

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
2 July 2009 (02.07.2009)

PCT

(10) International Publication Number
WO 2009/079732 A2

(51) International Patent Classification: Not classified

(21) International Application Number:
PCT/BR2008/000402

(22) International Filing Date:
16 December 2008 (16.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PI0704965-0 26 December 2007 (26.12.2007) BR

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(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE,
EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID,
IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK,
LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW,
MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT,
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TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM,
ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,
NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

Published:

- without international search report and to be republished
upon receipt of that report

(54) Title: METHOD FOR SUPPLYING CONCRETE TO CONSTRUCTION SITES

(57) Abstract: This abstract refers to a patent of invention of a method which is suitable for transporting and supplying concrete for construction sites. It can be used in civil construction works and has been designed to improve the supply of this important material: the concrete.



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BACKGROUND OF THE INVENTION

The concrete, likewise steel, is one of the main materials used in construction works. Composed of cement and aggregates – comprising stone, sand and water – we can nowadays manufacture concrete in various ways. In one of the most used forms, specialized concrete companies dose components in a central station, which is usually far from the construction site. They are then, carried in a beton and/or mixer truck, which is responsible for the blending and the transportation of the concrete. Therefore, it arrives at the field construction in a ready-to-use way. It can either be finished by adding additives or not.

For this supplying method to be efficient, all the operation has to be accomplished within certain time. However, practically, transportation time is subject to the local traffic or some malfunction of the beton and/or mixer truck, which may jeopardize the way the concrete gets to the construction site. Furthermore, this problem may lead to higher speeds of beton and/or mixer trucks, which can cause serious accidents. In addition, a beton and/or mixer truck has a relatively small capacity, which might lead to the need of many field trips, depending on the volume of concreting work to be done.

One way which has been found in order to overcome this problem is to install small concrete dosing central stations in the construction site. Anyhow, this is only technically and economically feasible in large sites.

THE INVENTION- METHOD FOR SUPPLYING CONCRETE TO CONSTRUCTION SITES

The objective of the current invention is to present a method for supplying concrete which overcomes the usual problems. It can neither be of difficult implementation nor of high complexity. Furthermore, the method must be one of low acquisition, with adequate maintenance, functioning and equipment.

In order to overcome the above mentioned problems, the method for supplying concrete to construction sites was developed. Method means the careful dosing of dry concrete, aggregates -sand and comprising stone-, water and additives in a remote central station; the transportation of these parts, in a separate way, in appropriate places to the field work and the “in loco” blending of parts, in a local beton and/or mixer truck, which composes and blends the concrete right before its launching.

The way the concrete is supplied in this method solves the problems which have been posed by the conventional way as the concrete is dosed carefully far from the construction site and it is effectively blended “in loco”. Therefore, there is no risk for the concrete to be lost due to defective transportation. Also, it does not involve uninteresting cost and, the most important, the present movable box of aggregates has a substantially greater capacity than a

conventional beton and/or mixer truck. This allows for a better quality concrete and decreases the cost of the construction.

The attached drawings show the method for supplying concrete to construction sites, as well as the movable box of aggregates, which is used to supply the concrete to beton and/or mixer trucks.

Drawing figure 1 shows a block diagram of the method;

Drawing figure 2 shows the movable box of aggregates which can be used to implement the method, previously described in drawing figure 1.

Drawing figures 3, 4 and 5 show a non-restrictive illustration of a possible configuration of the movable box, which is used to transport the dosed dry concrete, the aggregates and the water. They show a perspective, plant and section views.

Drawing figure 6 shows a schematic view of the movable box working together with a beton and/or mixer truck, "in loco".

According to the attached figures, the method for supplying concrete to construction sites consists of:

1-) Dosing the concrete, water and aggregates in a concrete dosing central, which is not located in the construction site;

1.2-) Loading the concrete, water and aggregates separately, into the movable box;

2-) Transporting these items from the concrete dosing central to the construction site;

3-) In the construction site, with the features of the movable box, transferring the dry dosed cement and the dosed dry aggregates to the beton and/or mixer truck, where they will be blended;

3.1-) Transferring the dosed water, which was previously stored in the movable box, to the beton and/or mixer truck, in order to blend the cement, sand and stones;

3.2-) Transferring the additives to the mixture of cement, sand, stones and water, which is being blended in the beton and/or mixer truck;

3.3-) Blending the mixture of cement, sand, stone, water and additives by using the beton of the beton and/or mixer truck

4-) Having reached the blending specifications and other ones of the concrete inside the beton and/or mixer truck, launch it as usual (conventional method or pumped);

According to the above described method of supplying concrete to construction sites, object of the present patent requirement, this method can feature modifications, which relate to the steps and parameters of the process, materials, dimensions, constructive details and functional configuration without exceeding the protection claimed by this patent requirement.

CLAIMS

CLAIMS

The METHOD OF SUPPLYING CONCRETE TO CONSTRUCTION SITES consists of:

1-) Dosing the concrete, water and aggregates in a concrete dosing central, which is not located in the construction site;

1.2-) Loading the concrete, water and aggregates separately, into the movable box;

2-) Transporting these items from the concrete dosing central to the construction site;

3-) In the construction site, with the features of the movable box, transferring the dry dosed cement and the dosed dry aggregates to the beton and/or mixer truck, where they will be blended;

3.1-) Transferring the dosed water, which was previously stored in the movable box, to the beton and/or mixer truck, in order to blend the cement, sand and stones;

3.2-) Transferring the additives to the mixture of cement, sand, stones and water, which is being blended in the beton and/or mixer truck;

3.3-) Blending the mixture of cement, sand, stone, water and additives by using the beton of the beton and/or mixer truck

4-) Having reached the blending specifications and other ones of the concrete inside the beton and/or mixer truck, launch it as usual (conventional method or pumped);