



Jicable and WETS Presentation

Lucien Deschamps

Chairman of the Organization Committee, Jicable



[http : // www.jicable.org](http://www.jicable.org)





Summary

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- 2 – Origin and Objectives of Jicable,
- 3 – Who attends Jicable ?
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Introduction: What is Jicable ?

Jicable = Journées Internationales du Câble

Jicable is an international forum for the exchange of information in the fields of :

- . Research
- . Industrial development
- . Installation
- . Operation and diagnostic

Relating to :

- . Insulated AC & DC power cables and their accessories

From :

- . Low voltage and special cables

Up to :

- . Extra high voltage cables
- . Cables of new technologies

Origin of Jicable, why Jicable? (1)

Since the 60s, the prospects offered by polymeric materials quickly became very attractive for power cables: no fluid in the insulation and therefore possible simplification of cables, low maintenance, cost reduction, ... **Important new issues were nevertheless raised by the development of polymeric cables:**

- Choice of materials taking into account nominal or exceptional stresses for AC and DC cables.
- Influence of water on the durability of the insulation.
- Ageing of materials.
- Development of materials with specific behaviours: fire resistance, radiation resistance, ...

Origin of Jicable, why Jicable? (2)

Jicable was created in 1982 during the beginning of great development in the world of high-voltage cables with extruded synthetic insulation to allow better technical exchanges between experts in the field.

The first conference was organized in 1984: Jicable'84



Jicable 84

Today, Jicable covers all insulating materials and not only cables with polymeric insulation

Jicable Partners: SEE, CIGRÉ, SYCABEL, RTE, ERDF & SERCE





Objectives of the conference Jicable

Create a unique framework of broadened exchanges, **complementary** to other “rendez vous”, dealing with all the problems of polymer insulated cables

Ensure broad **cooperation among all partners** concerned: especially with the **CIGRÉ** but also with the CIRED, IEEE EASIEAP, UPDEA,

Propose **scientific and technical high-level program** that meets the challenges of the main topical problems in the field





Who attends Jicable

Jicable is useful to any segment of the cable industry :

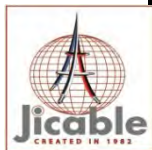
- Researchers
- Engineers
- Decision-makers & Purchasers
- Raw material suppliers
- Cable manufacturers
- Installers
- Electric utilities





Jicable conferences: The highlights

- . **Technical sessions** (42 sessions in 2011)
- . *Tutorials*
- . *Invited lectures*
- . *Closing round table*
- . *Audiovisual technical program*
- . *Jicable Awards*
- . *Young researchers contest*
- . **Technical exhibition**
- . **Technical visits**
- . **Reception with dinner**
- . **Workshops** (WETS'11 and WETS D'11 in 2011)





Jicable conferences: Technical topics for AC & DC

- Materials
- Design
- Testing methods
- Ageing, diagnostic, maintenance, remaining life evaluation
- Cables and the environment
- Economics of cable systems
- LV, MV, HV & EHV cable systems
- Submarine cables
- Cables for the future
- Industrial & special cables



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Jicable was created in 1982
The first eight conferences Jicable were:





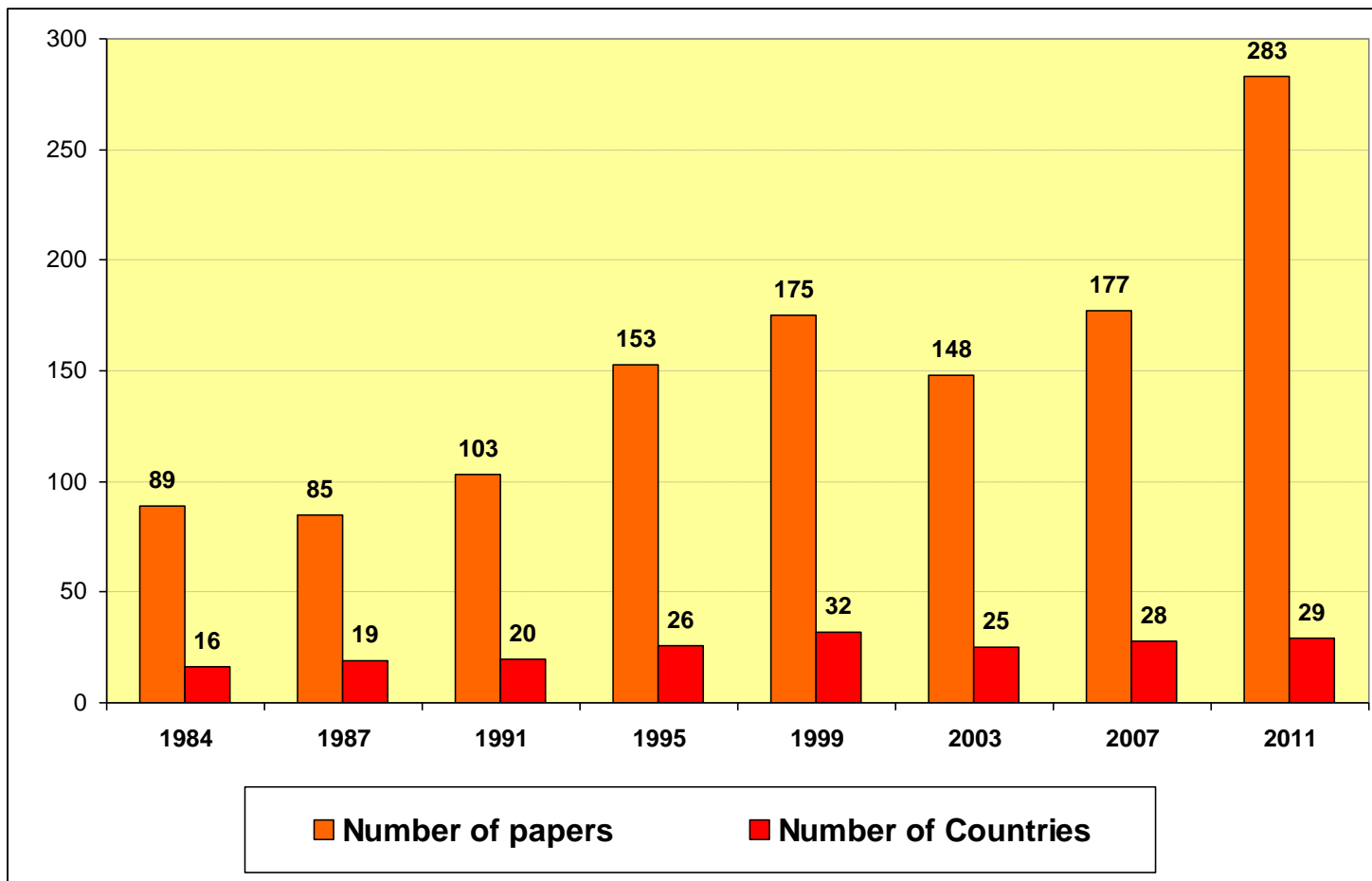
Some statistics regarding the first eight conferences Jicable



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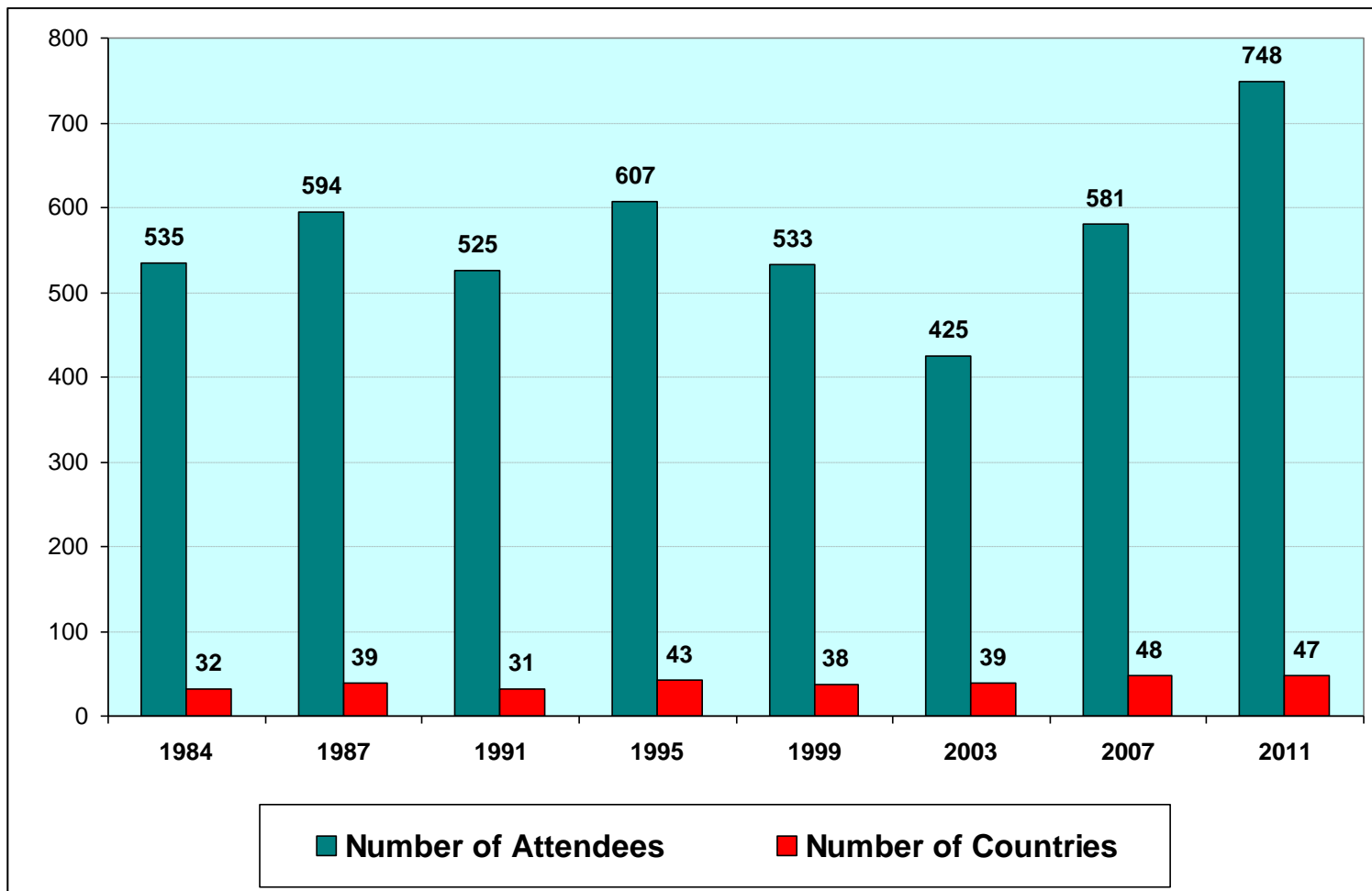
Number of papers, Number of countries of authors



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Attendees

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The latest conference Jicable Jicable'11



Versailles, France, 19 – 23 June 2011





Jicable'11

International Scientific and Technical Committee
58 experts from 26 countries

Chairman :

Ray AWAD, Hydro Québec TransÉnergie, Canada

Vice-Chairmen :

Pierre ARGAUT, CIGRE B1, Silec Cable, France

Kenneth BARBER, Nexans Asia Pacific , Australia

Mozart de SIQUEIRA, Brennand Energia, Brazil

Marcello Del BRENNA, Prysmian Powerlink Srl, Italy

Abdenour KERAMANE, MedEnergie, Algeria

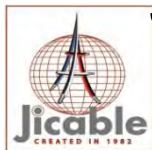
Paul PENSERINI, RTE, France

Susumu SAKUMA, VISCAS, Japan

John T. SMITH III, General Cable Corporation, USA

Secretary :

Jean BECKER, Nexans / Sart Consult, Belgique





Jicable'11: Number of papers

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TOPICS	Jicable 03	Jicable 07	Jicable 11
Materials and ageing	43	32	74
HV – EHV & cables for the future	33	36	44
Testing and Diagnostics	15	37	43
Design and Modelling	21	22	30
HV DC and submarine	12	12	29
LV – MV	6	16	22
Special & Environment	11	13	21
Installation	6	5	11
Economics		5	6
Total	147	177	280

Jicable'11

Program prepared by ISTC meeting chaired by

Ray AWAD, Paris, 13th december, 2010

- 280 papers from 28 countries
- **Opening session** : *Invited lecture – Future of energy in China.*
- **35 oral sessions (210 papers)**
- **5 poster sessions (70 papers)**
- **Closing session** : *Round table on DC links in the world*



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Jicable'11, ISTC Meeting

Meeting chaired by Ray AWAD, Paris, 13th december, 2010

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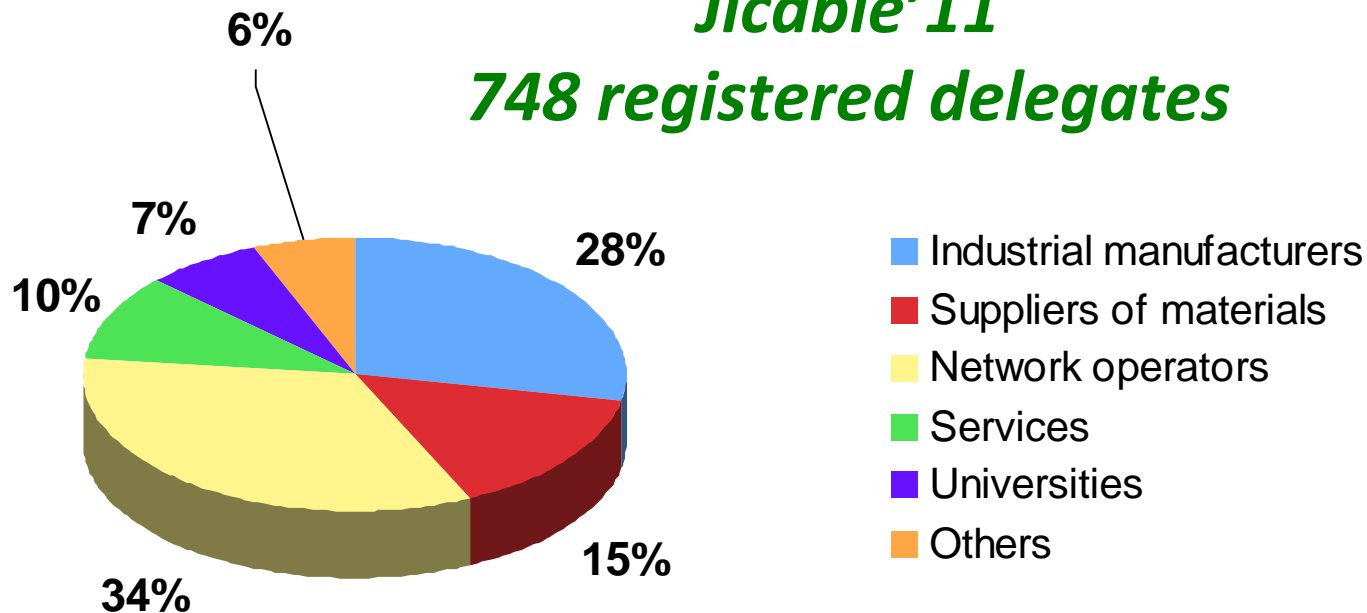


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Jicable'11

748 registered delegates



The 748 Jicable'11 registered delegates were as follows :

Industrial manufacturers and installers : 28 %

Suppliers of materials : 15 %

Network operators : 34 %

Services : Testing Laboratories, ... : 10 %

Universities : 7 %

Others : various agencies, consultants, ... 6 %



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Jicable'11: 748 registered delegates

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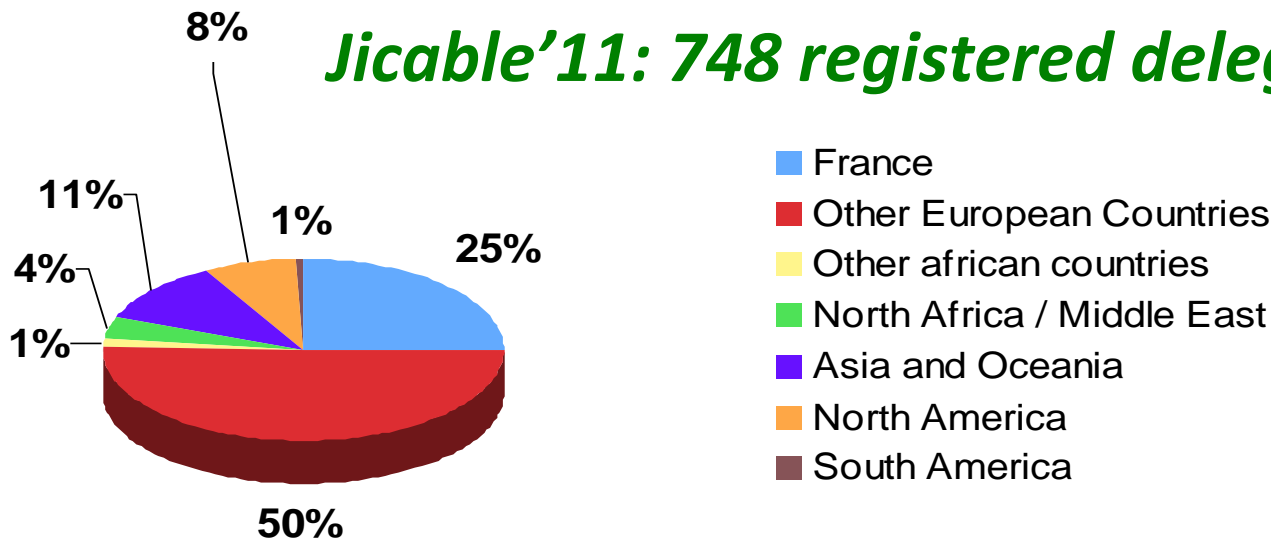




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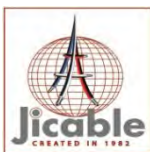
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Jicable'11: 748 registered delegates



The 748 Jicable' 11 registered delegates were as follows :

- **France : 186**
- **Other European Countries : 380** (Austria, Belgium, Croatia, Denmark, Finland, Germany, Great Britain, Greece, Hungary, Iceland, Ireland, Italy, Monaco, Netherlands, Norway, Poland, Portugal, Rep. Czech, Romania, Russia, Scotland, Spain, Sweden, Switzerland)
- **Asia / Oceania : 82** (Australia, China, Hong-Kong, Indonesia, Japan, Korea, New Zealand, Singapour)
- **North America : 57** (Canada, Mexico and USA)
- **North Africa / Middle East : 30** (Iran, Israel, Oman, Saudi Arabia, Turkey, UAE)
- **Other African Countries : 9** (Cameroun, Senegal, South Africa)
- **South America : 4** (Brazil, Chile)





Jicable'11, other events

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- **4 Tutorials**
 - . Towards an underground distribution network
 - . Accessories for HV cables
 - . Electrical modelling of underground links
 - . Service experience of HV underground and submarine cables
- **4 Technical visits,**
 - . EDF testing laboratories
 - . Installation of a long length MV cable
 - . HV substation and its underground installation
 - . National laboratory of metrology and testing
- **Technical exhibition:** 28 exhibitors, 395 M²
- **2 Workshops WETS (*World Energy Transmission System*)**
 - . WETS'11: Long length HV links by AC and DC cables
 - . WETS D'11: Renewal of cable distribution networks





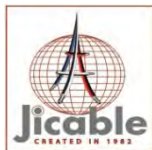
Workshops, *created in 1984*

The objective of the workshops is to examine and to explore with experts specialized topical issues.

These workshops were principally organized in coordination with the Jicable conferences.

To date, 11 workshops were held, each workshop was attended by 30 to 80 specialists from more than a dozen of countries.

Experts of the workshops are invited.





Workshops

- 1984 Clamart France, HT 84 : Polymer insulated cables at high temperature
- 1987 Clamart France, F 87: Fire behaviour
- 1987 Clamart France, HT 87: High electric fields
- 1989 St Petersburg USA, Cable'89: Ageing
- 1991 Clamart France, A 91: Ageing
- 1992 Nusa Dua Indonesia, CT 92: Tropical environment
- 2003 Meudon France, WETS'03: Technologies for a future world energy transmission system.
- 2005 Forum internet, WETS'05 RP: Long length AC, reactive power
- 2007 La Défense France, WETS'07: Long length AC links (> 10 kms)
- 2011 Versailles France, WETS'11: Long length AC an DC links
- 2011 Versailles France, WETS D'11: Renewal of cable distribution networks



The two latest workshops

Versailles, France, June 23th 2011

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2011 Workshop WETS'11 Jicable / Prospective 2100	Long length high voltage electrical links by AC and DC insulated power cables	59 experts from 14 countries	VERSAILLES Palais des Congrès
2011 Workshop WETS D'11 Jicable / Prospective 2100	Renewal of cable distribution networks	23 experts from 11 countries	VERSAILLES Palais des Congrès



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The two latest workshops

Versailles, France, June 23th 2011

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Jicable: Next events

Jicable HVDC'13: European Seminar on materials for HVDC cables and accessories: Performance, Modelling, Testing, Qualification.

Perpignan, France, November 18th – 20th, 2013

Jicable'15: 9th International Conference on Insulated Power Cables

Paris-Versailles (tbc), June 21st – 25th, 2015

Workshops WETS'15 and WETS D'15: Topics under study
Paris-Versailles (tbc), June 25th, 2015



Jicable HVDC'13

*European Seminar on materials for HVDC cables and accessories:
Performance, Modelling, Testing, Qualification.*



[http:// Jicable-hvdc13.fr](http://Jicable-hvdc13.fr)

Perpignan, France, 18 – 20 November, 2013

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Jicable HVDC'13

The objective of the seminar ***Jicable HVDC'13*** is to present state of knowledge on the behaviour of materials for HVDC cables and accessories.

It will first address the physical behaviour, physic-chemical and electrical properties of these materials: dielectric, space charges, interfaces, ageing, reliability,

It will then discuss the results of modelling studies and the relationship between modelling and behaviour of materials to clarify the role of tests: investigation, qualification, reception, control in operation,

Finally, the seminar will show how the scientific and technical information and results are taken into account by the system operators to demonstrate and evaluate the equipment over time.

The next Jicable conference
Jicable'15

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Paris – Versailles, France, 21 - 25 June 2015





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The Next Jicable Conference **Jicable'15**

***9th International Conference & exhibition
on Insulated Power Cables***

Paris – Versailles, France, 21 - 25 June, 2015

Deadlines :

Submission of abstracts : 15 November, 2014

Submission of full texts : 15 April, 2015

<http://www.jicable.org>

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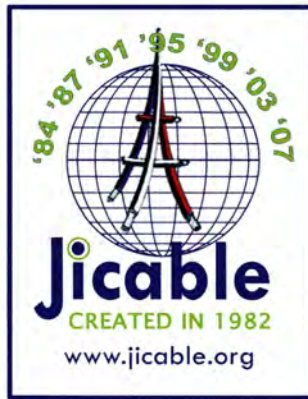


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Publications: DVD available

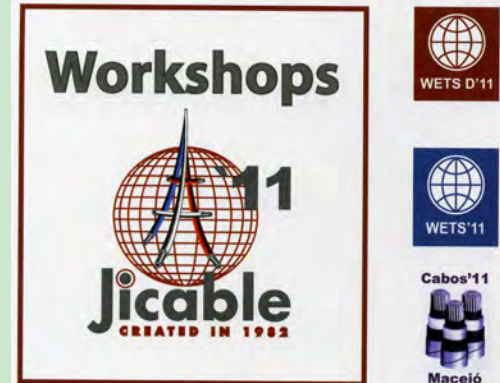
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The Jicable's Archives from 1984 to 2007



"Jicable" The leading forum about Insulated Power Cables

The Jicable'11 Workshops



23 June / juin 2011 - Versailles - FRANCE
8-10 November / novembre 2011 - Maceió - BRAZIL

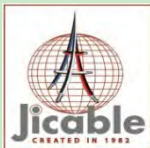
Les ateliers de Jicable'11

8th International Conference on Insulated Power Cables



19-23 June / juin 2011 - VERSAILLES - FRANCE

8^{ème} Conférence Internationale sur les Câbles d'Énergie Isolés



Today's Jicable/WETS session

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The objective of this workshop session, proposed by Jicable, is to present prospects, achievements and experiences in service of transmission and distribution links by insulated power cables.

The presentations are based on the work of the latest Jicable'11 conference as well as the results of the latest two workshops WETS'11 and WETS D'11.

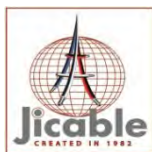


Today's Jicable/WETS session

This session was prepared by a mission in Brazil at the main organizations concerned: Ministry of Mines and Energy, ANEEL, EPE, ONS, Systems Operators and CIGRÉ BNC.

This mission was coordinated by **Mr. Mozart Siqueira Campos Araújo**, Brennand Energia and **Ms. Vera Dubeux Torres**, Professor UFAL, Alagoas.

We thank CIGRÉ for the coordination achieved with the meeting of CIGRÉ Committee B1



Today's Jicable/WETS session (1)

Four Jicable / WETS presentations in this session are:

1) "Achievement and experience in service of long length (> 10 km), high voltage **AC** electrical links by insulated power cables"

by Kenneth Barber, Nexans, Australia

2) "Achievement and experience in service of long length (> 10 km), high voltage **DC** electrical links by insulated power cables"

by Marco Marelli, Prysmian Italy



Today's Jicable/WETS session

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3) “Beyond the simple matter of asset management...”
by Frédéric Lesur, RTE, France

4) “Electricity Distribution and Underground Networks »
by Alain Doulet, Consultant, France



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Thank you

deschamps@2100.org

<http://www.jicable.org>

