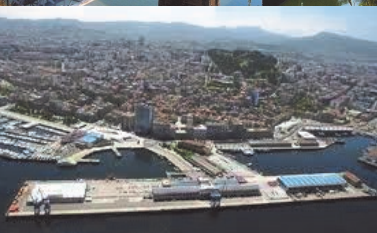


DURABLE TRANSPORT INFRASTRUCTURE IN THE ATLANTIC AREA

NETWORK

ACCESSIBILITY & TRANSPORTS
PROJECT 2008-1/049



DURATINET

NEWSLETTER

Nr 07

April 2012

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ATLANTIC AREA Transnational Programme
ESPACIO ATLÁNTICO Programa Transnacional
ESPACE ATLANTIQUE Programme Transnational
ESPAÇO ATLÂNTICO Programa Transnacional

Investing in our common future



European Union

European Regional
Development Fund

*This is the 7th edition of the **DURATINET Newsletter**. The format of the newsletter is mainly designed for on-line download (www.duratinet.org) and it reports on the dissemination activities and project progress achieved during the 6th and 7th semester (June 2011-May 2012) of the DURATINET project.*

The 6th Consortium Meeting and the 6th Trans-national Workshop took place in Nantes at 7th to 9th June 2011. The Meeting and the Workshop were organized by the University of Nantes with the collaboration of IFSTTAR Nantes for the communication and dissemination of project activities to the project partners and to stakeholders from Pays de la Loire.

UNIVERSITY OF NANTES

Founded in the XVth century, then closed for nearly 200 years, Université de Nantes reopened in 1962 and went on to become one of the top French universities. With its history and its dynamism, the University is ready to face the challenge of international competition. Today, Université de Nantes is one of France's top multidisciplinary universities. It is located in an attractive area boasting strong economic and demographic growth over the past two decades.

GeM Institute is a laboratory bond between Central school of Nantes, Nantes University, and CNRS (UMR 6183).

The Institute is composed of three divisions of research:

- Division "Porous materials, Interactions and structures"
- Division "Structures and couplings"
- Division "Materials and process"

The objective of the Institute is to build a scientific approach on the basis of the development and characterization of materials, including the processes, then their modelling by privileging the multi scale approach and confrontations to experiments. The laboratory counts 46 researchers, 54 PhD students and 23 technical staff.



Part of the studies undertaken in the laboratory deal with the durability of concrete and/or steel structures exposed to an aggressive environment (i.e. sea water which causes corrosion). The laboratory contributes to this project not only by its members but also by his equipment dedicated to work in the field of the durability of structures on Atlantic Coast.

IFSTTAR

The French Institute of Science and Technology for Transport, development and networks was founded on January 1st, from a merger of the INRETS Institute and the LCPC Laboratory. This new entity enjoys the status of a public scientific and technological institution and is overseen by France's ministry of ecology, sustainable development, transport and housing on one hand and the ministry of higher education and research on the other.

Recognised as a new reference organisation in the international arena, IFSTTAR conducts applied research and expert appraisals in the fields of transport, infrastructure, natural hazards and urban issues, with the aim of improving the living conditions of France's residents and, more broadly, promoting the sustainable development of our societies.

DURATINET TECHNICAL GUIDE “Maintenance and Repair of Transport Infrastructure”

The progress done by DURATINET Project during the 6th semester of project development was mainly concerned with the finalization of the Technical Guide (TG) and of the Technical reports concerning specific fields. The comments coming from the Editorial Commission which have the first meeting in May in Lisbon for preparing the first revision of the several volumes of the guide where introduced.

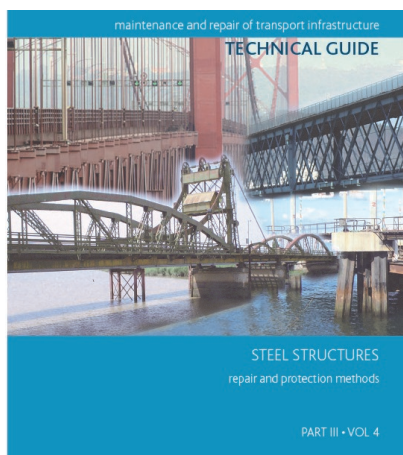
The main purpose of this Technical Guide is to provide a tool for the maintenance and repair of structures that is practical, user-friendly and accessible to all end-users involved in the maintenance of transport infrastructure. It will be a very important and useful project end product for the Administrations and enterprises working related with the maintenance of transport infrastructure.

The objective of maintenance and management strategy is to maintain or when necessary to restore the original integrity of structure or one of its elements and to mitigate the defects induced by the progress of deterioration. To prevent recurrence of deterioration processes after repair, the original cause of deterioration must be well identified and the repair technique adopted shall include a strategy to eliminate it. Of fundamental importance, therefore, is the correct diagnosis of the deterioration process, the identification of the specific causes of the deterioration and the selection of an appropriate repair technique.

The Technical Guide prepared inside the network reflects the harmonized knowledge and the general practices followed in this field in the Atlantic Area and contains the most relevant concepts for steel and reinforced concrete structures relating to:

- General methodologies for the management and assessment of structures
- Deterioration processes for structural steel and reinforced concrete and the main usual causes
- Testing techniques (destructive and non-destructive) applicable during routine or special inspections
- Repair methods and protection systems and their adequacy to the several deterioration causes

The Technical Guide was prepared in two versions: a version to be published as a hardcopy and an interactive web version for more easy and friendly access.



6th Trans-national Workshop

The 6th Trans-national Workshop was held on 7 June 2011 at Nantes University. The event was attended by 22 delegates.

The workshop programme was divided in two sessions.

Session 1 mainly concerned with the presentation of DURATINET project objectives, progress activities, results and end products under preparation by the project leader and other project partners.



Session 2 devoted to present the French experience on Maintenance and Repair of Transport Infrastructure. Two presentations were made:

- Les guides du CETMEF, N. Rouxel, CETE de l'Ouest
- Outils disponibles pour la maintenance par les risques des structures portuaires, Bruno Capra, Oxand

The workshop closed after a panel discussion between the invited speakers and all the participants.

6th Consortium meeting



The 6th Consortium Meeting was held in Nantes by invitation of University of Nantes with the collaboration of IFFSTAR on 8-9 June 2011. The meeting was attended by 24 consortium members .

Each of the Working Group leaders presented the progress achieved in semester 5 and the plan of activities for semester 6. Agreement on the progress achieved in relation to the overall project plan was

evaluated by the Steering Committee and the milestones for project deliverables under preparation were established. The Advisory Committee also meet and discuss several aspects related to the public project reports and TG.

7th Consortium meeting

The 7th Consortium Meeting was held in Lisbon by invitation of LNEC on 28-29 November 2011. The meeting was attended by 22 consortium members. During the meeting, after a discussion of the most important project management subjects, each Working Group leader presented the progress achieved and plan the dissemination activities for the project closure. Agreement on the progress achieved in relation to the overall project plan were also evaluated by the Steering Committee. The Advisory Committee discussed and present suggestions for a more efficiency on the next dissemination actions of the project. After internal discussion decisions where taken concerning the organization of DURATINET Course on testing techniques for structural inspection and the 7th and final Trans-national workshop for public presentation of Technical Guide and DB-Durati. Decisions were also taken concerning the organization of an International Conference sponsored by DURATINET project.

Technical Visit to IFFSTAR Laboratory

During the visit to IFFSTAR at Nantes we have the opportunity to see some laboratories and three biggest research equipments, the geotechnical centrifuge, fatigue testing bench and the pavement fatigue carrousel. The geotechnical centrifuge allows studying the behaviour of geotechnical structures, with a scale-reduction factor of the models equal to the centrifugal acceleration being applied, up to a maximum of 200 G.



Pavement fatigue carrousel is used to test new pavement structures and their maintenance and reinforcing techniques.

Fatigue testing bench allows conducting fatigue resistance tests on cables and anchorages of prestressed concrete bridges, cable-stayed or suspension bridges and offshore platforms.

Technical Visit to Port of Nantes



The attendants had the opportunity to have a technical visit to the most recent rehabilitation works on the Port of Nantes infrastructure.



Conviviality

After the Workshop and meeting, the partners and the invited workshop guests meet informally at a reception and a consortium dinner hosted by the University of Nantes.

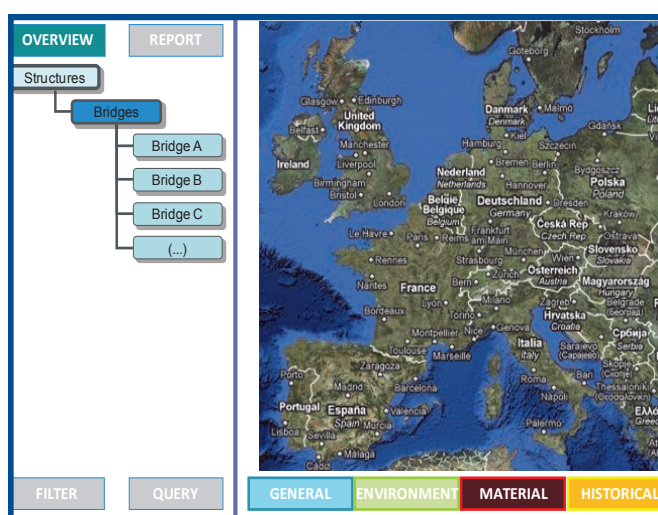


DB-DURATI Database

The database in construction by DURATINET collates and display reliable and useful data on the performance of structural and repair materials in transport infrastructures and other type of structures.

It also includes general information on the structures, environment characteristics and on the corrosivity classification, materials performance and durability materials parameters.

The materials performance datas will be useful for the benchmarking of structures service life models. Significant advances were done on the DB construction and data from several structures were already upload. The conclusion of the informatics structure of the DB will finish during semester 7.



DURATINET dissemination

Several presentations were prepared by DURATINET partners for dissemination of Project activities in national and international events organized by other institutions and in some of them a special DURATINET sessions was organized.

XII DBMC – 12th International Conference on Durability of Building Materials and Components, 12-15 April 2011, U. Porto

VI International Materials Symposium MATERIAIS 2011, 18-20 April de 2011, U. Minho, Guimarães

AUGC conference.. Tlemcen Algérie. May 2011

ASCP 2011, Coimbra, Junho 2011 (Special Session)

ICASP conference, Zurich, Switezland. Agust 2011

ACI 4th International Conference on Concrete Repair - Technical University of Dresden – Germany; 26-28th Sept. 2011

VIII Congresso de Construção Metálica e Mista, Vila Flor, Novembro 2011

Course on “Testing techniques for structures inspection”

In accordance to the project plan, a specialised course on testing techniques for structures inspection mainly for steel and concrete structures to support the diagnostic of the condition of structures, was designed during the partners meeting in Lisbon and the general programme defined. The programme includes the fundamentals of mechanical, acoustic, electrical and magnetic methods of NDT in-situ tests and specific DT lab tests, as well as their applicability to the evaluation of the different deterioration processes followed by practical demonstrations on their execution.

Final DURATINET Trans-National Workshop

The main lines of the general programme for the final trans-national workshop were defined during the Lisbon meeting. The aim of this workshop should be to present the results of DURATINET work, namely the Technical Guide, the technical reports and the Database DB-DURATI, to the end-users and to discuss the future of this network.

Invitations to Administrations responsible by the management of main transport infrastructures will be done for a discussion about the interest on the continuity of the network and the ways to maintain it.

ICDS 12

LNEC, Lisbon

The main topics for the organization of the International conference “Durable Structures. From construction to rehabilitation” were also discussed during the Lisbon meeting.

Next Project Meetings

Course on “Testing techniques for structures inspection”

29th and 30th May 2012

8th Trans-national Workshop & 8th Partners Meeting

30th May 2012

International Conference ICDS 12

31st May and 1st June 2012

LNEC, Lisbon, Portugal

<http://durablestructures2012.lnec.pt/>

Next Issue

Final DURATINET report

May 2012

More information on DURATINET can be obtained from the website

www.duratinet.org

Project secretariat email: duratinet@lnec.pt

PROJECT PARTNERS

PORTUGAL

Laboratório Nacional de Engenharia Civil, I.P.
(LNEC)

msalta@lnec.pt

Estradas de Portugal, SA (EP)

afonso.povoa@estradasdeportugal.pt

REFER, E.P.

lamendes@refer.pt

BEL – Engenharia e Reabilitação de Estruturas,
S.A.

rd@bel.pt

Administração do Porto de Lisboa (APL)

a.martins@portodelisboa.pt

Fundo para o Desenvolvimento das Ciências da
Construção

jmimoso@lnec.pt

FRANCE

Laboratoire Central de Ponts et Chaussées
(LCPC)

xavier.derobert@lcpc.fr

Université de Bordeaux

s.votte@ghymac.u-bordeaux1.fr

Université de Nantes

stephanie.bonnet@univ-nantes.fr

Université de La Rochelle

karim.ait-mokhtar@univ-lr.fr

Conseil General de la Charente-Maritime (CG-17)

anne.audouin-dubreuil@cg17.fr

IRELAND

Dublin University- Trinity College (TCD)

alan.oconnor@tcd.ie

National Roads Authority (NRA)

adaly@nra.ie

SPAIN

Universidade de Vigo (UV)

movoa@uvigo.es

Porto de Vigo

acoucheiro@apvigo.es

Xunta da Galiza

jose.ramon.pacheco.sancho@xunta.es

UNITED KINGDOM

Queen's University Belfast (QUB)

m.basheer@qub.ac.uk



EDITOR:
LNEC

Design: Helder David — LNEC



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