

CERTIFICATE OF PRODUCT CONFORMITY

Dubai Central Laboratory Department (DCLD) of Dubai Municipality,

hereby attests that the product(s)

CONCREMOTE

(Details as per the attached Scope of Certification)

manufactured by:

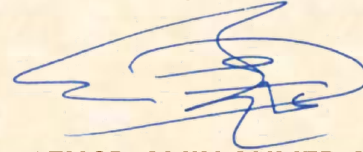
DOKA GULF FZE

Dubai, U.A.E.

have been assessed in accordance with DCLD Document Ref. No. RD-DP21-2001 (IC) "General Rules for DM third party product certification system through factory assessment" and the relevant TAR 157 , and were found in conformity with the standard specification:

TAR 157

Accordingly, DCLD hereby authorizes the above manufacturer to affix the DCL Product Conformity Mark to the above-mentioned product(s).



for / ENGR. AMIN AHMED AMIN

Director, Dubai Central Laboratory Department

Dubai Municipality

Verify:



Certificate No: TAC 157

Valid Until: 13-11-2019



Current Issue Date: 14 -11-2018

Original Issue Date: 14-11-2016

The attached Scope of Certification bearing the same Certificate No. forms an integral part of this Certificate.
This Certificate is an electronic document, subject to the Terms and Conditions of the Product Certification System and shall not be reproduced except in full.

F-IC-2031 REV 11

- 1) **The company:** Doka Gulf FZE
- 2) **Product trade name:** "Concremote"
- 3) **Manufacturers:** Doka Industries GmbH
- 4) **Factory:** BAS International Holding BV located in Venlo City, Netherlands
- 5) **Product Description:** "Concremote" is a digital temperature measurement system, GPRS network based, which provides real-time insight in the temperature profile of early age concrete, Concremote determines the actual compressive strength gain of the concrete structure by converting concrete maturity. Concremote is an alternative to early age laboratory and field cured test specimens
- 6) **Product Intended use:** The product is intended to be used for determination of concrete temperature development, the related Delta Temperatures and estimation of early age concrete strength based on the maturity concept for various structural elements
- 7) **Product identification**

Concremote slab sensors will be identified as mentioned below:



- The letters "Concremote"
- DCL TA mark - DCL - 157
- Sensor Serial Number

* Concremote cable sensors will be identified as mentioned below:



- The letters "Concremote"
- DCL TA mark - DCL - 157
- Sensor Serial Number

*Concremote wall panels will be identified as mentioned below:



- DCL TA mark - DCL - 157
- Sensor Serial Number

*Concremote cables with probes will be identified as mentioned below:



- DCL TA mark – DCL – 157
- Sensor Serial Number

12) Product characteristics

Remote digital temperature sensor devices specially designed for usage in and on wet concrete.

- GSM GPRS machine to machine communication between sensor and data server via internet data protocol.
- Robust construction site capable outer form and battery. Operating climatological conditions minus 10° Celsius up to plus 80° Celsius.
- Sensor measures concrete and outdoor temperature every 10 minutes including unique time-stamp and sensor identification number. The measurement data are submitted every 60 minutes (6 measurement results) to central located data server facility.
- Data server facility is located in Amsterdam the Netherlands at a special data service provider. In case data server facility in Amsterdam cannot be reached a fallback data server facility in Venlo (150 kilometer away from Amsterdam facility) is active.
- In case sensors are not successful in transferring measurement data each sensor includes a memory function with a capacity of minimum 3 days of measurement results. Sensor will automatically retry to connect to data server facility every 60 minutes.
- Sensors are activated at job-site by placement (slab sensor) and/or connecting plug (wall panels and cables with probes) once concrete has been placed.
- After receiving measurement results, sensor ID and time-stamp data is processed. Maturity results are defined and corresponding compressive strength to maturity is computed. Concremote software uses NEN 5970 weighted maturity method to define (cumulated) maturity.

9) Tests conducted

The calibration for each concrete mix design shall be conducted as per Doka Concremote procedures. Concrete technologists from Doka shall simulate expected compressive strength gain per curing regime and ensure that a certified laboratory will test specimens at correct timings. After acceptance of the test results, Concremote concrete technology center defines the correlation curves of maturity and strength.

10) Scope of approval

The Concremote sensors are approved for determination of concrete temperature development, the Related Delta Temperatures and the actual early age compressive strength using the weighted maturity method

11) Conditions of Approval

- a) This approval is granted only to Doka Gulf FZE, no other company, firm or person may hold or claim any entitlement to this technical approval.
- b) This Technical Approval will remain valid for the period shown on the Approval Certificate provided that:
 - i) The characteristics of the product are unchanged, ii) Surveillance checking and/or testing by Dubai Municipality shows compliance with the requirements of this technical approval.
- c) In granting this technical approval, Dubai Municipality makes no representation as to:
 - i) The presence or absence of patent or similar rights subsisting in "Concremote sensors".
 - ii) The legal right of Doka Gulf FZE to market in the Emirate of Dubai.
- d) The Technical Approval shall not be used in such manner as to bring Dubai Municipality into disrepute and Doka Gulf FZE shall not make any statement which Dubai Municipality may consider as misleading.
- e) Surveillance
 - i) Inspection and testing
Dubai Municipality maintains the right to inspect the product at any time without prior notice and to collect samples from the product available at client's stores, warehouses or at any building site within Dubai, for the purpose of verification and/or testing.
 - ii) Declarations of shipments
Doka will keep records of all deliveries to customers in Dubai. These records shall be open to examination by Dubai Central Laboratory personnel.
 - iii) Cost of sampling and testing
Doka Gulf FZE shall bear the cost of all surveillance visits, sampling and testing of the product either at Dubai Central Laboratory or at any other laboratory approved by Dubai Central Laboratory. The testing laboratory may be any local, regional or international laboratory.
 - iv) TA mark shown in the following image shall be part of the labeling/markings of each sensor to show the required basic information in Arabic and/or English language



- v) Failure of satisfaction of the conditions of this Technical Approval Certificate might ground into termination of the Technical Approval.

12) Disclaimer

- a) The Dubai Municipality – Dubai Central Laboratory Department shall not be held liable for installation and use the product in the site.
- b) The Dubai Municipality – Dubai Central Laboratory Department shall not be held liable for any action (legal or otherwise) raised by any party on matters resulting from implementation of the technical approval.