

Naples, Italy, welcomes the Second *fib* Congress



The symposium took place in the imposing "Mostra d'Oltremare" Congress Centre, built in 1940 to house an exhibition on Italian colonies in Eastern Africa.

Following the success of the first *fib* Congress held in 2002 in Osaka, Japan, the second edition of was held in Naples, Italy, from 5 to 8 June 2006, and was a landmark event in its own right. During these four days some 860 participants attended more than 70 sessions dealing with a wide range of topics, including FRP reinforcement for new and existing structures, modeling and design, seismic design, durability, and large projects and innovative structures. Despite some unseasonable rain, participants enjoyed the warmth of the climate and of southern Italian hospitality.

The Opening Ceremony on Monday 5 June began with welcome addresses by Edoardo Cosenza, Chairman of the Organizing committee, and a number of eminent local authorities: Guido Trombetti, Rector of the University of Naples Federico II; and Antonio Bassolino, Governor of Campania, and Rocco Papa, Vice-Mayor of Naples. They welcomed the Congress participants

to Naples and reminded them of the city's long, rich history of buildings and monuments, as well as its strong academic tradition centred around the University of Naples Federico II, one of the oldest universities in world.

Giuseppe Mancini, President of *fib*, then came to the podium and announced the *fib* honorary memberships that had been approved the previous day by the General Assembly, and to present the 2006 Freyssinet Medals to Heinz Isler and Michel Virlogeux (see article on page 132).

Plenary session I began with the awards ceremony for the 2006 *fib* Awards for Outstanding Concrete Structures. Jury chairman and *fib* Honorary President Jim Forbes presented the 12 projects that had been selected as winners or for special citations, and called the project representatives to the podium to receive their awards (see related article in the June 2006 issue of *fib-news*).

The session continued with a keynote speech by *fib* Deputy President Hans Rudolf Ganz, during which he reviewed certain aspects of post-tensioning materials, systems, design, durability, construction and applications. Michel Virlogeux, *fib* Honorary President and Freyssinet Medallist, then gave a keynote speech in which he outlined the prospects for the future of concrete (the texts of the keynote speeches are available on CD from the Congress secretariat; see page 131).

The following days were fully scheduled, with over 70 technical sessions, plus in-depth reports from *fib*'s National Member groups and Commissions, a commercial exhibition and a poster session.

Three sessions were reserved for national reports. Austria, Croatia, Czech Republic, France, Hungary, India, Japan, Poland, Portugal, Romania, Slovakia and Switzerland had published extensive reports, printed or on CD, that were offered to congress participants free of charge. Reports from Commissions and Special Activity Groups attracted the audience during another three sessions. They presented recently published bulletins or the main contents of reports that will be

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Members of the Presidium enjoy a musical performance during the banquet.

ready for publication in the near future. As part of the Commission 4 report, Peter Marti revealed the results of the international competition on predicting the response of reinforced concrete slabs to transverse shear; a comprehensive report will be issued by the Institute of Structural Engineering of the ETH Zurich and it is planned to publish a summary article in the next issue of this Journal. Eight groups of researchers from Austria, Australia, Canada, China, Czech Republic and Italy had taken part. The first prize went to Prof. Kollegger of the Technical University Vienna. All participants received commemorative plaques with Swiss rock crystals. The photo below shows the participants after the award ceremony.

A number of social events acquainted

Congress participants with Neapolitan culture, starting with the welcome reception held in the Castel dell'Ovo in the Bay of Naples. This event included artisans and performers who interacted with the public, offering them a close-up look at Neapolitan traditions and cuisine. The following evenings treated participants to a concert by the renowned Neapolitan singer Bruno Venturini and a musical lights and water show. A splendid banquet in the National Museum accompanied by a troupe of traditional Neapolitan musicians was a high-point of the week's social programme.

General Assembly

On the Sunday before the Congress, a General Assembly took place in the



Prediction competition participants (left to right): Frank Vecchio (Toronto), Jan Cervenka (Prague), Stephen Foster (Sydney), Evan Bentz (Toronto), Sebastian Ambro (Vienna, representing Prof. Kollegger), Beatrice Belletti (Parma) Stefan Burtscher (Vienna), Thomas Jaeger (Zurich), Peter Marti (Zurich)

excellent facilities of the former Aula Magna of the Universita Federico II, now used as university congress centre. It was particularly well attended: out of the 36 National Groups entitled to vote as statutory members, 31 were represented, casting 67 out of 73 possible votes.

President Giuseppe Mancini gave a short report on his presidency since his election in Avignon in April 2004. He recalled as outstanding events the successful symposia held in New Delhi in 2004, in Budapest and in La Plata in 2005, as well as the Workshop on Durability of Tendons held in Zurich in October 2004. Five presidium meetings were held in the reported period (including a jury meeting for the Awards for Outstanding Structures), and in addition four combined Council and Steering Committee meetings. He represented *fib* as an invited speaker to conferences in New York (ACI convention), Teheran (Conference on Concrete and Development) and in Nanjing (Conference). During his presidency new statutes were developed, *fib* was registered in the Swiss canton Vaud and new personnel were hired in the secretariat, which is now working with two full time employees and one at 80 %.

Deputy-President Hans-Rudolf Ganz then reported on the activities of the Steering Committee since the meeting in Avignon, April 2004 (see article on next page).

New statutes

The proposed new statutes, which had been discussed several times in Council, were submitted to voting. They were approved unanimously and without abstentions. They are available to members on *fib's* website and will also be published later this year in the Directory 2006. The main changes concern the creation of a new body called the 'Technical Council', which will replace the 'Council' and 'Steering Committee'. The Technical Council will be comprised of the Heads of

National Delegations, the members of the Presidium, the chairs of Commissions and Special Activity Groups, the Honorary Presidents, the Secretary General and further members appointed by the Presidium for a four year term. It elects two representatives serving a four year term on the presidium and in the CEB Trust Fund. The Technical Council has the responsibility to initiate Commissions, Task Groups and Special Activity Groups, with their terms of reference, appoints their chairs and monitors their output. It also has to approve recommendations, guides and manuals. It will no longer deal with financial aspects (budget, balance, etc.); these will be handled by the General Assembly meeting at least every two years.

Elections

By secret ballot the General Assembly elected the following:

- President, 1 Jan 2007 – 31 Dec 2008: Hans-Rudolf Ganz (Switzerland)
- Deputy-President 1 Jan 2007 – 31 Dec 2008: Michael Fardis (Greece)

- Four Presidium members, 1 Jan 2007 – 31 Dec 2010: György L. Balazs (Hungary), Hugo Corres Peiretti (Spain), Harald S. Müller (Germany), Jun Yamazaki (Japan)

The Technical Council will elect two deputy-chairs who will serve as two further members from 1 Jan 2007 – 31 Dec 2010. The presidium will also co-opt another two members for the period of Hans-Rudolf Ganz's presidency. As Honorary Treasurer for the period 1 Jan 2007 – 31 Dec 2010, the General Assembly elected Hans-Ulrich Litzner (Germany).

The General Assembly then unanimously approved the proposed new Honorary Members (see page 134), and the Model code on service life design (Bulletin 34, presented in the June issue of *fib-news*).

Council & Steering Committee

These held their last meeting together on Sunday morning. Council approved the draft balance 2005 and the draft budget

The congress proceedings (two CDs containing all papers in full and keynote speeches) can be ordered from *fib* Italia: fib2006@unina.it



2006. On request of the British National Group it also decided to hold the 2009 *fib* symposium in London. It accepted the proposals for several new Task Groups : TG 1.5 *Offshore concrete structures* (T.O. Olsen, Convener), TG 3.8 *Green concrete technologies for life cycle design of concrete structures* (M. Glavind, Convener), TG 3.9 *Application of environmental design to concrete structures* (K. Kawai, Convener), TG 9.12 *Ground anchors* (T. Niki, Convener) and TG 9.13 *External tendons* (T. Theryo, Convener). The detailed membership in all commissions and the working programmes for the next four years will be submitted to the new Technical Council for its first meeting on 1 - 2 December in Zurich.

Report on Steering Committee Activities, 2004-2006

The *fib* Steering Committee consists of the 10 Commission chairmen, the Convenors of SAG, and 10 elected members. In accordance with the *fib* statutes valid until June 2006, the Steering Committee was responsible for: (1) initiating Commissions and Task Groups, (2) monitoring their output and the participation of their members, (3) making recommendations to the *fib* Council and Presidium for the dissemination of output/results.

Meetings

The Steering Committee met on the following dates and places in conjunction

with *fib* symposia:

- 24 April 2004 in Avignon, France
- 26 November 2004 in New Delhi, India
- 21 May 2005 in Budapest, Hungary
- 26 September 2005 in La Plata, Argentina.

All meetings were held together with the *fib* Council, with an attendance of between 15 and 39 persons.

Commissions, Task Groups and Special Activity Groups

No new Commissions were created during the past two years. However, the Steering

Committee noted with great satisfaction that Commission 10 started their work and held several meetings during the reporting period.

The creation of more than 15 new Task Groups was announced in the reporting period to which most Commissions contributed. Details of these TGs can be found in the Terms of Reference, see the *fib* website, www.fib-international.org/about/organisation. *fib* members can also access the notes of all meetings via the "members only" section, www.fib-international.org/membersonly.

The Special Activity Group SAG 5 was created in the reporting period to draft the New *fib* Model Code. SAG 5 is co-chaired by Joost Walraven and Peter Marti. Agnieszka Bigaj van Vliet was appointed as

technical secretary in charge of coordinating the contributions and ensuring consistency of the draft documents. SAG 5 held five meetings after the kick-off in February 2004 in Lausanne. Significant parts of the new *fib* Model Code have been drafted already by selected key persons. However, all Commissions are called upon to contribute to, review and amend the draft chapters.

Publication of Bulletins

Seven *fib* Bulletins have been published during the reporting period. These are:

- Bulletin 29, *Precast concrete bridges*
- Bulletin 30, *Acceptance of stay cable systems*
- Bulletin 31, *Post-tensioning in buildings*
- Bulletin 32, *Guidelines for the design of footbridges*
- Bulletin 33, *Durability of post-tensioning tendons*
- Bulletin 34, *Model code for service life design*
- Bulletin 35, *Retrofitting of concrete*

structures by externally bonded FRPs, with emphasis on seismic applications. Summaries for these and other *fib* Bulletins are given at www.fib-international.org/publications/fib.

Dissemination of results

The output/results of *fib* is disseminated mainly through the following means:

- publication of *fib* Bulletins (see above);
- presentation of ongoing work and upcoming bulletins at the Technical Activity Workshops held at *fib* Symposia. During the reporting period such Technical Activity Workshops were held in Avignon (April '04), Budapest (May '05), and La Plata (September '05);
- *fib* Short Courses organised by SAG 2. During the reporting period Short Courses were held in New Delhi/India (November 2004 on prefabrication and strut-and-tie models), in Ankara/Turkey and Istanbul/Turkey (June 2005 on retrofitting of concrete structures through externally bonded FRPs with

emphasis to seismic applications), and in Mexico-City/Mexico (May 2006, on the same topic as the courses given in Turkey). The course documentation for these last two courses was published as Bulletin 35.

In addition to the above, the second *fib*/IABSE Workshop on Tendon Durability was organised in Zurich in October 2004. A draft version of Bulletin 33 was presented at the workshop as basis for the technical discussions and to prepare resolutions of the Workshop.

Conclusions

The Steering Committee feels that the above work and output is fairly impressive for a non-profit organisation such as *fib*. The creation of a Technical Council under the new *fib* statutes should enable an even greater focus on technical activities and foster new work and output.

Hans-Rudolf Ganz, *fib* Deputy-President

Freyssinet Medals awarded to Heinz Isler and Michel Virlogeux



Heinz Isler



Freyssinet Medal



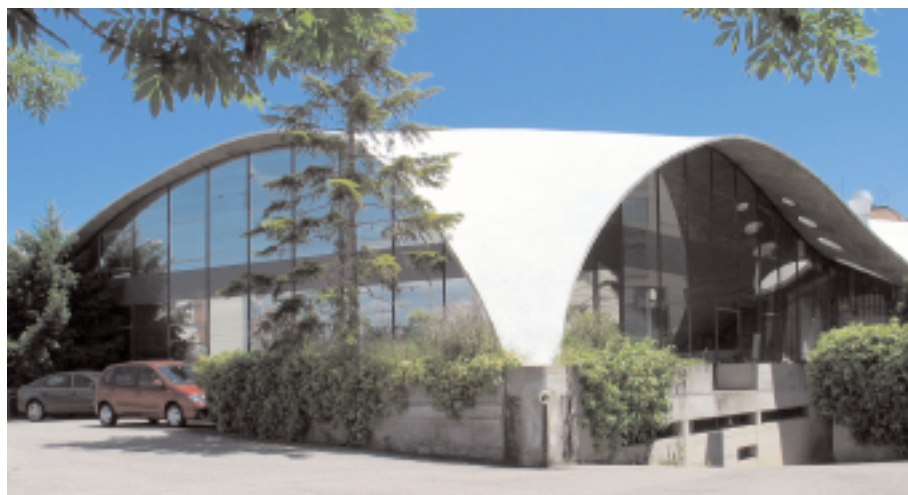
Michel Virlogeux

Awarded every four years at the occasion of an *fib* Congress, the Freyssinet Medal is the highest distinction awarded by *fib* and is "given in recognition of outstanding technical contributions in the field of

structural concrete". The 2006 medals were awarded on 5 June to Heinz Isler and Michel Virlogeux by *fib* President Giuseppe Mancini, at the *fib* Congress in Naples, Italy.

Born in 1926, **Heinz Isler** started his own engineering firm soon after earning a degree in civil engineering from the ETH Zurich in 1950. He specialised in the development of experimental methods and modelling techniques to design and create shell structures with "free" geometry; at the first congress of the International Association for Shell Structures (IASS) in 1959 he presented his methods in a short paper entitled "New shapes for shells".

In the decades that followed he used his methods to design and build numerous concrete shell structures, including parking structures, industrial facilities, garden centres, petrol stations and an open-air theatre. Over the years Heinz Isler built over 1400 shell structures and was generally involved in all phases of their design and construction, including the definition of the geometrical shape, model testing,



Shell structure designed and built by Heinz Isler for Sici SA, Geneva, Switzerland

structural dimensioning, construction methods, site supervision, and inspection and monitoring of the shells' performance during service life.

In 1983 he received an honorary doctoral degree from the ETH Zurich and in the same year was nominated professor at the University of Karlsruhe, Germany. He continued to build shell structures and worked as a consultant until the year 2000.

Prof. Isler was unfortunately unable to attend the awards ceremony in Naples; the Freyssinet medal was therefore accepted on his behalf by Peter Ritz, National Delegate in *fib* for Switzerland.

Born in 1946, **Michel Virlogeux** obtained his doctorate in engineering from the University Pierre et Marie Curie in 1973. After working as a civil servant in Tunisia, he joined SETRA, the technical office of France's highway administration, where he eventually became Head of Division for Large Concrete Bridges and, in 1987, Head of Division for Large Bridges (including steel bridges). In this position he designed many bridges, including the well-known Normandy Bridge (at that time the world's longest cable-stayed bridge).

From 1977 to 1994 he was a part-time

professor in structural analysis at the Ecole Nationale des Ponts et Chaussées and became an independent consultant in 1995. In that capacity he developed the conceptual design of the Avignon viaducts for the French Railways and was later a consultant during their construction. He participated in the development of the Millau viaduct project and later also acted as consultant during the construction phase.

In addition to designing numerous bridges in France, he has worked extensively on

the international level, including consulting work in Japan, China and Chile, and the development of the continuous, completely suspended deck of the Rion-Antirion Bridge in Greece.

Michel Virlogeux was President of FIP in 1996 to 1998 and then became the first president of *fib*, serving from 1998–2000.

He has been distinguished with many awards, including the IABSE Prize (1983), the Award of Excellence of the Engineering News Record (1995), the Gold Medal of the Institution of Structural Engineers (1997), the Fritz Leonhardt award (1999), the Gustav Magnel Gold Medal (1999), the ACI Turner Medal (2003), the IABSE International Award of Merit (2003), the Bridge Design Award of the American Bridge Engineering Association (2003) the Hills Millennium Award of the Institution of Engineering Designers (2005) and Gold Medal of the Institution of Civil Engineers (2005).

Honorary memberships

Honorary memberships in *fib* are given by the General Assembly in recognition of significant personal contributions to the work



The Normandy Bridge (photo Bouygues Campenon Bernard Group - Vinci)

of fib. At the General Assembly that preceded the Naples Congress, honorary memberships were bestowed on Luis J. Lima (Argentina), Manfred Miehlabradt (Germany) and Zivota Perisic (Serbia and Montenegro).



Luis J. Lima

Luis Lima was recognised for his contributions during the last 40 years as a member in several CEB commissions related to Structural Design and Detailing, as well as for his work for the 1990 CEB-FIP Model Code, the dissemination of CEB's achievements through textbooks, and courses held inside and outside his country, and his engagement as a member of the Presidium for several years.



Manfred Miehlabradt

Manfred Miehlabradt was recognised for his contributions during the last 40 years as a member and chairman of several CEB and FIP commissions related to international recommendations, trial and comparison calculations, practical design, and others, his work for the 1978 and 1990 CEB-FIP Model Codes, and the support he provided to the CEB, FIP and fib secretariats.



Zivota Perisic

Zivota Perisic was recognised for his contributions during the last 30 years as a member of several CEB commissions related to design, his work for the

Award recipients in Naples. From left to right: Manfred Miehlabradt, Renate Miehlabradt, Michel Virlogeux, Hélène Virlogeux, and Peter Ritz



1988 CEB Plenary Session, as member of the CEB Administrative Council and the Advisory Committee, and as Head of Dele-

gation for his country for 15 years.

2007 fib Diplomas to Younger Engineers

The fib Diploma for research and practice is given at an fib symposium every two years since 2001. The award consists of a diploma and prize money of 2000 Euros for the winners in each of the two categories described below. Submissions are now open for the 2007 edition, which will be attributed at a special ceremony during the fib symposium in Dubrovnik in May 2007. This edition of the award is sponsored by Jean Muller International, in memory of the late Jean Muller (1925 - 2005).

Jean Muller was widely renowned for his designs of unique and attractive bridges. Recognised by numerous professional organizations for his outstanding achievements, innovations, and contributions in the field of bridge engineering, he received his master's degree in civil engineering in 1947 from the Ecole Centrale des Arts et Manufactures in Paris and started his professional career under

the direct supervision of Eugène Freyssinet, the 'father' of modern prestressed concrete. Serving from 1951 to 1955 as chief engineer for the Freyssinet Company in New York, he then worked the following 20 years as Technical Director for the Campenon Bernard construction company in Paris, involved in large prestressed concrete projects as dams, nuclear reactor pressure vessels and long span bridges. His technique of precast segmental construction with matching joints was applied for the first time in 1962. From 1978 to 1988 he was Chairman of the Board and Technical Director of Figg and Muller Engineers in Tallahassee, Florida. A number of innovative structures witness this period. The Long Key Bridge and the Seven Mile Bridge in the Florida Keys were the first precast segmental bridges erected by the span-by-span erection method. From 1986 to 1999 he was Technical Director of Jean Muller International with offices in the

USA, France and Thailand. Among many others, Bang Na Expressway in Bangkok and the Confederation Bridge in Canada witnessed this period. In 1998, at the FIP Congress in Amsterdam, Jean Muller received the Freyssinet Medal.

Candidates for the 2007 Diploma award may not apply for the award themselves; they must be proposed or supported by the *fib* National Member Group in their country. Entries will be judged by an international jury set up by the Technical Council. Proposals are to be submitted by letter or e-mail to the chairman of the jury and the *fib* secretariat, in accordance with the following procedures.

Research category

The candidate is to be nominated on the basis of a Ph.D. thesis. The candidate must submit a copy of the original thesis plus a written summary in English of about five to 10 pages (even if the original is in English). This summary should include all relevant information to assess the technical level, importance and innovative quality of the thesis. The thesis should have been submitted to and accepted by the competent university authorities in the years 2002 to 2006.

Design and construction category

The candidate (note: a single candidate, not a group) should be nominated on the basis of a documentation report on the practical design or execution work made by her or him. This report must be in English and should be about 10 pages long, including documentation such as photos, plans, etc. It should also specify the level or responsibility of the candidate and, if applicable, mention any relevant information on the innovative or outstanding character of the work, or the potential 'promotion of good/better

concrete structures' through the design or the construction work, etc.

General conditions for the 2007 award

- Candidates are only eligible if born 1968 or later.
- Submission of proposals by 31 October 2006, supported by the Head of Delegation, a National Delegate or Deputy and preferably in electronic form (by email or on CD), to the *fib* secretariat and to the chairman of the Jury:
 Prof. Konrad Bergmeister
 Inst. Konstruktiver Ingenieurbau
 Universität für Bodenkultur
 Peter-Jordan-Str. 82, A-1190 Vienna
 Tel. +43 1 47 65 45 250
 Fax +43 1 47 65 45 299
 Email: konrad.bergmeister@boku.ac.at
- The National Delegate need not write a recommendation letter; it is sufficient to mention that the candidate has been chosen by the National Delegation. However, every proposal must contain:
 - the summary or documentation report as mentioned above; if this cannot be submitted in electronic form, two paper copies are required: one to be sent to the *fib* secretariat and one to the chairman of the Jury;
 - one paper copy of the thesis in original language, to be sent only to the chairman of the Jury;
 - the curriculum vitae of the candidate (if not electronically submitted, two paper copies are required to be sent as described above);
 - his/her full current address including phone, fax or e-mail,
 - a passport-type photo (in electronic form as a JPEG file, or in traditional form on paper, in which case it can be sent only to *fib* secretariat).
- Altogether, the number of candidates suggested in each category must not exceed the number of votes the particular country has in the General Assembly.

- The candidates should be prepared and willing, if elected as winner or given a 'special mention' citation, to participate in the 2007 symposium (see below) and to write a paper on their work to be published later in *fib-news*.

The jury will choose the winners in each category and may additionally nominate one or two candidates per category to receive a 'special mention'.

fib will invite the winners and 'special mention' recipients in each category to present and discuss their work during a special session at the Dubrovnik symposium. This invitation will cover

- the cost for an economy class apex flight ticket from the candidate's domicile to Dubrovnik,
- free participation in the symposium, and
- a contribution to the candidate's accommodation expenses of 500 CHF.

In addition, the winners and 'special mention' recipients will be invited to report on their work in *fib-news*. The winner in each category will be awarded the *fib* Diploma 2007 for research and design.

Short notes

The authors of *fib Bulletin 33* (December 2005) recently brought to the attention of the *fib* secretariat two errors occurring on page 14, Table 1.3. A corrigendum has been issued and can be downloaded from the *fib* website at www.fib-international.org/publications/fib/33.

Corrigenda for **Bulletins 32** and **36** are also available for downloading from their respective summary pages on the website.

Congresses and symposia

The calendar lists *fib* congresses and symposia, co-sponsored events and, if space permits, events supported by *fib* or organised by one of its National Groups. It reflects the state of information available to the Secretariat at the time of printing; the information given may be subject to change.

Date and location	Event	Main organiser	Contact
22-25 October 2006 Grapevine, Texas, USA	PCI Annual Convention & Exhibition and National Bridge Conference	PCI	Precast/Prestressed Concrete Institute info@pci.org www.pci.org/news/convention
5-7 November 2006 San Diego, CA, USA	ASBI Convention	ASBI	American Segmental Bridge Institute asbi@earthlink.net www.asbi-assoc.org/news/conventions.cfm
20-23 May 2007 Dubrovnik, Croatia	<i>fib</i> Symposium: Concrete Structures: Stimulators of Development	<i>fib</i> group Croatia	www.igh.hr/fib-dubrovnik-2007 fib-dubrovnik-2007@igh.hr
16-18 July 2007 Patras, Greece	8th International Symposium on Fiber Reinforced Polymer Reinforcement for Concrete Structures	University of Patras	Prof. Thanasis Triantafyllou Dept. of Civil Engineering, University of Patras frprcs8@upatras.gr www.frprcs8.upatras.gr
4-7 September 2007 Stuttgart, Germany	Second Symposium on Connections between Steel and Concrete	University of Stuttgart	Symposium secretariat c/o IWB University of Stuttgart symposium@iwb.uni-stuttgart.de
18-21 May 2008 Amsterdam, The Netherlands	<i>fib</i> Symposium: Tailor Made Concrete Structures: New Solutions for Our Society	<i>fib</i> group Netherlands	www.fib2008amsterdam.nl dick@betonvereniging.nl
8-9 June 2009 (tentative) London, UK	<i>fib</i> Symposium: Concrete: 21st Century Superhero	<i>fib</i> group UK	The Concrete Society www.concrete.org.uk
29 May - 1 June 2010 Washington D.C., USA	<i>fib</i> Congress	<i>fib</i> group USA PCI	Precast/Prestressed Concrete Institute (PCI) info@pci.org www.pci.org

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