

# CERTIFICATE OF PRODUCT CONFORMITY

Dubai Central Laboratory Department (DCLD) of Dubai Municipality  
hereby attests that the product(s)

## STEEL COMPOSITE LOAD BEARING BEAM( DELTABEAM ® )

(Details as per the attached Scope of Certification)

manufactured by:

**PEIKKO GULF LLC**

**Al Hamra Industrial Zone, Warehouse WIZ 04-2, Ras AL Khaimah, UAE**

have been assessed in accordance with DCLD Document Ref. No. DM-DCLD-RD-DP21-2001 (IC) "General Rules for DM Third Party Product Certification Scheme Through Factory Assessment" and were found in conformity with the Technical Approval Requirements

## TARR 145

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**

Certificate No: TAC15080145

Valid Until: 01 July 2021



Current Issue Date: 02 July 2020

Original Issue Date: 02 July 2015



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.

DM-DCLD-F-IC-8003 REV 04

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|  | Document Title:    | SCOPE OF TECHNICAL<br>APPROVAL                                    | عنوان الوثيقة:    |  |
|  | Doc Ref.           | DM-DCLD-F-IC-8007   | رقم الوثيقة :     |  |

## TECHNICAL APPROVAL CERTIFICATE NO. TAC15080145

### 1. The Company:

PEIKKO GROUP OY

### 2. Product trade name: STEEL COMPOSITE LOAD BEARING BEAM( DELTABEAM®)

### 3. Manufacturer: PEIKKO GULF LLC

Al Hamra Industrial Zone, Warehouse WIZ 04-2, Ras AL khaimah, UAE

### 4. Scope of approval

- This scope of approval covers " DELTABEAM®" (Load Bearing composite beam) product manufactured using S355J2+N plates for the thickness 5 to 25 mm for all types of DELTABEAM®

- Exclusions:**

- Types other DELTABEAM® (composite beam) **shall not be** covered in the scope of this approval.
- Plates thickness other than mention above **shall not be** covered in this scope of approval

- Product description:**

DELTABEAM® is fabricated from steel plates welded to form a trapezoidal box section with ledges on either side of the bottom flange.

DELTABEAM® is a hollow steel beam made from steel plates with holes in the sides to create composite action between the concrete slabs and the DELTABEAM® when filled with in-situ concrete.

it consist of rebar's, side plates with two types of holes (air holes and web holes), top plate with casting holes and beam ledges on either side of the bottom flange, all welded together to form a trapezoidal box

section. (see annex A for full detail).

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| Approved by HOU  | Authorized by PCASM |
| Date of Issue : 17/06/2020                             | Rev. No. : 02       |
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### 5. Product characteristics

Product Intended use

DELTABEAM<sup>®</sup> is used to create integrated composite beam for flat slab system. When used with precast concrete slabs DELTABEAM<sup>®</sup> will carry the slabs during installation and the beam will be fulfilled with the in-situ concrete after installation which will create composite action between the slabs and the beam. DELTABEAM<sup>®</sup> can be used as load bearing beam for primary and secondary beams in floor and roof structures as per design.

Product characteristic are as shown in Table 1:

Table 1:

| Property                          | Evaluation method                      | Requirement                              |
|-----------------------------------|--|--|
| Tensile strength for rebars       | <b>BS 4449-05; Grade 500 B</b>         | <b>&gt; 1.08 f<sub>y</sub> (540 MPa)</b> |
| Tensile strength for steel plates | EN 10025-2                             | (470 – 630 )MPa                          |
| Load bearing capacity             | Calculation as per EN 1994 and BS 5950 | ≥ as per design load                     |
| Bending moment                    | Calculation as per EN 1994 and BS 5950 | ≥ as per Design Bending moment           |
| Sheer stress                      | Calculation as per EN 1994 and BS 5950 | ≥ as per Design Shear stress             |
| Deflection                        | Calculation as per EN 1994 and BS 5950 | ≤ L/250                                  |

### 6. Identification/Labeling/Marking

Each product item as well as the packing containers shall be identified / labeled / marked to show the required basic information (manufacturer name, product name, DCL Technical Approval mark) in Arabic and/or English language.

DELTABEAM<sup>®</sup> shall be identified as follows:

- The letters " PKDL D##-### " or "PKDL DR##-###" , where D refers to Intermediate beam and DR refers to Edge beam.
- DCL TA mark –TAC15080145
- Running number- AX1

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Example of identification mark is as shown:

PKDL D20-300 AX1 DCL 145



### 7. Production quality control

All test results showed compliance with the requirements regarding Tensile strength, Load bearing capacity, Bending moment, Shear stress and Deflection.

### 8. Conditions of approval

8.1 This approval is granted only to PEIKKO GROUP OY, no other company, firm or person may hold or claim any entitlement to this Technical Approval.

8.2 This Technical Approval will remain valid for the period shown on the Approval Certificate provided that:

- The company complies with the requirements of this Technical Approval,
- The characteristics of the products are unchanged,
- Continue to be checked by DM as per surveillance scheme mentioned hereinafter in this report.

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8.3 In granting this Technical Approval, Dubai Municipality makes no representation as to:

- The presence or absence of patent or similar rights subsisting in PEIKKO DELTABEAM ®,
- The legal right of PEIKKO GROUP OY to market DELTABEAM ® in the Emirate of Dubai.

8.4 The Technical Approval shall not be used in such manner as to bring Dubai Municipality into disrepute and PEIKKO GROUP OY shall not make any statement which Dubai Municipality may consider as misleading.

### 8.5 Surveillance

- Inspection and testing  
Dubai Municipality maintains the right to inspect the factory and products at any time without prior notice and to collect samples from the products available at the client's factory, warehouses or at any building site within Dubai Emirate, for the purpose of verification and/or testing.
- Complaints  
"PEIKKO GROUP OY" shall provide Dubai Central Laboratory (DCL) in writing with details of all records of complaints received whenever requested by DCL and shall keep records of such complaints for examination by Dubai Central Laboratory personnel.
- Cost of sampling and testing  
"PEIKKO GROUP OY" shall bear the cost of sampling and testing of the products either at Dubai Central Laboratory (DCL) or at any other DCL approved laboratory. The testing laboratory may be any local, regional or international laboratory.

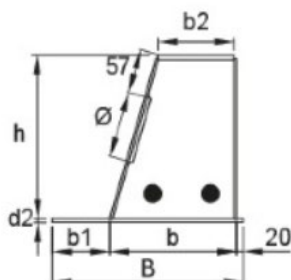
8.6 Failing to satisfy the conditions of this Technical Approval Certificate may be grounds for terminating the Technical Approval.

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|          | b    | B   | b1 * | b2     | d2  | h   | Ø** |
|----------|------|-----|------|--------|-----|-----|-----|
|          | [mm] |     |      |        |     |     |     |
| DR20-215 | 335  | 100 | 148  | 5 - 25 | 200 | 80  |     |
| DR20-245 | 365  | 100 | 180  | 5 - 25 | 200 | 80  |     |
| DR22-250 | 370  | 100 | 180  | 5 - 25 | 220 | 80  |     |
| DR25-260 | 380  | 100 | 180  | 5 - 25 | 250 | 150 |     |
| DR26-230 | 350  | 100 | 148  | 5 - 25 | 265 | 150 |     |
| DR26-260 | 380  | 100 | 180  | 5 - 25 | 265 | 150 |     |
| DR26-290 | 410  | 100 | 210  | 5 - 25 | 265 | 150 |     |
| DR26-325 | 445  | 100 | 245  | 5 - 25 | 265 | 150 |     |
| DR30-270 | 390  | 100 | 180  | 5 - 25 | 300 | 150 |     |
| DR32-250 | 370  | 100 | 148  | 5 - 25 | 320 | 150 |     |
| DR32-285 | 405  | 100 | 180  | 5 - 25 | 320 | 150 |     |
| DR32-310 | 430  | 100 | 210  | 5 - 25 | 320 | 150 |     |
| DR32-365 | 485  | 100 | 245  | 5 - 25 | 320 | 150 |     |
| DR37-325 | 475  | 130 | 210  | 5 - 25 | 370 | 150 |     |
| DR40-295 | 445  | 130 | 180  | 5 - 25 | 400 | 150 |     |
| DR50-350 | 500  | 130 | 210  | 5 - 25 | 500 | 150 |     |

\*standard size unless the customer otherwise defines (minimum 20 mm).

\*\*c/c distribution for web holes is always 300 mm.

**Figure 2 : DELTABEAM (Edge beam)**

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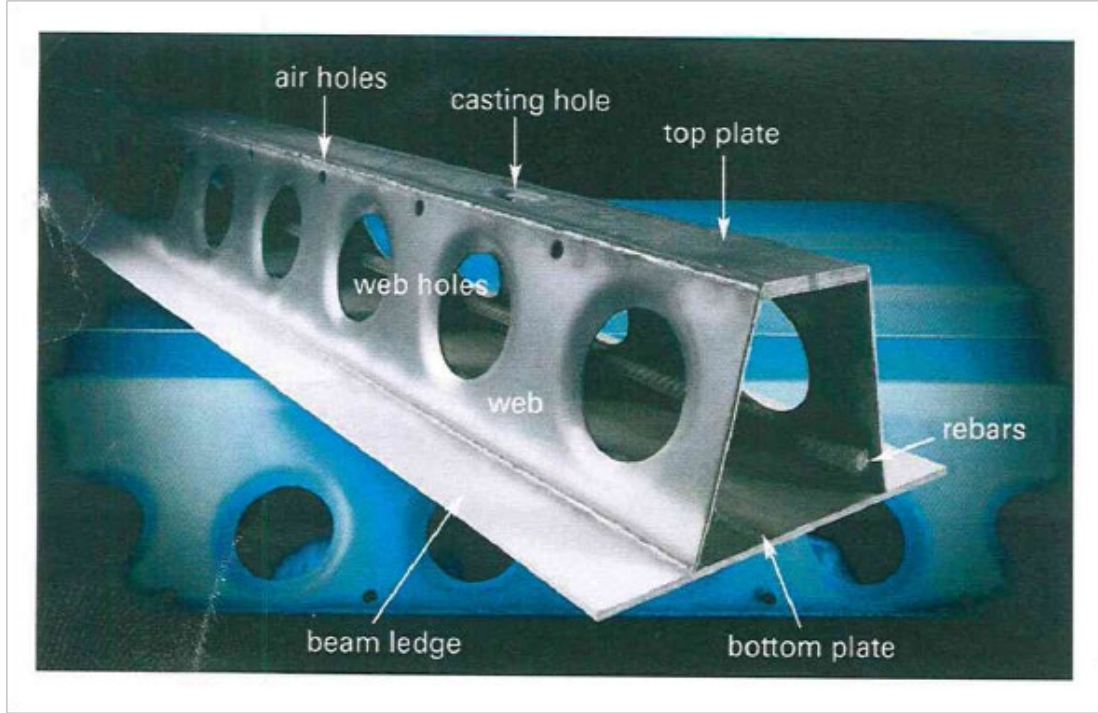


Figure 2 : DELTABEAM

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## TECHNICAL APPROVAL CERTIFICATE NO. TAC15080145

NOTE 1: This document forms part of the Certificate of Technical Approval bearing the same Certificate Number.

NOTE 2: The above product shall bear the DCL Conformity Mark (applied on each product or on the packaging).

NOTE 3: Disclaimer :

- The Dubai Municipality - Dubai Central Laboratory Department shall not be held liable for installation the product in the site.
- 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.

NOTE 4: Declarations of shipments:

- PEIKKO GROUP OY shall keeps records of all deliveries to customers in Dubai. These records shall be open to examination by Dubai Central Laboratory personnel.
- PEIKKO GROUP OY 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.
- TA mark shown in the following image shall be part of the labeling/markings by box marking each product item as well as their containers shall be identified by labeling and/or marking to show the required basic information in Arabic or English language

Original Issue Date : 02 July 2015

Current Issue Date : 02 July 2020

Valid Until : 01 July 2021



ARIF HUSAIN AL MARZOOQI

Products Conformity Assessment Section Manager

Dubai Central Laboratory Department

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