

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: GOKHALE, AMIT ARUN C/O - INDIAN MOBILE EQUIPMENT SURVEY NO 532, BHUGAON-PUNE , PUNE-411021 India			PCT WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)		
			Date of mailing (day/month/year) 14-05-2024		
Applicant's or agent's file reference MYREF88529			FOR FURTHER ACTION See paragraph 2 below		
International application No. PCT/IN2024/050150	International filing date (day/month/year) 15-02-2024	Priority date (day/month/year) 23-12-2023			
International Patent Classification (IPC) or both national classification and IPC B28C5/42 Version=2024.01					
Applicant GOKHALE, AMIT ARUN, GOKHALE, ANAND ARUN, and others.					

1. This opinion contains indications relating to the following items:	
<input checked="" type="checkbox"/>	Box No. I Basis of the opinion
<input type="checkbox"/>	Box No. II Priority
<input type="checkbox"/>	Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI Certain documents cited
<input type="checkbox"/>	Box No. VII Certain defects in the international application
<input type="checkbox"/>	Box No. VIII Certain observations on the international application
2. FURTHER ACTION If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered. If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later. For further options, see Form PCT/ISA/220.	

Name and mailing address of the ISA/ Indian Patent Office Plot No. 32, Sector 14, Dwarka, New Delhi-110075 Facsimile No.	Date of completion of this opinion 14-05-2024	Authorized officer Shivanshu Mohan Singh Telephone No. +91-1125300200
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/IN2024/050150

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed.
☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(b)).

3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:

- a. ☐ forming part of the international application as filed.
b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)),
☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.

4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.

5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IN2024/050150

Box No. V **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	<u>1-10</u>	YES
	Claims	<u>NONE</u>	NO
Inventive step (IS)	Claims	<u>1-10</u>	YES
	Claims	<u>NONE</u>	NO
Industrial applicability (IA)	Claims	<u>1-10</u>	YES
	Claims	<u>NONE</u>	NO

2. Citations and explanations:

Reference is made to following documents:

D1: JPS6145066 A (SHINMEIWA INDUSTRIES Ltd.) 08 AUGUST 1984
(08.08.1984)

D2: WO2011007364 A2 (GOKHALE Amit Arun, GOKHALE Anand Arun) 20
JANUARY 2011 (20.01.2011)

Novelty under PCT Article 33(2)

The subject matter of claims 1-10 disclose about a mobile concrete mixer having a sandwiched material storage and material flow configuration which comprises of a mobile concrete mixer having a sandwich type bulk storage compartment with three longitudinal compartments, screw conveyor, discharge gate, belt conveyor and hopper. These features are not completely disclosed in Document D1, as D1 discloses a cargo box having a plurality of divided storage chambers for individually storing a plurality of kinds of concrete materials to be kneaded is fixedly mounted on a frame of a vehicle, each storage chamber of the cargo box is provided with a conveyance means having a conveyance direction in the same direction and a carry-out port at the same position, hence claims 1-10 are novel and meets the criteria of novelty in view of Document D1.

INVENTIVE STEP under Article 33(3)

The subject matter of Claims 1-10 meets the requirements of PCT Article 33(3) and it involves inventive step in view of disclosure of documents D1-D2.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Continuation of Citation and Explanation(Box5)

Regarding claim 1, D1 discloses a cargo box having a plurality of divided storage chambers for individually storing a plurality of kinds of concrete materials to be kneaded is fixedly mounted on a frame of a vehicle, each storage chamber of the cargo box is provided with a conveyance means having a conveyance direction in the same direction and a carry-out port at the same position (Claim 1). A sub-frame 2 is fixed on a main frame 1 of a vehicle V, and a cargo box 4 is supported and fixed on the sub-frame 2 through a leg portion 3. The inside of the cargo box 4 is partitioned into first, second, and third storage chambers by two partition walls 5 and 6 extending in the longitudinal direction of the vehicle. The first storage chamber 7 is for storing cement, and the upper part of the first storage chamber T is covered with a lid plate 10 having a manhole 11. The second storage chamber 8 is used to store gravel, and the third storage chamber 9 is used to store sand. Upper portions of the second and third storage chambers 8 and 9 are open. The bottom portion of the cargo box 4 is inclined so as to become higher toward the rear of the vehicle r, and first, second, and third screw feeders 12,13,14 as conveying means are disposed on the bottom portion of the cargo box 4 so as to correspond to the respective storage chambers 8 and 9. A kneading tank 26 extending in the width direction of the vehicle V is disposed below the measuring bucket 23, and a kneading means 29 composed of a pair of screws 27,28, which rotate in directions opposite to each other, is provided in the kneading tank 26 (Whole Description). D1 does not disclose about the mixing blades and about the use of cleated belt conveyors inclined in the same way as the binder screw conveyor for fine and coarse aggregates; about binder or cement compartment which is longitudinally sandwiched' between the fine and coarse aggregate compartments and about a plurality of mixing blades inside which move the material entering from Side A to Side B.

D2 discloses a compact concrete producing and transporting equipment (10) mounted on the chassis of a vehicle is disclosed wherein a weighing hopper is adapted to weigh discrete solid constituents stored in a plurality of silos provided in a storage space (12). A conveyor belt is adapted to receive the solid constituents from the weighing hopper and transport the same to a concrete mixer (28). The concrete mixer (28) is adapted to receive liquid constituents from a plurality of tanks (30) (Abstract). Concrete is a construction material composed of cement as well as other cementitious materials such as fly ash, slag cement, aggregate comprising a coarse aggregate such as gravel, limestone, or granite along with a fine aggregate such as sand and chemical admixtures. The conveying means includes a conveyor belt (26), wherein the conveyor belt (26) is located operatively below the weighing hopper (20). The conveyor belt (26) is typically of slippage free rubber or ribbed or cleated so as to ensure smooth movement of the weighed and batched solid

constituents on the conveyor belt (26) to the concrete mixer (28). The conveyor belt (26) is typically of 3 or 4 ply rubber and typically has a width of 600 mm to 1000 mm. The conveyor belt (26) is operated with a conveyor drive mechanism (D4) and the conveying means is inclined at an angle adapted to provide a high discharge height of said concrete mixer (28). The discharge port includes a gate or a belt conveyor. The cement and fly ash of the solid constituents separately contained in two of the silos (14a), (14b), (14c), (14d), (14e) and (14f) are provided with screw conveyors for leading the cement and the fly ash into the weighing hopper (20). The compact concrete producing and transporting equipment comprises of solid constituents selected from a group consisting of stones or gravels, fine particles, cement and fly ash, said stones or gravels are of various size, said fine particle includes stone dust or river sand (Whole Description; Claims 1-10).

D1-D2 do not disclose about binder or cement compartment which is longitudinally sandwiched between the fine and coarse aggregate compartments and about plurality of mixing blades inside which move the material entering from Side A to Side B.

All the cited documents D1-D2 belong to the same field of invention i.e.; Preparing Clay; producing mixtures containing clay or cementitious material e.g. Plaster; Claim 1 claims about a mobile concrete mixer having a sandwiched material storage and material flow configuration which comprises of a mobile concrete mixer having a sandwich type bulk storage compartment with three longitudinal compartments, use of cleated belt conveyors inclined in the same way as the binder screw conveyor for fine and coarse aggregates, plurality of mixing blades inside which move the material entering from Side A to Side B and Claims 2-10 are dependent on claim 1 which includes additional features such as a binder compartment sandwiched between the fine and coarse aggregate compartments, screw and belt conveyors and hopper installed between the discharge ends of the conveyors. These features are not disclosed in Documents D1-D2, hence the subject matter of claims 1-10 is inventive under Article 33(3) of PCT in view of documents D1-D2

Industrial Applicability under PCT Article 33(4)

The subject matter of claims 1-10 is considered to be industrially applicable and meets the requirements of Article 33(4) PCT.