

Number 19-02-02

Subject DIANA Users Association General meeting of members

Date December 10th, 2019

Time 4 pm.

Place NDC Den Hommel, Utrecht, The Netherlands

Present Ane de Boer Consultant Ane de Boer (chairman)

TNO Henco Burggraaf
Arcadis Coen van der Vliet
ABT Kris Riemens
DIANA FEA BV Gerd-Jan Schreppers

Royal HaskoningDHV Peter Flink

Report drawn up by Jolanda van Willige

JRI Communication vof

Date December 22th, 2019

#### 1. Opening

The chairman opened the meeting at 16.05 and welcomed the attendees. Yannick Liem, Bogdan Orlic and Nynke Vollema have signed off. Peter Flink attended this meeting instead of Nynke Vollema. The agenda will be laid down.

#### 2. Announcements from the Board

There are no announcements from the Board.

## 3. The Minutes of the general meeting of members of the DIANA Users Association on June 18, 2019 and actions.

There are no comments so the Minutes will be laid down by Jolanda.

#### **Actions**

Action 17-02 Henco All presentations starting from the DIANA Users

**Action remains** Meeting 2015, shall be put on the website.

Action 18-13 Ane/Jolanda Will make a pdf file of all lectures which have been held

Action remains during the DIANA Users Meeting 2018/2019 and send it to all

members of the DIANA Users Association and all participants

of the DIANA Users Meeting 2018/2019.

Action 19-01 Jolanda Will ensure that on the registration form of the

**Action completed** DIANA Users Meeting 2019 it is mentioned that Dutch

participants can get 4 points at the Constructors' registry by

participating in the DIANA Users Meeting

Action 19-02 Ane/Jolanda Ane will make an overview of the wishes of the DIANA

Action remains Users during the DIANA Users Meeting 2019 and Jolanda

will send it to the members of the Association.

Action 19-03 Ane Ane will contact Juan Navarro-Gregori of the University

**Action completed** of Valencia and will set a date with him for the DIANA

Users Meeting 2020.

Action 19-04 Ane Ane will make a shorter version of the lecture of Bas Lottman

**Action remains** in the Annual report 2018.

Jolanda will process the comments concerning the annual Action 19-05 Jolanda

**Action completed** report 2018.

Action 19-06 Coen/Jolanda Coen will send the extensive financial annual report to

Jolanda so she can send it to the members of the **Action completed** 

Association.

Action 19-07 Gerd-Jan Gerd-Jan will organize a session for evaluation

DIANA 10.3 during autumn in Delft and he will inform all **Action remains** 

DIANA users.

The session will be organized in the first quarter of 2020.

Action 19-08 Board Asking TNO for the extensions of safety factors nonlinear **Action completed** 

analysis.

This action is not applicable. Henco remarks that TNO is working on a memo about safety factors. This will be input for the NLFEA guideline. It is not known whether this is input for the Model Code. It is even not known when it will be

ready.

## 4. International DIANA Users Meeting

## - Budget DIANA Users Meeting 2020

Coen explained the budget for the DIANA Users Meeting 2020. The budget is based on the budgets of the DIANA Users Meeting held in Porto and in Barcelona. The budget is based on 21 participants. On the right side we see the expenses like the fee for the meeting room, activities of the secretary, catering, Social Event. On the left side we see the income like contributions of the members and none members, (PhD)-students and accompanying persons social events.

The contribution of the DIANA Users Association will be € 2.675,--. When there are more participants, the contribution of the DIANA Users Association will be less. The budget is adopted by the members.

## - Structure of the DIANA Users Meeting 2020

There will be organized a workshop around the DIANA module DESIGN, presented by DIANA FEA BV. Coen will fit a part of the text of this workshop Action  $\rightarrow$  19-09.

There is a discussion about study cells and the members decided to organize a pre-study cell to brainstorm about probalistic practice cases. A reliable probabilistic analysis scheme is still under discussion, so it is too early to move the PROBAB module from the hidden feature to the set of main DIANA modules. However the checking codes show β values for the reliability of structures, where a nonlinear analysis results in failure loads, belonging to a certain failure mode, based on extended partial factors for material properties and loads. To bridge this gap a probabilistic analysis can help the engineer by adding also  $\beta$  values for the reliability of a structure. So there is a need to get practical examples from the engineering field.

Ane, Coen, Gerd-Jan and Henco (or a colleague from Henco, Action > 19-10) will participate in this study cell to setup an overview of practical examples, which can be useful to show the possibilities . The board will discuss organizing a general meeting of members of the DIANA Users Association during the DIANA Users Meeting 2020 and how to fill this meeting in Action  $\rightarrow$  19-11.

#### 5. Estimation 2020 DIANA Users Association

Coen explained the budget for the DIANA Users Association in 2020.

On the left side we see the expenses like the fees of the meeting rooms during the general meetings of the association, activities of the secretary, costs of the website hosting by the provider, costs of the modifications of the website, the website's maintenance costs and sponsoring the DIANA Users Meeting 2020.

On the right side we see the income like contributions of the members.

The budget is adopted by the members.

## 6. Progress update website DIANA Users Association

Henco noted that a trial version of the website has been made by Communication Team and Henco has access to the CMS management system. He has asked the provider if it is possible to make 2 different registration forms. When Henco has filled the website, the Communication Team will do a final test and then the website will go online. Jolanda will send all abstracts from the DIANA Users meetings sofar to Henco Burggraaf for the website of the DIANA Users Association. **Action → 19-12**. Henco expect that the registrations for the DIANA Users Meeting 2020 will be possible via the website.

### 7. Ideas working groups

1) Proposal for extending NLFEA simulations for Safety Formats.

Ane noted some papers/reports are finished. The following is finished:

- a set of 9 experiments reinforced beams and 3 experiments lightly reinforced beams with a bending moment failure will be presented in IABSE Wroclaw2020;
- the simulations of structures, Viaduct "De Beek" which has been proof loaded, is presented at IABSE Vancouver2017 and IABSE New York2019.
- simulations of a damaged viaduct will be presented at IABMAS2020 in Sapporo.

All papers will come in the publication list of the DIANA Users Association, the database of DIANA FEA and in the Testsuite of DIANA FEA.

Foreseen papers/reports:

- extended report of the above mentioned 12 reinforced beams 2020-Q1
- paper with 6 prestressed reinforced beams at IABSE Christchurch2020
- extended report of the 6 prestressed reinforced beams 2020-Q3
- paper with at least 6 experiments reinforced slabs(Lantsoght) at IABSE Ghent2021
- paper with affected reinforcement reinforced slab viaduct
- composite behaviour steel-concrete existing slab structure, which has been proof loaded Again, when DIANA members like to participate in his group, please contact Ane.

### 2) Evaluation DIANA Release 10.3.

Gerd-Jan notes that in the first quarter of 2020 all clients in the Netherlands and Belgium will be invited for an evaluation session release 10.3 and they can give feedback in to which direction we have to develop.

#### 3) Workflow DIANA

The workflow DIANA will also be evaluated in the evaluation session of DIANA 10.3. Meanwhile release 0.4 is operational in 2020-Q1. Which release will be evaluated? Gerd-Jan will make this decision later on.

4) Connection between nonlinear analysis and checking codes

DIANA has a workflow, which shows a close relation with the design checking code of a structure. The NLFEA guideline gives also some practical guidance for a workflow especially for the sequence of the loads, based on the partial factors of the Eurocode or the ModelCode2010. The actual DIANA workflow will be presented in the evaluation session of DIANA 10.3, so here this aspect can be removed.

Other ideas for working groups:

Kris: Ground interaction.

Peter: is the explicit solver operational and can it be used? Gerd-Jan answers no, it is a hidden feature.

## **10. Communications**

## - DIANA FEA BV

Gerd-Jan noted that DIANA FEA BV will move to a new office on December 23th. The address will be: Thijsseweg 11, 2629 JA Delft in The Netherlands.

- There are a lot of activities at DIANA FEA BV:
  - 1) before the end of this year we will have release 10.4 get ready and then test it for 3 months. The release will be ready at the beginning of April 2020.
  - 2) Release 10.4 contains:
    - a. many geotechnical functions;
    - b. new design functions;

- c. more functions for structure meshing;
- d. better possibilities to import CAD models.
- Who has taken over the activities of Emile van Varsseveld? Gerd-Jan answers that the Sales Team has taken over the activities of Emile.

## 11. Questions

There were no questions. The chairman closed the meeting at 18.00 hrs.

# Actions of the General meeting of members of the DIANA Users Association, December $10^{\rm th}$ , 2019

Action 17-02	Henco	All presentations starting from the DIANA Users Meeting 2015, will be put on the website.
Action 18-13	Ane/Jolanda	Will make a pdf file of all lectures which has been held during the DIANA Users Meeting 2018/2019 and send it to all members of the DIANA Users Association and all participants of the DIANA Users Meeting 2018/2019.
Action 19-02	Ane/Jolanda	Ane will make an overview of the wishes of the DIANA Users during the DIANA Users Meeting 2019 and Jolanda will send it to the members of the Association.
Action 19-04	Ane	Ane will make a shorter version of the lecture of Bas Lottman in the Annual report 2018.
Action 19-07	Gerd-Jan	Gerd-Jan will organize in autumn a session for evaluation DIANA 10.3 in Delft and he will inform all DIANA Users.
Action 19-09	Coen	Coen will fit the text of the workshop Module Design for the call of abstracts for the DIANA Users Meeting 2020.
Action 19-10	Henco	Henco will submit the name of the person from TNO for the PROBAB group
Action 19-11	Board	The board will participate in the preparation of the DIANA Users Meeting the organization of a general meeting of members of the DIANA Users Association during the DIANA Users Meeting 2020 in Valencia.
Action 19-12	Jolanda	Jolanda will send all abstracts from the DIANA Users meetings to Henco Burggraaf for the website of the DIANA Users Association.