturi  |  |  |
| IN IND                                |                         |                              |                  | Postal   |                           | Gyananand Bhawan, Kalinka Viha                           |  |  |
|                                       |                         |                              |                  | Addre  | ess                       | Lane No. 3, Majrimafi, IIP Mohkampur                     |  |  |
|                                       |                         |                              |                  |  |                           | Kala-248005, Dehradun, Uttarakhan India.                 |  |  |
|                                       |                         |                              |                  | Telep  |                           | N/A  |  |  |
|                                       |                         |                              |                  |  |                           | +91-9808414112   |  |  |
|                                       |                         |                              |                  | Fax N  |                           | N/A ,  |  |  |
|                                       |                         |                              |                  | E-mai  | il ID                     | anuj.mechanical19@gmail.com                              |  |  |
| Country                               | Application             | Filing date                  | Name of the      | ne   | Title                     | IPC (as classified in the                                |  |  |
| Nil                                   | Number<br>Nil           | Nil                          | applicant<br>Nil |  | of the                    | convention country)                                      |  |  |
| 9. IN<br>INTER                        | CASE OF PC              | L<br>T NATIONA<br>PPLICATION | L PHASE          | APPLI<br>DER PA                                | ATENT                     | Nil ON, PARTICULARS OF Γ CO-OPERATION TREATY (PCT)       |  |  |
| Interna                               | ational application     | n number                     |                  | Intern   | International filing date |  |  |  |
|                                       | ]                       | Nil                          |                  | Nil  |                           |  |  |  |
|                                       | CASE OF DECULARS OF C   |                              |                  |  |                           | UNDER SECTION 16,  |  |  |
| Original (first) application No.  Nil |                         |                              | Date             | Date of filing of original (first) application |                           |  |  |  |
|                                       |                         |                              |                  | ,  | Nil                       |  |  |  |
| 11. IN O                              | CASE OF PATAIN APPLICAT | TENT OF AD                   | DITION FI        | LED U  | JNDER                     | R SECTION 54, PARTICULARS                                |  |  |
| Main a                                | pplication/paten        | it No.                       |                  | Date   | of filing                 | g of main application                                    |  |  |
| 12. DEC                               | CLARATIONS              |                              |                  |  |                           |  |  |  |
|                                       |                         |                              |                  |  |                           |  |  |  |

### (i) Declaration by the inventor(s)

(In case the applicant is an assignee: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

I/We, the above named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

Dated this: 17th Day of November, 2022.

Signature(s)
Name(s) of the signatory

Dr. Sandeep Kumar Chaudhary

Dr. Santosh Kumar Joshi

### (ii) Declaration by the applicant(s) in the convention country

(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

Dated this:

(Not applicable)

- a) Signature(s)
- b) Name(s) of the signatory

### (iii) Declaration by the applicant(s)

### I/We the applicant(s) hereby declare(s) that: -

- · I am/ We are in possession of the above-mentioned invention.
- The complete specification relating to the invention is filed with this application.
- The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.
- There is no lawful ground of objection(s) to the grant of the Patent to me/us.
- · I am/we are the true & first inventor(s).
- · I am/we are the assignee or legal representative of true & first inventor(s).
- The application or each of the applications, particulars of which are given in Paragraph 8, was the first application in convention country/countries in respect of my/our invention(s).
- I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.
- My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph 9.
- The application is divided out of my /our applications particulars of which is given in Paragraph 10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act.
- The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph 11.

## 13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION (a) Form 2

| Item              | Details   | Fee , | Remarks          |  |
|-------------------|---|-------|------------------|--|
| Complete #        | No. of pages: 12                                    |       | (Total 15 pages) |  |
| No. of Claim(s)   | No. of claims <b>05</b> and No. of pages: <b>01</b> |       |                  |  |
| Abstract          | No. of pages: 01                                    |       |                  |  |
| No. of Drawing(s) | No. of drawings No. 02 of pages: 02                 |       |                  |  |

# In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

- (b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable.
- (c) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).
- (d) Statement and Undertaking on Form 3
- (e) Declaration of Inventorship on Form 5
- (f) Power of Authority Form 26
- (g) Request for Early Publication on Form 9
- (h) Request for Examination on Form 18

| Total fee - in cash/Banker's Cheque/Bank Draft Bearing | NO Date | ) II |
|--|---------|------|
| Bank   |         |      |

**Dated this:** 17<sup>th</sup> Day of November, 2022.

ON BEHALF OF APPLICANT

a) Signature(s)

b) Name(s) of the signatory

Signature:

Name: Anuj Raturi [IN/PA: 4266]

(AGENT FOR THE APPLICANT)

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### Note: -

- \* Repeat boxes in case of more than one entry.
- \* To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
- \* Tick ( $\checkmark$ )/cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
- \* Name of the inventor and applicant should be given in full, family name in the beginning.
- \* Strike out the portion which is/are not applicable.
- \* For fee: See First Schedule !;

# THE PATENTS ACT, 1970 (39 of 1970) & The Patents Rules, 2003

## COMPLETE SPECIFICATION (See section 10 and rule 13)

**Title:** "AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL GENERATOR"

Applicant(s):

Name: J B INSTITUTE OF TECHNOLOGY .

Nationality: India

Address: 23 Milestone, NH-07, Chakrata Road, Shankarpur, Dehradun,

Uttarakhand, India.

### PREAMBLE TO THE DESCRIPTION:

The following specification particularly describes the invention and the manner in which it is to be performed.

### FIELD OF THE INVENTION:

The present invention relates to diesel generator emission reduction system. Said emission reduction system more particularly relates to an apparatus for controlling particulates of a diesel generator.

### 5 BACKGROUND OF THE INVENTION:

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Background description includes information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.

A number of different type of the assemblies and apparatus for removing pollutants are available in the prior art. For example, the following prior arts are provided for their supportive teachings and are all incorporated by reference:

Prior art document, US20060218904A1 discloses a diesel system for reducing particulate matter emissions in off-road vehicles, coal mining and metal/non-metal mining operations, comprising, in combination, a supply of highly paraffinic diesel fuel having a high Cetane rating and substantially no sulfur, aromatics and nitrogen content and being formulated to greatly reduce PM output levels from the engine relative to conventional diesel fuels, The invention is further embodied in the method of reducing diesel emission contaminants including providing a supply of highly paraffinic diesel fuel having a negligible sulfur, aromatics or nitrogen content, and a high Cetane number, and other apparatus useful for filtering engine emissions before discharge to ambient.

Another prior art document, US8209956B2 describes a emissions control system may have an SCR device that receives a flow of exhaust. The emissions control system may also have an injector that introduces a reduction agent into the flow of exhaust at or upstream of a catalyst within the SCR device. The emissions control system may have a controller in communication with the injector, the controller

being configured to calculate a first amount of the reduction agent by using an approximation that at least one of a plurality of SCR reactions must be completed before the remaining SCR reactions commence. The controller may also be configured to adjust the injector according to at least the first amount.

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Yet another prior art document, US5180559A describes a method of reducing the light-off time of a catalytic converter comprising exposing the matrix of the converter to an alternating magnetic field or to electromagnetic radiation having a frequency such that the washcoat and the catalyst particles supported by the matrix are heated to the light-off temperature without a corresponding increase in the temperature of the entire matrix. The catalytic converter includes a matrix formed in two or more parts, of which the downstream parts are conventional. The upstream part of the matrix consists of a honeycomb made of a material which does not absorb microwave energy, is coated with a washcoat dispersed with catalyst particles which does heat up when exposed to microwave energy, and is enclosed in a waveguide having perforated walls through which exhaust gases can flow.

Yet another prior art document, US3964875 describes a method and apparatus for deflecting or redistributing the flow of exhaust gases discharged from an exhaust pipe into a canister or housing containing a coated honeycomb monolith of a catalytic converter of larger cross-sectional area than the exhaust pipe, so as to more evenly distribute such discharge flow through such catalysed honeycomb support member within the container, and thereby optimize the treatment and removal of pollutants from said exhaust gases.

Yet another prior art document, CN201810378 provides a flow-guide energy-saving exhaust tail pipe comprising an interface, a front-mounted detector, a casing, exhaust openings, an inner pipe, a lava nozzle and an air inlet.

Yet another prior art document, US8146708 describes an exhaust muffler with an integrated catalytic converter having a polymeric muffler body.

Yet another prior art document, US20100101219 describes an exhaust system for a vehicle with a diesel engine, having a first insert through which exhaust gas flows, a second insert through which exhaust gas flows and which is arranged downstream of the first insert in the flow direction, and an injection device arranged between the first and second inserts for injecting a fluid. A swirling element is provided in the flow path of the exhaust gas downstream of the first insert in the flow direction.

Yet another prior art document, US20120103719 provides an exhaust muffler comprising an inlet in fluid communication with an outlet via an expansion chamber, the expansion chamber comprising an inner core extending in the longitudinal direction, wherein the muffler is provided with at least one accelerator tube between the inlet and the expansion chamber.

All the above cited prior arts use inbuilt mechanism such as stationary detectors, variable flow deflectors or pinwheel inside the exhaust pipe before the catalytic converter. Wherein, the present invention discloses a system and method for trapping soot emission from a diesel generator exhaust system which has all the advantages over the prior art and none of the disadvantages.

### **OBJECTS OF THE INVENTION:**

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Some of the objects of the present invention, which at least one embodiment herein satisfy are as listed herein below.

The main object of the present invention is to provide an apparatus for controlling particulates of a diesel generator.

Another object of the present invention is to provide an apparatus for controlling particulates of a diesel generator wherein the apparatus comprises a mesh element configured to mesh out particulate matter from exhaust gases. Further, the system comprises a NOX reduction element configured to remove NO<sub>X</sub> compounds from

the exhaust emission. Furthermore, the system comprises a muffler element configured to release the treated emission into air.

Yet another object of the present invention is to provide an apparatus for controlling particulates of a diesel generator which is simple in design.

Yet another object of the present invention is to provide an apparatus for controlling particulates of a diesel generator which is simple in maintenance.

### SUMMARY OF THE INVENTION:

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As an aspects of the present invention relate to an apparatus for controlling particulates of a diesel generator, and more particularly to an system and method for trapping soot emission from a diesel generator.

In an aspect, a system for trapping soot emission from a diesel generator for reducing air pollution is disclosed. The system comprises a mesh element configured to mesh out particulate matter from exhaust gases. Further, the system comprises a NOX reduction element configured to remove NO<sub>X</sub> compounds from the exhaust emission. Furthermore, the system comprises a muffler element configured to release the treated emission into air.

In an aspect, a method for trapping soot emission from a diesel generator for reducing air pollution by a diesel generator is disclosed. The method begins with removing particulate matter from exhaust gases by a mesh element. Next, the method removes  $NO_X$  compounds from the exhaust gases by a NOX reduction element. Thereafter, the method ends with releasing treated emission into air by an muffler element.

Various objects, features, aspects, and advantages of the inventive subject matter will become more apparent from the following detailed description of preferred

embodiments, along with the accompanying drawing figures in which like numerals represent like components.

### BRIEF DESCRIPTION OF THE DRAWINGS:

- It is to be noted, however, that the appended drawings illustrate only typical embodiments of this invention and are therefore not to be considered for limiting of its scope, for the invention may admit to other equally effective embodiments.
  - FIG. 1 depicts an exemplary representation of a soot trapping system (100) as an embodiment of the present invention, and
- FIG. 2 depicts an exemplary flow diagram (200) representing method for trapping soot emission from a diesel generator as an embodiment of the present invention.

### **DETAILED DESCRIPTION:**

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In the following detailed description, reference is made to the accompanying drawings which form a part hereof, and in which is shown by way of illustration specific embodiments in which the invention may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that the embodiments may be combined, or that other embodiments may be utilized and that structural and logical changes may be made without departing from the spirit and scope of the present invention. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope of the present invention is defined by the appended claims and their equivalents.

The present invention is described in brief with reference to the accompanying drawings. Now, refer in more detail to the exemplary drawings for the purposes of illustrating non-limiting embodiments of the present invention.

As used herein, the term "comprising" and its derivatives including "comprises" and "comprise" include each of the stated integers or elements but does not exclude the inclusion of one or more further integers or elements.

As used herein, the singular forms "a", "an", and "the" include plural referents unless the context clearly dictates otherwise. For example, reference to "a device" encompasses a single device as well as two or more devices, and the like.

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As used herein, the terms "for example", "like", "such as", or "including" are meant to introduce examples that further clarify more general subject matter. Unless otherwise specified, these examples are provided only as an aid for understanding the applications illustrated in the present disclosure, and are not meant to be limiting in any fashion.

As used herein, the terms ""may", "can", "could", or "might" be included or have a characteristic, that particular component or feature is not required to be included or have the characteristic.

Exemplary embodiments will now be described more fully hereinafter with reference to the accompanying drawings, in which exemplary embodiments are shown. These exemplary embodiments are provided only for illustrative purposes and so that this disclosure will be thorough and complete and will fully convey the scope of the invention to those of ordinary skill in the art. The invention disclosed may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein.

Various modifications will be readily apparent to persons skilled in the art. The general principles defined herein may be applied to other embodiments and applications without departing from the spirit and scope of the invention. Moreover, all statements herein reciting embodiments of the invention, as well as specific examples thereof, are intended to encompass both structural and functional

equivalents thereof. Additionally, it is intended that such equivalents include both currently known equivalents as well as equivalents developed in the future (i.e., any elements developed that perform the same function, regardless of structure). Also, the terminology and phraseology used is for the purpose of describing exemplary embodiments and should not be considered limiting. Thus, the present invention is to be accorded the widest scope encompassing numerous alternatives, modifications and equivalents consistent with the principles and features disclosed. For purpose of clarity, details relating to technical material that is known in the technical fields related to the invention have not been described in detail so as not to unnecessarily obscure the present invention.

Thus, for example, it will be appreciated by those of ordinary skill in the art that the diagrams, schematics, illustrations, and the like represent conceptual views or processes illustrating systems and methods embodying this invention. The functions of the various elements shown in the figures may be provided through the use of dedicated hardware as well as hardware capable of executing associated software. Similarly, any switches shown in the figures are conceptual only. Their function may be carried out through the operation of program logic, through dedicated logic, through the interaction of program control and dedicated logic, or even manually, the particular technique being selectable by the entity implementing this invention. Those of ordinary skill in the art further understand that the exemplary hardware, software, processes, methods, and/or operating systems described herein are for illustrative purposes and, thus, are not intended to be limited to any particular named element.

Each of the appended claims defines a separate invention, which for infringement purposes is recognized as including equivalents to the various elements or limitations specified in the claims. Depending on the context, all references below to the "invention" may in some cases refer to certain specific embodiments only. In

other cases, it will be recognized that references to the "invention" will refer to subject matter recited in one or more, but not necessarily all, of the claims.

References will now be made in detail to the exemplary embodiment of the present disclosure. Before describing the detailed embodiments that are in accordance with the present disclosure, it should be observed that the embodiments reside primarily in combinations arrangement of the system according to an embodiment herein and as exemplified in FIG. 1 to 2.

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In an embodiment of the present invention, a system (100) for trapping soot emission from a diesel generator is disclosed. The soot trapping system (100) comprises a mesh element (101) configured to mesh out particulate matter from the exhaust emission. The mesh element (101) is composed of porous ceramic fibre that traps particulate matter present in the exhaust emission. Further, the soot trapping system (100) comprises a NO<sub>X</sub> reduction element (102) configured to remove NO<sub>X</sub> compounds from the meshed exhaust gases. The NOX reduction element (102) uses NOX reduction compounds to remove NO<sub>X</sub> compounds from exhaust emission. The NOX reduction element (102) perform a catalytic reduction reaction for NOX reduction of the exhaust emission. Furthermore, the system (100) comprises an muffler element (103) configured to release the treated emission into the air. The muffler element (103) causes reduced pollutant emission into the air.

All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., "such as") provided with respect to certain embodiments herein is intended merely to better illuminate the invention and does not pose a limitation on the scope of thé invention otherwise claimed. No language in the specification should be construed as indicating any non-claimed element essential to the practice of the invention.

Various terms as used herein are shown below. To the extent a term used in a claim is not defined below, it should be given the broadest definition and persons in the pertinent art have given that term as reflected in printed publications and issued patents at the time of filing.

Groupings of alternative elements or embodiments of the invention disclosed herein are not to be construed as limitations. Each group member can be referred to and claimed individually or in any combination with other members of the group or other elements found herein. One or more members of a group can be included in, or deleted from, a group for reasons of convenience and/or patentability. When any such inclusion or deletion occurs, the specification is herein deemed to contain the group as modified thus fulfilling the written description of all groups used in the appended claims.

The order in which the method is described is not intended to be construed as a limitation, and any number of the described method blocks may be combined in any order to implement the method or alternate methods. Additionally, individual blocks may be deleted from the method without departing from the spirit and scope of the subject matter described herein. Furthermore, the method may be implemented in any suitable hardware, software, firmware, or combination thereof. However, for ease of explanation, in the embodiments described below, the method may be considered to be implemented in the above-described system.

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The method begins at step 202 with removing particulate matter from the exhaust emission by a mesh element (101). Then, the system removes  $NO_X$  compounds from the exhaust emission by a  $NO_X$  reduction element (102) at step 202 Thereafter, the method ends at step 203 with releasing treated emission into the air by an muffler element (103).

Although the invention has been described herein with particular embodiments, one skilled in the art will understand that various modifications, changes, and variations

may be made in the elements, steps, operation, and details of the method, system, and computer program product described herein without departing the scope thereof. The described invention may be implemented with some components removed or other components added to the method or system without departing from the invention. The different steps illustrated in the figures may not require the particular order shown in the example figures. Additionally, some steps may be eliminated or some steps may be added or the order of some of the steps may be changed to the described flow of steps. Furthermore, one or more steps illustrated in one figure may be appropriately included in another figure in the implementation of the invention without departing from the scope of the invention. It is intended that the invention described herein is not limited to only the embodiments or examples described. It will be appreciated by those skilled in the art that changes could be made to the exemplary embodiments described above without departing from the broad inventive concept thereof. It is understood, therefore, that this invention is not limited to the particular embodiments disclosed, but it is intended to cover modifications within the spirit and scope of the present invention as defined by the appended claims.

### ADVANTAGES OF THE PRESENT INVENTION:

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The main advantage of the present invention is to reduce air pollution from a diesel generator.

Another advantage of the present invention is to provide a system for trapping soot emission from a diesel generator.

Yet another advantage of the present invention is to provide a system comprises a mesh element configured to mesh out particulate matter from exhaust emission wherein, a NO<sub>X</sub> reduction element configured to remove NO<sub>X</sub> compounds from the exhaust emission.

Yet another advantage of the present invention is to provide a system comprises an muffler element configured to release the treated emission into air.

Yet another advantage of the present invention is to provide a system and method for trapping diesel generator soot emission.

**Dated this:** 17<sup>th</sup> Day of November, 2022.

ON BEHALF OF APPLICANT

Signature:

Name: Anuj Raturi [IN/PA: 4266]

(AGENT FOR THE APPLICANT)

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### CLAIM(S)

### We Claim:

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- 1. An apparatus for controlling particulates of a diesel generator (100) comprising:
- 5 a mesh element (101);
  - a  $NO_X$  reduction element (102); and
  - an muffler element (103).
  - 2. The system of present invention as claimed in claim 1, wherein the mesh element (101) is a mesh of ceramic configured to trap the particulate matter present in the exhaust emission.
    - The system of present invention as claimed in claim 1, wherein the NO<sub>X</sub> reduction element (102) uses NO<sub>X</sub> reduction compounds to remove NO<sub>X</sub> compounds from the exhaust emission.
    - 4. The system as claimed in claim 1, wherein the muffler element (103) discharges reduced pollutant emission into the air.
    - 5. A method (200) for trapping soot emission comprising:

in a step (201) removal of particulate matter from exhaust gases by a mesh element (101);

in a step (202) eliminating  $NO_X$  compounds from the exhaust gases by a  $NO_X$  reduction element (102); and

in a step (203) releasing treated emission into air by a muffler element (103).

Dated this: 17<sup>th</sup> Day of November, 2022.

ON BEHALF OF APPLICANT

353

Signature:

Name: Anuj Raturi [IN/PA: 4266]

13

### **ABSTRACT**

Title: "AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL GENERATOR"

An apparatus for controlling particulates of a diesel generator (100) comprising: a mesh element (101); a NO<sub>X</sub> reduction element (102), wherein said NO<sub>X</sub> reduction element (102) made of a NO<sub>X</sub> reduction compound to remove NO<sub>X</sub> compounds from the exhaust emission; and a muffler element (103) configured to release the treated emission into the air. Wherein the method (101) for trapping soot emission comprising: in a step (201) the removal of particulate matter; in a step (202) eliminating NO<sub>X</sub> compounds; and in a step (203) releasing treated emission into air.

Dated this: 17<sup>th</sup> Day of November, 2022.

ON BEHALF OF APPLICANT

Signature:

Name: Anuj Raturi [IN/PA: 4266]

(AGENT FOR THE APPLICANT)

THE PATENTS ACT, 1970 (39 of 1970) and

| STATI   | THE PATENTS RU EMENT AND UNDEF SECTION (See section 8; R  | RTAKING UNI<br>8                      | DER  |   |
|---|---|---------------------------------------|--|---|
| 1. Name & address of the applicant(s).                                      | We, J B INSTITUT<br>VILLAGE SHANK<br>Uttarakhand, 248197<br>(i) that we who have<br>17/11/2022 alone, in<br>application(s) for pate<br>given below:   | ARPUR, CHA                            | AKRATA ROA<br>declare:<br>plication No. 202<br>ame/ substantiall | D, DEHRADUN,  211 dated y same invention, |
| Name of the Country Date of Application                                     | Application No.   | Status of<br>Application              | Date of publication  | Date of Grant                             |
|   | Details attached as AN  |                                       | <u>r</u>   |   |
| 2. Name of the assignee   | (ii) that the rights in the application(s) has/have been assigned to J INSTITUTE OF TECHNOLOGY that we undertake that up to the dat of grant of the patent by the Controller, we would keep him informed i writing the details regarding corresponding applications for patents file outside India within six months from the date of filing of suc application.  Dated this: 17th day of November, 2022. |                                       |  |   |
| 3. To be signed by the applicant or his authorized registered patent agent. |   | ture:  Anuj Raturi    T FOR THE       | [IN/PA: 4266]  |   |
| <b>4.</b> Name of the natural person who has signed.                        | Anuj Raturi   |                                       |  |   |
|   | To, The Controller of Pate The Patent Office, <b>De</b>   | · · · · · · · · · · · · · · · · · · · |  |   |
| Note Strike out whichever is not appli                                      | cable;  |                                       |  |   |

### **ANNEXURE TO FORM-3**

**Title of Invention:** "AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL GENERATOR"

Application No. 202211\_\_\_\_\_Filed on: 17/11/2022

**Applicant(s): J B INSTITUTE OF TECHNOLOGY** 

| Country | Application<br>date | Application<br>No. | Status of the Application | Date of<br>Pub. / Pub.<br>Number | Date of grant<br>/ Grant<br>Number |
|---------|---------------------|--------------------|---------------------------|----------------------------------|------------------------------------|
| N/A     | N/A                 | N/A                | N/A                       | N/A                              | N/A                                |

\*N/A (Not applicable)

Dated this: 17th day of November, 2022.

Signature:

Name: Anuj Raturi [IN/PA: 4266] (AGENT FOR THE APPLICANT)

# THE PATENTS ACT, 1970 (39 of 1970) & THE PATENT RULES, 2003

DECLARATION AS TO INVENTORSHIP

[See Section 10(6) and Rule 13(6)]

We, J B INSTITUTE OF TECHNOLOGY having institution address at NH-72, VILLAGE SHANKARPUR, CHAKRATA ROAD, DEHRADUN, UTTARAKHAND, 248197, INDIA, hereby declare that the true and first inventors of the invention disclosed in the complete specification filed in pursuance of our Application Titled "AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL GENERATOR" are:

Name: Dr. Sandeep Kumar Chaudhary

Nationality: Indian

Address: Department of Applied Science, J B Institute of Technology, Dehradun.

Name: Dr. Santosh Kumar Joshi

Nationality: Indian

Address: Department of Applied Science, J B Institute of Technology, Dehradun.

Dated this: 17th day of November, 2022.

Signature & Name:

Registrar

J B Institute of Technology

To, The Controller of Patents The Patent Office at Delhi.

The Patent ACT, 1970 (39 of 1970) &
The Patents Rule, 2003

## **Request for Publication**

[See section 11A (2), Rule 24A]

| 1. | Name, address and nationality of the applicants:                        | We, J B INSTITUTE OF TECHNOLOGY  Address: NH-72, VILLAGE SHANKARPUR, CHAKRATA ROAD, DEHRADUN, Uttarakhand, 248197 India. Nationality: Indian                                      |
|----|---|---|
| 2. | To be signed by the applicant or his authorized registered patent agent | Hereby request for early publication of our application Titled: "AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL GENERATOR" filed herewith under section 11A(2) of the Act. |
| 3. | Name of the natural person who signed.                                  | Signature: Name: Anuj Raturi [IN/PA: 4266]  |
|    | Dated: November 17, 2022.   | (AGENT FOR THE APPLICANT)   |

To,
The Controller of Patents
The Patent Office at, New Delhi.

## THE PATENT ACT, 1970 (39 OF 1970) & THE PATENTS RULES, 2003

## TO BE SUBMITTED BY AN EDUCATIONAL INSTITUTION

[See rules 2 (ca) and 7].

| We, J B INSTITUTE OF TECHNOLOGY having Nationality of India of the address-NH-72, VILLAGE SHANKARPUR, CHAKRATA ROAD, DEHRADUN, Uttarakhand, 248197, India. Applicant in respect of the patent application titled "AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL |
|---|
| GENERATOR" & application no.202211,   |
| hereby declare that we are an educational institution in accordance with rule 2(ca) and submit the following document(s) as proof;  |
| i) Certificate/proof of university recognized under/Central/State government.   |
| The information provided herein is correct to the best of our knowledge and belief.   |
| <b>Dated this:</b> 16 <sup>th</sup> day of November, 2022.  |
| Signature: 373  |
| Name: Anuj Raturi [IN/PA: 4266]   |

(AGENT FOR THE APPLICANT)

To,

The Controller of Patents,

The Patent Office, at Delhi.

The Patent ACT, 1970 (39 of 1970) & ...
The Patents Rule, 2003

## **Request for Publication**

[See section 11A (2), Rule 24A]

| 1. | Name, address and nationality of the applicants:                        | We, J B INSTITUTE OF TECHNOLOGY  Address: NH-72, VILLAGE SHANKARPUR, CHAKRATA ROAD, DEHRADUN, Uttarakhand, 248197 India. Nationality: Indian                                      |
|----|---|---|
| 2. | To be signed by the applicant or his authorized registered patent agent | Hereby request for early publication of our application Titled: "AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL GENERATOR" filed herewith under section 11A(2) of the Act. |
| 3. | Name of the natural person who signed.                                  | Signature: Name: Anuj Raturi [IN/PA: 4266]  |
|    | Dated: November 17, 2022.   | (AGENT FOR THE APPLICANT)   |

To,
The Controller of Patents
The Patent Office at, New Delhi.

### THE PATENT ACT, 1970 (39 OF 1970)

## & THE PATENTS RULES, 2003

### TO BE SUBMITTED BY AN EDUCATIONAL INSTITUTION

[See rules 2 (ca) and 7]

| We, J B INSTITUTE OF TECHNOLOGY having Nationality of India of the   |
|--|
| address-NH-72, VILLAGE SHANKARPUR, CHAKRATA ROAD, DEHRADUN,  |
| Uttarakhand, 248197, India. Applicant in respect of the patent application titled "AN  |
| APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL   |
| GENERATOR" & application no.202211,  |
| hereby declare that we are an educational institution in accordance with rule 2(ca) and submit the following document(s) as proof; |
| i) Certificate/proof of university recognized under/Central/State government.  |
| The information provided herein is correct to the best of our knowledge and belief.  |
| Dated this: 16 <sup>th</sup> day of November, 2022.  |
| Signature:   |
| Name: Anuj Raturi [IN/PA: 4266]  |
| (AGENT FOR THE APPLICANT)  |
|  |

To,

The Controller of Patents,

The Patent Office, at Delhi.

### All India Council for Technical Education

(A Statutory body under Ministry of Education, Govt. of India)



Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org

### APPROVAL PROCESS 2022-23

### Extension of Approval (EoA)

F.No. Northern/1-10968838042/2022/EOA

Date: 29-Jul-2022

To,

The Secretary(Technical Education) Govt. of Uttarakhand,Dehradun Sectt., 4 Subhash Road, Dehradun-248001

Sub: Extension of Approval for the Academic Year 2022-23

Ref: Application of the Institution for Extension of Approval for the Academic Year 2022-23

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations, 2022 Notified on 4th February, 2022 and amended on 24th February 2022 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

| Permanent Id            | 1-8461364  | Application Id            | 1-10968838042  |
|-------------------------|--|---------------------------|--|
| Name of the Institution | J B INSTITUTE OF TECHNOLOGY  | Name of the Society/Trust | JAI BHAGWAN EDUCATIONAL<br>SOCIETY   |
| Institution Address     | NH-72, VILLAGE SHANKARPUR,<br>CHAKRATA ROAD, DEHRADUN,<br>DEHRADUN, DEHRADUN,<br>Uttarakhand, 248197 | Society/Trust Address     | 17 MANDIR MARG, VASANT<br>VIHAR ENCLAVE<br>DEHARDUN,DEHRADUN,DEHRA<br>DUN,Uttarakhand,248001 |
| Institution Type        | Private-Self Financing   | Region                    | Northern   |
| Year of Establishment   | 2009   |                           |  |

|   | Introduction of               |          |
|---|-------------------------------|----------|
| Opted for Introduction of New Program/Level     | Program/Level Approved or Not | Approved |
| 22.23.42.23.23.23.23.23.23.23.23.23.23.23.23.23 |                               |          |

### To conduct following Courses with the Intake indicated below for the Academic Year 2022-23

| Level   | Program                               | Course                    | Affiliating Body<br>(University<br>#Body)                      | Intake<br>Approved<br>for 2021-22 | Intake<br>Approved<br>for 2022-23 | NRI<br>Approval<br>Status | FN / Gulf<br>quota/ OCI/<br>Approval<br>Status |
|---------|---------------------------------------|---------------------------|--|-----------------------------------|-----------------------------------|---------------------------|--|
| DIPLOMA | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | CIVIL<br>ENGINEERING      | Directorate Of<br>Technical<br>Education,<br>Srinagar(Garhwal) | 60 ,                              | 60                                | No                        | No   |
| DIPLOMA | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | ELECTRICAL<br>ENGINEERING | Directorate Of<br>Technical<br>Education,<br>Srinagar(Garhwal) | 60                                | 60                                | No                        | No   |

Application No:1-10968838042 ALL IN Note: This is a Computer generated Report. No signature is required.

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Page 1 of 4

Printed By: ae4696141

Letter Printed On:10 August 2022

| Level             | Program                               | Course  | Affiliating Body<br>(University<br>/Body)                      | Intake<br>Approved<br>for 2021-22 | Intake<br>Approved<br>for 2022-23 | NRI<br>Approvat<br>Status | FN// Gulf<br>quota/ OCI/<br>Approval<br>Status |
|-------------------|---------------------------------------|---|--|-----------------------------------|-----------------------------------|---------------------------|--|
| DIPLOMA           | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | MECHANICAL<br>ENGINEERING                             | Directorate Of<br>Technical<br>Education,<br>Srinagar(Garhwal) | 60                                | 60                                | No                        | No   |
| UNDER<br>GRADUATE | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | ARTIFICIAL<br>INTELLIGENCE<br>AND MACHINE<br>LEARNING | Uttarakhand<br>Technical<br>University,<br>Dehradun            | 60                                | 30                                | NA .                      | NA   |
| UNDER<br>GRADUATE | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | CIVIL<br>ENGINEERING                                  | Uttarakhand<br>Technical<br>University,<br>Dehradun            | 60                                | 60                                | No                        | No   |
| UNDER<br>GRADUATE | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | COMPUTER<br>SCIENCE &<br>ENGINEERING                  | Uttarakhand<br>Technical<br>University,<br>Dehradun            | 60                                | 90                                | NA                        | NA   |
| UNDER<br>GRADUATE | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | ELECTRICAL<br>ENGINEERING                             | Uttarakhand<br>Technical<br>University,<br>Dehradun            | 30                                | 30                                | No                        | No   |
| UNDER<br>GRADUATE | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | ELECTRONICS &<br>COMMUNICATIO<br>N ENGG               | Uttarakhand<br>Technical<br>University,<br>Dehradun            | 30                                | 30                                | No                        | No   |
| UNDER<br>GRADUATE | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | MECHANICAL<br>ENGINEERING                             | Uttarakhand<br>Technical<br>University,<br>Dehradun            | 60                                | 60                                | No                        | No   |
| POST<br>GRADUATE  | ENGINEERI<br>NG AND<br>TECHNOLO<br>GY | COMPUTER<br>SCIENCE &<br>ENGINEERING                  | Uttarakhand<br>Technical<br>University,<br>Dehradun            | 24                                | 24                                | No                        | No   |
| POST<br>GRADUATE  | MANAGEM<br>ENT                        | МВА   | Uttarakhand<br>Technical<br>University,<br>Dehradun            | 0                                 | 60##                              | No                        | No   |

## Approved New Course(s)

It is mandatory to comply with all the essential requirements as given in APH 2022-23 (Appendix 6)

### **Important Instructions**

- 1. The State Government/ UT/ Directorate of Technical Education/ Directorate of Medical Education shall ensure that 10% of reservation for Economically Weaker Section (EWS) as per the reservation policy for admission, operational from the Academic year 2019-20 is implemented without affecting the reservation percentages of SC/ ST/ OBC (NCL)/ General. However, this would not be applicable in the case of Minority Institutions referred to the Clause (1) of Article 30 of Constitution of India. Such Institution shall be permitted to increase in annual permitted strength over a maximum period of two years.
- The Institution offering courses earlier in the Regular Shift, First Shift, Second Shift/Part Time are now amalgamated as total intake and shall have to fulfil all facilities such as Infrastructure, Faculty and other requirements as per the norms specified in the Approval Process Handbook 2022-23 for the Total Approved Intake. Further, the Institutions Deemed to be Universities/ Institutions having Accreditation/ Autonomy status shall have to maintain the Faculty: Student ratio as specified in the Approval Process Handbook. All such Institutions/ Universities shall have to create the necessary Faculty, Infrastructure and other facilities WITHIN 2 YEARS to fulfill the norms based on the Affidavit submitted to AICTE beginning with the Academic Year 2022-23
- Strict compliance of Anti-Ragging Regulation, Establishment of Committee for SC/ ST, Establishment of Internal Complaint Committee (ICC), Establishment of Online Grievance Redressal Mechanism, Barrier Free Built Environment for disabled and elderly persons, Fire and Safety Certificate should be maintained as Approval Process Handbook and provisions made in AICTE Regulation notified from time to time.
- In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Pharmacy Institute: In compliance with the order dated 05.03.2020 passed by the Hon'ble Supreme Court of India in Transferred Petitions (CIVIL) No 87-101 of 2014, for the existing institutions offering courses in Pharmacy Programme, approval of Pharmacy Council of India (PCI) is mandatory and AICTE approval is NOT required. The requirements for running the Programme (Diploma / UG / PG) such as Land & Build-up Area, Student-faculty ratio, Intake etc. will be as per the respective regulatory body (PCI). In case of any inconsistency in the course name and intake for EoA issued by AICTE and the approval by PCI, the approval of PCI shall

Architecture Institute: In compliance with the order dated 08.11.2019 passed by the Hon'ble Supreme Court of Indian CA No.364/ 2005, for the existing Institutions offering Courses in Architecture Programme, approval by the Council of Architecture (CoA) is mandatory and AICTE approval is NOT required. The requirements for running the Programme (Diploma / UG / PG) such as Land & Build-up Area, Student-faculty ratio, Intake etc. will be as per respective regulatory body (CoA). In case of any inconsistency in the course name and intake for EoA issued by AICTE and the approval by CoA, the approval of CoA shall prevail.

Deemed to be University: Institutions Deemed to be Universities (Running Technical Education Programmes), it is mandatory to have AICTE approval from the Academic Year 2018-19 in compliance of the Hon'ble Supreme Court Order dated 03-11-2017 passed in CA No.17869- 17870 /2017.

> Prof.Rajive Kumar Member Secretary, AICTE

### Copy to:

- The Director Of Technical Education\*\*, Uttarakhand
- 2. The Registrar\*\*, Directorate Of Technical Education, Srinagar(Garhwal)
- The Principal / Director, J B INSTITUTE OF TECHNOLOGY Nh-72, Village Shankarpur, Chakrata Road, Dehradun, Dehradun, Dehradun, Uttarakhand,248197
- The Secretary / Chairman, 17 MANDIR MARG, VASANT VIHAR ENCLAVE **DEHARDUN** DEHRADUN, DEHRADUN

Application No:1-10968838042

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Page 3 of 4

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Uttarakhand,248001

The Regional Officer, All India Council for Technical Education Govt. Polytechnic Campus Adjoining Directorate of Technical Education Vikas Nagar, Kanpur-208 002, Uttar Pradesh

### Guard File(AICTE)

Note: Validity of the Course details may be verified at <a href="http://www.aicte-india.org/">http://www.aicte-india.org/</a>

This is a computer generated Statement. No signature Required

Page 4 of 4

Application No:1-10968838042 ALL INI Note: This is a Computer generated Report. No signature is required. Printed By: ae4696141

<sup>\*\*</sup> Individual Approval letter copy will not be communicated through Post/Email. However, consolidated list of Approved Institutions(bulk) will be shared through official Email Address to the concerned Authorities mentioned above.



प्रेपक.

डा० रंजीत कुगार सिन्हा सचिव श्री राज्यपाल / फुलाविपति ।

रोवा में.

कुलपि, वीर माघो सिंह मण्डारी उत्तराखण्ड प्रौद्योगिकी विश्वविद्यालय. सुद्धोवाला, देहरादून।

राज्यपाल/कुलाधिपति समिवालय उत्तराखण्डः

देहरादून : दिनांक : 🕓 अक्टूबर, 2022

महोदय. कृपया विश्वविद्यालय के पन्न संo—2052 व 2055, दिनांक 07—01—2022 का सन्दर्भ ग्रहण करने का कष्ट करें।

2. उपरोक्त सन्दर्भ के सम्बन्ध में मुझे यह कहने का निदेश हुआ है कि नियामक संस्था. निरीक्षण मण्डल, कुलपित व कुलसिवा, वीठमाठसिंठमठ उत्तरखण्ड प्रौद्योगिकी विश्वविद्यालय द्वारा प्रदत्त सस्तुति के दृष्टिगत विश्वविद्यालय अधिनियम, 2005 (यथा अद्यतन संशोधित) की धारा-24(2) के अधीन निम्नवत् संस्थान को उसके सम्मुख वर्णित पाठ्यक्रम, सीटों एवं अवधि की अस्थाई सम्बद्धता विस्तारण हेतु छाजहित में माठ कुलाधिपित द्वारा पूर्णानुमोदन निम्नवत् उपबन्धों के साथ प्रदान किया गया है :-

| संस्थान का नाम   | पाठ्यक्रम | सीट संख्या<br>प्रति सत्र         | शैक्षिक सन्त्र |
|--|-----------|----------------------------------|----------------|
| 1  | 2         | 3                                | 4              |
| जे0वी0 इंस्टीट्यूट ऑफ<br>टैक्नोलॉजी, ग्राम—शंकरपुर,<br>चकराता रोड़, देहरादून |           | 60<br>60<br>30<br>30<br>60<br>60 | 202122         |

- (1) विश्वविद्यालय द्वारा संस्थान की Annual Balance Sheet सम्बन्धी साक्ष्य की सत्यापित प्रति प्राप्त कर इस सचिवालय को उपलब्ध कराई जायेगी।
- (2) प्राभृति राशि अपूर्ण है। अतः उत्तराखण्ड शासन द्वारा शासनादेश दिनांक 14 दिसम्बर. 2016 द्वारा तथा व्यवसायिक पाठ्यक्रमों हेतु प्राभृति राशि के सम्बन्ध में शासन स्तर पर लिये गये निर्णय का पूर्ण रूप से अनुपालन विश्वविद्यालय व संस्थान द्वारा किया जायेगा, उराके अनुपालन की सूचना से इस सविवालय को भी अवगत कराया जायेगा।
- (3) विश्वविद्यालय द्वारा छात्र/छाताओं की गुणवत्ता और व्यवहारिक शिक्षा में सुधार के लिए क्या कदम उठाए गये हैं, इसकी सूचना व संस्थानों द्वारा छात्रों की प्रायोगिक शिक्षा और इंटर्निशिप/विजिट के लिए किन समूहों, विभागों एवं कंपनियों के साथ समझौता (Tie-up or MoU) किया गया है, तत्सम्बन्धी अभिलंख एक गाह के भीतर अनिवार्य रूप से इस सविवालय को प्रेषित करना सुनिश्चित करें। अन्यथा की रिथति में संस्थान की सम्बद्धता निरस्त कर दी जाएगी साथ ही अग्रेस्तर सत्रों की सम्बद्धता के सम्बन्ध में कोई विचार नहीं किया जायेगा।

क्रमशः....2/....

- विकाविद्यालय संस्थान द्वारा सोसाइटी / इस्ट पंजीकरण अधिनियम के अन्तर्गत निर्घारित Legal Obligation पूर्ण किये जाने के साथन्य में साध्य सहित आख्या एक माह के भीतर राज्यपाल सचिवालय को उपलब्ध कराया जाना स्निप्तित विच्या जाशेगा।
- यदि संस्थान द्वारा एक या एक से अधिक विश्वविद्यालय से पाठ्यक्रम की सम्बद्धता प्राप्त की गई हो तो संस्थान समस्त पात्यकमों की साम्बद्धता को एक साथ रखकर पाठ्यक्रमवार मानक पूर्ण कियं जाने के सम्बन्ध में आख्या संस्थान द्वारा विश्वविद्यालय की उपलब्ध कराई जायेगी तथा र प्राप्त आख्या का परीक्षण करते हुए विश्वविद्यालय द्वारा राज्यपाल रावियालय को उपलब्ध
- अंगेत्तर सर्वो के सम्बद्धता प्रस्ताव नियामक संस्था, विश्वविद्यालय एवं शायन द्वारा कराई जावेगी। निर्धारित मानुकों के अनुरूप पूर्ण होने की दशा में ही स्वीकार किये जायेंगे अन्यवा की स्थिति में अपूर्ण प्रस्तावों पर विचार नहीं किया जायेगा, जिसका पूर्ण उत्तरवायित विश्वविद्यालय का होगा।
- विश्वविद्यालय, नियामक संस्था, विश्वविद्यालय व राज्य संस्कार द्वारा किर्मरित संगी मानकों के पूर्ण होने की दशा में ही कार्यपरिषद के अनुमोदन से विहित शर्ती/उपनन्धों के अधीन अस्थाई सम्बद्धता विस्तारण के आदेश निर्गत कर व तत्सम्बन्धी कार्यवाधी की सूचना मा० कुलाधिपति महोदय के अवमतार्थ लपलब्ध कराये।

तदनुसार अग्रेत्तर कार्यवाही सुनिश्चित करें।

भवदीय.

(डा० रंजीत कुमार सिन्हा) राचिव श्री राज्यपाल / कुलाधिपति।

# संख्या—28 52-(1) / जी०एस०(शिष्टा) / A4-48(P-II) /2019 तद्दिनांकित।

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(स्वाति एस० मदौरिया) अपर सचिव श्री राज्यपाल / कुलाधिपति।



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Power of Attorney by J B INSTITUTE OF TECHNOLOGY, of the address- NH-72, VILLAGE SHANKARPUR, CHAKRATA ROAD, DEHRADUN, Uttarakhand, 248197, India; hereby authorize- Mr. Anuj Raturi [Registered Indian Patent Agent, (IN/PA:4266)] & Adv. Ram Chandra Joshi [Reg. No.: U.A. 2638/04, U.P. 2763/94 (Advocate & Notary)] having office address, as Gyananand Bhawan, Kalinka Vihar, Majrimafi, Lane No.3, IIP Mohkampur Kala-248005, Dehradun, Uttarakhand, India.

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We, J B INSTITUTE OF TECHNOLOGY having address at NH-72, VILLAGE SHANKARPUR, CHAKRATA ROAD, DEHRADUN, Uttarakhand, 248197, India, do hereby authorize Mr. Anuj Raturi [Registered Indian Patent Agent, (IN/PA:4266)] & Adv. Ram Chandra Joshi [Reg. No.: U.A. 2638/04, U.P. 2763/94 (Advocate & Notary)] having office address, as Gyananand Bhawan, Kalinka Vihar, Majrimafi, Lane No.3, IIP Mohkampur Kala-248005, Dehradun, Uttarakhand, India, to act on our behalf in connection with the filing and pre & post grant prosecution for the invention titled "AN APPARATUS FOR CONTROLLING PARTICULATES OF A DIESEL GENERATOR" filed in our name and request that all notices, requisitions and communication relating thereto may be sent to such person(s) at the above address unless otherwise specified.

This authorization includes the right to appoint substitutes.

We hereby revoke all previous authorizations, if any made, in respect of the same matter or proceeding.

We hereby assent to the action already taken by the said person in the above matter.

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### Applicants: J B INSTITUTE OF TECHNOLOGY

Diesel generator

FIG. 1

Dated: 17th Day of November, 2022

Total Sheets 02 Sheet no. 01

ON BEHALF OF APPLICANT

Signature:

Name: Anuj Raturi [IN/PA: 4266]

(AGENT FOR THE APPLICANT)

### Applicants: J B INSTITUTE OF TECHNOLOGY

Discharge of diesel generator emission into an apparatus for controlling particulates of a diesel generator (100)

Step (201): removal of particulate matter from exhaust gases by a mesh element (101)

Step (202): eliminating NO<sub>X</sub> compounds from the exhaust gases by a NO<sub>X</sub> element (102)

Step (203): releasing treated emission into air by a muffler element (103)

Dated: 17th Day of November, 2022

FIG. 2

Total Sheets 02 Sheet no. 02

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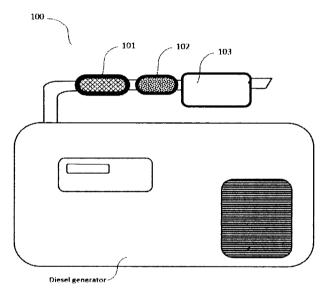


FIG. 1

### Applicants: J B INSTITUTE OF TECHNOLOGY

Diesel generator

FIG. 1

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Name: Anuj Raturi [IN/PA: 4266] (AGENT FOR THE APPLICANT)

FIG. 2

Dated: 17th Day of November, 2022