



13th German
Concrete Canoe-Regatta



24th und 25th June 2011 in Magdeburg, Salbker See II

Invitation to apply

13th German Concrete Canoe Regatta Magdeburg 2011



Host

The German Cement and Concrete Industries

Patron

Dr. Lutz Trümper, Lord Mayor of Magdeburg

Event Organiser

BetonMarketing Ost GmbH, Berlin

Co-Organisers

Association of German Concrete Engineers (VDB)
Watersports Club Buckau-Fermersleben e.V. Magdeburg
University of Applied Science Magdeburg-Stendal (FH)

Members of the regatta committee

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University of Applied Science Magdeburg-Stendal (FH)
Diethelm Bosold, doctor of engineering,
BetonMarketing West
Michael Buchmann, BetonMarketing Deutschland
Anja Burger, BetonMarketing Ost
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www.betonkanu-regatta.de



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Conditions of Participation

1. Training centres, schools, polytechnics, universities and other institutions that teach CONCRETE TECHNOLOGY are eligible to participate.
2. Last date for submitting applications is 30th December 2010 (final confirmation by **20th Mai 2011**). The postmark date or the date of sending FAX or E-Mail will be taken as the date of submission.
3. The canoes and watercraft must comply with the following rules.
4. The canoe or watercraft must not have been built before **1st October 2011**. No more than two canoes permitted for each institution participating.
5. The canoes and watercraft must be designed and built by the pupils, trainees or students of the participating institute.
6. Only pupils, trainees or students who are trained in concrete technology and who actively contributed to the construction of the canoes are allowed to take part in the Regatta sports competition.
7. For each participating institution a maximum number of 2 canoes with 2 teams each is permitted.
8. Participants who do not meet the aforementioned requirements will be excluded from the competition together with their canoes and watercraft.
9. The Regatta Committee may make exceptions in special cases. Such applications must be submitted to the chairman of the Regatta Committee. With respect to such applications, the Regatta Committee's decision is final. There can be no appeal.
10. The canoes and watercraft must be in the competition area by 12pm on Friday **24th June 2011**. The judges will assess the canoes and watercraft (including weigh-in and size measurement) in the competition area. The canoes and watercraft must be removed from the competition area by 11am on Sunday **26th June 2011** at the latest (, if not agreed otherwise).
11. The organisers decide about the location of the presentation places where the canoes shall rest and be shown to the judges and the visitors. These places are limited to an area of 4 m x 6,50 m per canoe (or 5 m x 6,50 m for two canoes) except for the watercraft of the "open class".

NOTICE: The camp ground will be already open from Wednesday afternoon, **22nd June 2011**, because on Thursday there is a ban on truck traffic and some vehicles with trailers in some German federal states.

12. The event organisers accept no liability. Participation in and attendance at the Concrete Canoe Regatta is entirely at one's own risk.

Preliminary Note

This invitation to apply contains the rules and regulations for

- “competition class” concrete canoes and for
- “open class” watercraft

A few conditions have been changed in comparison to the last regatta and are marked by underlining.

“Competition Class” Concrete Canoes

Rules For Construction Of A Concrete Canoe

1. The canoe must be constructed in such a way that it can be steered by two people, kneeling, sitting or standing, using single-blade paddles. Rowlocks and steering gears are not allowed.

2. Limits for canoe dimensions are as follows:

- Minimum length: 4.0 m
- Maximum length: 6.0 m
- Minimum width: 0.7 m
- Maximum width: 1.0 m

3. The canoes must be made from reinforced concrete, fine aggregate concrete and/or cement mortar. This composite building material is known as “ferro-cement”.

The strength and rigidity of the canoes should be achieved through profiling and reinforcement and through the composition of the concrete, fine aggregate concrete and/or mortar (hereafter simply called the concrete mix).

■ Aggregates:

Natural or synthetic, impermeable or porous, no restrictions on grain size.

■ Binders:

Cement according to DIN EN 197, DIN EN 14216 or DIN 1164-1 or as permitted on building sites or according to the respective national standard. No other organic or inorganic binders are permitted, with the exception of concrete additives.

■ Admixtures:

Additives according to DIN EN 206 / DIN 1045-2 or according to the respective national standard. Additives, such as fly ash, silica dust and so on, must not exceed 25% of the total weight of the cement

■ Reinforcement:

All types of reinforcement, such as reinforcement steel, wire, steel/glass fibre, synthetic or natural fibre, wire mesh and mats and fabrics made from the aforementioned materials are permitted.

Sheet metal or other laminar or rod-shaped independently bracing constructions are not permitted.

■ Synthetic materials:

A maximum of 2 kg can be used in the canoe. This includes any synthetics in the concrete mix, bonding layers, paintwork and so on, but does not include the weight of floats and stickers.

4. Paintwork, undercoats, moisture-proofing, wax and so on may only be applied to the outer skin of the canoe and only above the waterline of the canoe when floating with crew onboard.

5. The keel, like the entire canoe casing, must be made of ferro-cement. Plating the keel with other materials is not permitted.



“Competition Class” Concrete Canoes

6. Floats should be fixed to the canoe to make it unsinkable. Buoyancy should exceed the weight of the canoe itself by a minimum of 1,000 N. It must be possible to remove the floats for the judges' evaluation. For the race, the floats must be fixed to the canoe in such a way that they will not become detached should the canoe sink or break apart. Floats must not be used as load-bearing or bracing elements. Floats and buoyancy, which should enable the canoe to float back up should it become submerged beneath the water, are subject to inspection by the panel of judges. In any case, however, calculations proving the effectiveness of the floats and the buoyancy of the canoe, should it become submerged, must be provided along with the construction report.

7. A buoy, ideally made of ferro-cement, must be attached to the canoe with a line at least 12 m long so that if the canoe sinks, despite the floats, the buoy will float up unimpeded, thus marking the location of the canoe.

8. Making the canoe watertight must be achieved via the composition and treatment of the concrete.

9. Seats and other equipment (covers, stabilisation fins, etc.) should be made of ferro-cement. Any equipment not made of ferro-cement must be removable; such equipment must not be used to provide additional bracing for the canoe. Any inside bottom upholstery shall not be stronger than ordinary expanded polystyrene foam (as for heat insulation) without any composite reinforcement (fibres, strands or fabric), and its total thickness is limited to 20 mm maximum.

10. A report (maximum 10 pages size A4) detailing the design and construction of the canoe, the materials used and the concrete mix, together with a drawing and list of materials (type and quantity), must be submitted to the Regatta Committee **by 27th May 2011 per post only** (date of post-office stamp). You are requested to also submit photos and details of any literature consulted. It is recommended that the framework below be used for the construction report (see also Technical Report in Evaluation Criteria for “Construction” and “Design” Prizes).

- General – design concept
- Dimensions, weight, evidence of buoyancy, attachment of floats
- Formwork, reinforcement
- Concrete mix
- Construction of the canoe, bracing, floats, surface treatment
- List of materials, drawing of canoe
- Name of the professor, trainer or teacher responsible, together with a list of all contributors.

11. Before the race, the canoe will be assessed and checked to confirm it complies with the report submitted.

12. Failure of the canoe to meet the requirements laid out in the construction rules may result in disqualification, or at least the deduction of points or allocation of time penalties in all competitions and races for each individual breach. Any such penalties will be asserted on the day of the Regatta.



“Competition Class” Concrete Canoes

Competition Rules

1. The sports competition will comprise a combination of straight line races and slalom courses. Further details will be provided later in the programme for the Concrete Canoe Regatta.

2. One team comprises two participants in the competition and a maximum of two substitutes. These must be pupils, trainees or students

- who belong to and/or are enrolled in the institution they are representing
- who are trained in concrete technology and
- who actively contributed to the construction of the canoe.

Proof thereof must be presented to the event organisers on request. False information will result in disqualification. For identity checks, each participant in the competition must carry an identity card with photograph during the races.

3. Each team must nominate a “team captain (male or female)” on the entry form.

4. The team may not be changed during the competitions on the water.

5. All participants in the competition must be able to swim a distance of 100 meters on their own.

6. Teams are not permitted to call upon outside assistance during the race.

7. Deliberately colliding with or damaging other canoes will result in disqualification.

8. “Cutting up” other canoes during the race may result in disqualification. A canoe may only cross the line of travel of another canoe approaching from the rear if there is a minimum of two boat lengths between them.

9. Every canoe must bear a name. The name must be clearly displayed above the waterline. For the race itself, each team will be given a start number, which must also be clearly displayed.

10. The crew may only be changed a maximum of two times for the canoe to remain eligible to start.

11. Any protests against judges’ decisions are to be submitted immediately in writing to the competition office. A submission fee will be charged for each protest. The competition office will forward the protest to the chairman of the arbitration board. The arbitration board’s decision will be announced after consultation with the chairman of the panel of judges involved. There can be no appeal.



Prizes, Certificates and Plaques for the Participants

Prizes will be awarded for

■ Construction

The Association of German Concrete Engineers’ Challenge Cup

■ Design

The Challenge Cup

■ Sports competition

The Association of the German Cement Industry’s Challenge Cup (women’s/men’s)

Winners of individual competitions will receive the Challenge Cup for that competition and/or additional prizes. Each crew will receive a certificate marking their participation in the competitions. There will also be other prizes, including cash prizes.

Every participating institute will receive a commemorative plaque made of concrete as recognition of their “contribution”, together with a cash reward to say thank you for taking part. Special tribute will be paid to the builders of the heaviest and/or lightest canoes. There will be a “booby prize” as consolation for the most unlucky crew.

Prize for construction:

The following will be evaluated: design concept, weight (the lighter, the better), position in the water, solutions for details, etc., and the report submitted (see also the section “Evaluation criteria...”)

Prize for design:

Conformity of form and function of the canoe, plus craftsmanship and appearance on land and in the water with crew onboard (see also the section “Evaluation criteria...”).

Sports competition prize for the fastest women’s/men’s teams:

Winners will be determined in the finals.

**“Construction” and “Design” prizes can only be awarded to place winners in the sports competitions!
The canoe must still be manoeuvrable after the preliminary heats.**



“Competition Class” Concrete Canoes

Evaluation Criteria for “Construction” and “Design” Prizes

“Construction” Prize

1st prize will go to the canoe that gains the highest score according to the criteria listed below. Each judge is allowed to give up to 4 points per evaluation criterion. The criteria will be weighted according to their significance. Any deviations from the “Rules for Construction of a Canoe” will result in the deduction of points and the allocation of time penalties in the sports competition.

During evaluation, high scores will be given for new concepts in canoe construction, reinforcement and concrete mix, for primary research into building materials, for independent creation of formwork and for good solutions for details.

Based on the technical report, each canoe will be given a preliminary mark. This mark will be included in the evaluation:

a) Technical report:

Report submitted on time? Report complete? Too short or too long? Well presented? Pictures, detail drawings and descriptions of how the canoe was made? Consistency between the report and canoe produced?

The report should contain the following information: length, width, thickness of walls and weight of the canoe; bracing of the canoe body; type, weight, volume and fixings of the floats, including buoyancy calculations; type of formwork and description of how formwork was made; type and amount of reinforcement, including rod / wire / fibre diameters and mesh sizes where applicable. Precise concrete formula, including

water/cement ratio with details (type and amount) of rock granules (aggregates), cement, admixtures and additives etc. - See “Rules for Construction of a Concrete Canoe”, point 10!

b) Design concept:

Canoe design new / known? Complex/simple design? Were special solutions found for the formwork, reinforcement and concrete? Ecological viewpoint considered?

c) Materials concept:

Are there very special solutions for the reinforcement and the concrete?

d) Formwork:

Formwork designed and built independently?

e) Execution:

Casting method? Craftsmanship? Surfaces? Repairs?

f) Bracing of the canoe:

Were the requirements of the invitation to apply adhered to? (see “Rules for Construction of a Canoe”)

g) Detail solutions:

Seats? Covers? Buoy effective and attached securely? Floats and their proper fixing?

h) Presentation of the canoe and communication to the jury:

Expert explanations? Use of appropriate media? Poster board? Pictures? Demonstration material, samples?



“Competition Class” Concrete Canoes

i) Weight and wall thickness of the canoe:

The lighter the weight of the canoe per metre in length, the higher the score.

j) Are the rules for canoe construction satisfied?

k) Position in water / freeboard (with crew):

How does the canoe sit in the water? Does it look like it may capsize? Does it travel in the desired direction? Freeboard too low or too high? (ideally should be approx. 15 - 20 cm)

l) Durability when racing:

Was the canoe still seaworthy after the preliminary heats? Were considerable repairs required?

“Design” Prize

1st prize will go to the canoe that gains the highest score according to the criteria listed below. For maximum score, weighting of points and deviations from the rules, see “Construction” Prize.

a) Canoe name:

Name original and generally appealing? Does the name bear any reference to the canoe/design? Legibility and craftsmanship?

b) Presentation on land:

Presentation concept / picture / boards? Competent description? Regatta clothing?

c) Shape and design of the canoe body:

Design objectives recognisable? Appropriateness of the shape? Overall aesthetic impression?

d) Decoration and accessories:

Colour of concrete (“natural”, coloured using pigments, cement selected specially)? Paintwork (motif, craftsmanship)? Textures, relief patterns and other decorative accessories?

e) Outer / inner surfaces:

Holes, tears and cracks? Concrete cover of reinforcement? Repair points? Rough spots, ridges, edges? Evenness?

f) Detail solutions:

Original and well-fitted solutions for buoy and floats? Spray protection? Seats? Edge protection/safeguarding against injury?

g) Canoe in the water:

Position in the water when crew onboard? Harmony between canoe and crew?



“Open Class” Water Crafts

Motto: “It floats although it’s concrete!”

Concrete canoes participating in the sports competition are not permitted to enter the “open class”.

Watercraft for the “open class” must satisfy the following criteria:

1. The floating body of the watercraft must be made of concrete.
2. The watercraft must be constructed in such a way that the crew are able to manoeuvre and steer it in the water.
3. Selection of drive is free, but electric motors (excluding solar cell power) and combustion engines cannot be used.
4. Dimensions and shape of the watercraft are free.
5. Shape and weight of the watercraft must be designed so that the crew, possibly with helpers, is able to bring the watercraft to the water. Lifting equipment (heavy equipment) is not provided.
6. Buoyancy should exceed the weight of the canoe itself by a minimum of 1,000 N. Floats should be fixed to the watercraft to make it unsinkable. It must be possible to dismantle the floats for evaluation and the floats should be attached to the watercraft in such a way that they do not become detached if the watercraft is damaged. Calculations proving the effectiveness of the floats must be provided with the construction report.

7. Making the watercraft watertight must be achieved via the composition of the concrete. Paintwork is only permitted above the waterline.

8. The concrete composition of the floating body shall meet the requirements as for the canoes.

9. All types of reinforcement are permitted. Sheet metal or other laminar or rod-shaped independently reinforcing constructions are not permitted.

10. In accordance with point 10 of the Rules for Construction of a Concrete Canoe, a report detailing the design and construction of the watercraft must be submitted to the Regatta Committee by **27th May 2011** per mail only (date of post-office stamp).

Evaluation criteria and prizes:

There will be no competition in the “open class”. However, the watercraft will be required to take part in a parade (boat parade) with the canoes in the water on the day of the competition. The following will be assessed:

- Originality
- Construction
- Use of concrete, including for “accessories”
- Design
- Equipment
- Drive
- Crew / watercraft harmony
- Presentation (e.g. visual, acoustic)

The winner will receive a special prize. There will also be prizes for 2nd and 3rd places.



Who Has The Best Regatta Shirt?



We will also be interested in your individual regatta shirt designs (painted or printed) at this Concrete Canoe Regatta. We are hoping to see some wonderful colours as in previous regattas. You, i.e. the participants themselves, will decide on, present and award the prizes for the best regatta shirts during the reception evening. Glory (and of course prizes) beckon!

However, in order to participate in the tee-shirt competition, you must submit a drawing (A4 size) or a colour copy of the motif you have designed along with the construction report (**until 27th May 2011**) and during registration on **24th June 2011** you must hand in a sample shirt of your design at the regatta office. The regatta shirt will be returned to you after the tee-shirt competition.

Application & Registration

Please send your forms and documents to the central administration office dealing with **all applications and registration:**

BetonMarketing West GmbH
Biebricher Straße 74
D-65203 Wiesbaden
Allemanne/germany

Queries

The chairman of the panel of judges for this concrete canoe regatta will be happy to answer any specific questions you may have regarding the invitation to apply, construction of your craft and any general queries about the concrete canoe regatta:

Dr.-Ing. Diethelm Bosold
 c/o BetonMarketing West GmbH
 Biebricher Straße 74
 D-65203 Wiesbaden
 Phone: 0049 (0)611 261066
 Fax: 0049 (0)611 261068
 E-Mail: diethelm.bosold@bmwest.de

Should there be any organizational questions or assistance where communication in English is required, you may contact the coordinator of the Regatta Committee:

Dipl.-Ing. Wolfgang Schaefer
 c/o BetonMarketing Ost GmbH
 Teltower Damm 155
 D-14167 Berlin
 Mobile: 0049 (0)172 3911338
 Phone: 0049 (0)30 308777840
 Fax: 0049 (0)30 308777841
 E-Mail: schaefer@bmo-berlin.de

This paper is translated from the German original according to best knowledge, the 25th Nov 2010: W. Schäfer

Please also consult the following website:
www.betonkanu-regatta.de

Host

Die Deutsche
Zement- und
Betonindustrie

Event Organiser

BetonMarketing
Ost GmbH

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14167 Berlin-Zehlendorf
Telefon 030 3087778-0
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mailbox@bmo-berlin.de

Patron

Dr. Lutz Trümper
Oberbürgermeister der
Landeshauptstadt Magdeburg



Co-Organisers



WBF Magdeburg e.V.



HEIDELBERGCEMENT

 Dyckerhoff



 SCHWENK
Baustoffe fürs Leben



 dornburger
zement



■ 13th German Concrete Canoe Regatta
+ + + preliminary application + + +

Magdeburg 2011
Salbker See II
24./25. Juni '11

Institution name of the institution: _____
address: _____
phone: _____ FAX: _____
responsible professor/teacher: _____

Name name of the contact person: _____
address: _____
phone: _____ FAX: _____
E-Mail: _____

We intend to participate with

- _____ concrete canoes
- _____ male teams
- _____ female teams

We will produce for the "Open Class"

- _____ water craft(s)

Please return this form before **30th December 2010** to:

BetonMarketing West GmbH
Biebricher Straße 74

65203 Wiesbaden

You may also send this form by FAX **0049 (0) 611 261068**
or E-Mail: diethelm.bosold@bmwest.de