

IEC ACOS 10th Workshop

Safety aspects in the area of E-mobility

Frankfurt, Germany, 20 and 21 February 2013

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Information on meeting place and Hotel accommodation

The Workshop will be held at:

Maritim Hotel Frankfurt
Theodor-Heuss-Allee 3
60486 Frankfurt
Germany

P +49 69 75 78-0
F +49 69 75 78-10 00
e-mail: info.fra@maritim.de
www.maritim.de



The Hotel is located centrally at the trade fair, just a few paces from the Festhalle and the Trade Fair Tower. It is easily reached by public transportation.

A block reservation has been made at the Hotel Maritim from 19 to 22 February 2013 at the following prices:

Single room:	197,00 €
Double room:	255,00 €

The prices are incl. taxes and breakfast buffet

Delegates are requested to make the reservation directly with the Hotel by e-mail or fax with the keyword: **ACOS Workshop** using the annexed hotel accommodation form. Hotel accommodation can only be guaranteed for reservations made **before 22nd January 2013**.



Information on the Workshop

The Workshop is organized by ACOS (the Advisory Committee on Safety of the IEC) and hosted by the German National Committee of the IEC.

The Workshop will be of interest to:

- International, regional and national regulators
- Standards developers and users of IEC safety standards
- Manufacturers of electrical and electronic equipment
- Test laboratories
- Certification bodies

A Workshop participation fee of 250,00 € will be charged. This fee will include information folder, two lunch breaks and a flying buffet.

Delegates are requested to register through the following link electronically, not later than 8 February 2013:

www.ACOS-workshop-2013.de

ACOS members and **speakers** please register separately with Ms. Melanie Feuerriegel (melanie.feuerriegel@vde.com)

For further information on the Workshop contents, please contact:

ACOS Chairman

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cj@iec.ch

For organizational questions, please contact:

Ms Melanie Feuerriegel
DKE - German National Committee of the
IEC
Stresemannallee 15
60596 Frankfurt am Main
Germany

P +49 69 63 08-363
F +49 69 63 08-363
melanie.feuerriegel@vde.com

Presentation of the Workshop

One of the large global challenges during the coming years will be to establish environmental friendly possibilities of mobility for persons and goods. This IEC workshop will deal with “Safety aspects in the area of e-mobility” particularly dealing with aspects related to all kinds of electric motor cars. The workshop was prepared in cooperation with IEC SMB Strategic Group 6 (SG 6) “Electrotechnology for mobility”

Over all the past years the system “car” and the systems “electrical products” and “electrical installations” have been in cooperative coexistence. But now with the upcoming importance” of e-mobility these systems grow together to a new system “e-mobility.

Besides the technical challenges there are also regulatory difficulties for manufacturers of cars and electrotechnical products to overcome. Whereas cars have traditionally to comply with the UN ECE rules electrical equipment has to comply with European Directives (e.g. Low Voltage Directive and EMC Directive in the EU), the US legislation (e.g. the NEC), many GB standards mandatory under Chinese legislation etc. How do legislators guarantee that all these requirements in different legislations lead to a similar level of safety everywhere? As this cannot be expected by regulation the international standardization bodies IEC and ISO will have to take over a major role in this context by setting up a well coordinated and consistent file of standards. A major step forward has been made by the MoU signed by IEC and ISO in 2010.

If real progress of environmental friendly driving is regarded as a further goal in e-mobility activities the electrical energy must not be produced by CO₂ emitting methods. Using renewable sources of energy production (e.g. wind, photovoltaic, thermal solar power, fuel cells) will provide new challenges for the stability of the grid with a decentralized energy feeding and an intelligent control. These kinds of aspects will become without any doubt a major field of activities in IEC not only in the area of e-mobility. Besides aspects of functionality of smart grids there arise new safety challenges in this area which require many new or modified and redesigned protective measures.

The charging stations (wall boxes) build the interface from the grid to the e-vehicle. The different charging modes require close cooperation between standardizers responsible for the e-vehicles on the one side and those on the side of the grid, especially in respect to consistent and complementary safety requirements. The level of protection for the user must be equivalent on both sides. Furthermore a cross-check is required so that the level of protection for a driver of an e-vehicle is comparable to that of a user of household equipment or of an operator of a machine.

The IEC provides a number of so called basic safety and group safety standards which are mandatory for product standardizers within IEC. Such standards deal e.g. with aspects of protection against electric shock, insulation coordination or insulation materials which should be applicable without any difficulties also within electric vehicles. The coordination of these horizontal safety and group safety standards within IEC is provided by the Advisory Committee on Safety (ACOS).

The success of e-vehicles on the market will without any doubt depend on the progress in the development of suitable batteries and their early availability. This depends on the storage capacity and lifetime on the one side as well as on the level of safety on the other side, including fire hazards. Having in mind the quantity of energy comparable to that what we have today in liquid fuel tanks this will be a real challenge for the designers of batteries as well as for the designers of e-vehicles to find right and safe ways to integrate these batteries in the vehicle.

In the light of these safety related challenges in the area of e-mobility the program for the 10th ACOS Workshop will cover the following items:

- a brief overview of the IEC and the role of ACOS;
- the offer of the IEC in the area of basic safety and group safety electrotechnical standards applicable also for e-mobility
- already existing activities related to e-mobility
 - inside (primarily ISO responsibility) and
 - outside the e-vehicle (primarily IEC responsibility)
- the cooperation with ISO in the field of e-mobility
- to underline the possible ways to fulfill the requirements presented on the first day, the workshop will be dealing with specific subjects.
- practical applications of IEC and/or ISO safety standards for
 - electrical safety aspects inside e-cars
 - functional safety in relation to e-vehicles
 - safety aspects related to an e-vehicle connected to the grid

The format of the ACOS Workshop will also ensure enough opportunities for discussions during the meeting sessions.

Programme

DAY 1		
09.00 – 09.15	Welcome	German NC of IEC
Session 1 International Standardization, IEC ACOS and Conformity Assessment		F. Harless
09.15 – 09.25	Purpose of the Workshop	F. Harless
09.25 – 09.45	The IEC and Advisory Committee on Safety (ACOS)	Ch. Jacquemart
09.45 – 10.15	Possible Service of CAB/IECEE in the area of e-mobility	CAB/IECEE repr. Pierre de Ruvo
10.15 – 10.30	Questions and discussion	
10.30 – 10.45	Coffee break	
Session 2 Safety related e-mobility standardization activities in IEC		SG6 Chairman Claude Ricaud
10.45 – 11.15	Relevant IEC Basic Safety and Group Safety standards, e.g. <ul style="list-style-type: none"> - Protection against electric shock - Insulation requirements - Functional safety - Electromagnetic fields 	ACOS Chairman elect (Philippe Juhel)
11.15 – 12.00	Work program IEC/TC 69 “Electric road vehicles and electric industrial trucks” including safety related aspects of .d.c. charging systems for e-vehicles	Representative of IEC TC 69 Mr van den Bossche
12.00 – 12.30	Safety of batteries (incl. fire hazards)	Dr. Goldbeck, VDE Testing and Certification Institute
12.30 – 13.30	Lunch	
13.30 – 14.00	Presentation from CEEIA (China) representative: “Safety requirements and inspection methods for e-mobility charging equipment”	Lu Yao
14.00 – 15.30	Relevant IEC product standards outside e-vehicles Installation rules incl. smart grid and smart metering (TC 64, TC 57, PC 118)	Holger Krings Member of TC57/WG17
15.30 – 16.00	Coffee Break	
16.00 – 16.10	IEC President’s address to the Workshop	IEC President Dr. Klaus Wucherer
16.10 – 17.10	Present work program and future projects of ISO TC 22 related to electrotechnical aspects in e-cars	Representative of ISO TC 22/SC 21 Dr. Wunderlich
17.10 – 17.25	Discussion of session 2	Session 2 Leader
17.25 – 17.40	Arrangements for breakout sessions on 2 nd day	F. Harless

DAY 2		
9.00 – 9.10	Welcome	F. Harless
9.10 – 9.20	Session 3.1	P. Juhel
9.20 – 9.50	Electrical safety aspects inside e-cars	V. Rothe
9.50 – 10.20	Discussion (taking place in the lobby)	
10.20 – 10.50	Coffee break	
10.50 – 11.00	Session 3.2	R. Schultz
11.00 – 12.00	Functional safety in relation with e-vehicles, presentation of core elements of IEC 61508 and ISO 26262 each 30 minutes	R. Bell N. Becker
12.00 – 12.30	Discussion	
12.30 – 13.30	Lunch	
13.30 – 13.40	Session 3.3	G. Luber
13.40 – 14.40	Safety aspects related to an e-vehicle connected to the grid including safety related aspects of d.c. charging	
	Presentation from IEC/TC 23	C.D. Ziebell
	Presentation from IEC/TC 64	E. Tison
	Presentation from IEC/TC 69	P. van den Bossche
14.40 – 15.10	Coffee break	
15.10 – 15.40	Presentation from ISO/TC 22/SC21	Dr. Wunderlich
15.40 – 16.10	Discussion (taking place in the lobby)	
16.10 – 16.30	Closing remarks	ACOS Chairman elect
16.30	Refreshments	

Presentation of e-cars with possibility for driving experience !



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2. DATE AND PLACE OF 10th ACOS WORKSHOP

Maritim Hotel Frankfurt
Theodor-Heuss-Allee 3
60486 Frankfurt
Germany

P +49 69 75 78-0
F +49 69 75 78-10 00
info.fra@maritim.de
www.maritim.de

3. REGISTRATION

How to register

Please use the following link to register electronically not later
than **21 January 2013**:

www.ACOS-workshop-2013.de

ACOS members and **speakers** please register separately with
Ms. Melanie Feuerriegel (melanie.feuerriegel@vde.com).

4. REGISTRATION FEE

A Workshop **registration fee of 250,00 €** will be charged. The payment of the registration fee will be handled also through the registration link.

The registration fee includes information folder, two lunch breaks, a gift and flying buffet on Wednesday, 20th February 2013.

Further details will be available from the ACOS Workshop X registration/information desk upon arrival.

PAYMENTS, CANCELLATIONS AND REFUNDS

You will be **charged with 30,00 €** if you cancel your registration 4 weeks before the Workshop. For cancellations after the **21 January 2013** you will be charged with 100% so that there will be no refund.

No liability is assumed by the organizers for changes in Workshop dates, contents, speakers or venue.

5. ACCOMMODATION

A block reservation from 19 to 22 February 2013 has been made at:

Maritim Hotel Frankfurt (meeting hotel) Theodor-Heuss-Allee 3 60486 Frankfurt Germany	P +49 69 75 78-0 F +49 69 75 78-10 00 info.fra@maritim.de www.maritim.de
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Special Hotel rates:	single room:	197,00 €
	double room:	255,00 €

The prices are incl. taxes and breakfast buffet.

Delegates are requested to make the reservation **directly** with the Hotel by e-mail or fax with the keyword: **ACOS Workshop**. Hotel accommodation can only be guaranteed for reservations made **before 22nd January 2013**.

At the following Hotels block reservations from 19 to 22 February 2013 have been made:

Hotel Savoy Wiesenhüttenstr 42 60329 Frankfurt Germany	P +49 69 27 396-248/-249 F +49 69 27 396-422/-795 info@savoyhotel.de www.savoyhotel.de
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Special Hotel rate:	single room:	99,00 €
	double room:	124,00 €

The prices are incl. taxes and breakfast buffet.

Delegates are requested to make the reservation **directly** with the Hotel by e-mail or fax with the keyword: **ACOS Workshop**. Hotel accommodation can only be guaranteed for reservations made **before 22nd January 2013**.

Ibis Hotel Frankfurt Centrum Speicherstrasse 4 60327 Frankfurt Germany	P +49 69 27 303-0 F +49 69 27 303 300 h1445@accor.com www.ibishotel.com
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Hotel rate:	single room:	89,00 €
	double room:	99,00 €

The prices are incl. taxes and breakfast buffet.

Delegates are requested to make the reservation **directly** with the Hotel by e-mail or fax with the keyword: **ACOS Workshop**. Hotel accommodation can only be guaranteed for reservations made **before 22nd January 2013**.



Holiday Inn Express
 Frankfurt City – Hauptbahnhof
 Elbestrasse 7
 60329 Frankfurt
 Germany

P +49 69 8700 3883
 F +49 69 8700 3888
Frankfurt@fmhos.com
www.hiexpress.com

Hotel rate: single room: 129,00 €
 double room: 129,00 €

The prices are incl. taxes and breakfast buffet.

Delegates are requested to make the reservation **directly** with the Hotel by e-mail or fax with the keyword: **ACOS Workshop**. Hotel accommodation can only be guaranteed for reservations made **before 04th January 2013**.

Delegates will personally be responsible for all financial obligations arising from reservations made on their behalf.

6. ORGANIZATION

Reception

The 10th ACOS Workshop registration/information desk at Maritim Hotel will be open at the following hours:

Tuesday, 19 February 2013 from 5 pm until 7 pm
 Wednesday, 20 February 2013 from 7.30 am until 12 pm

Badges

Delegates and accompanying persons will receive a badge showing their name and country represented.

All participants are requested to wear their badge throughout the 10th ACOS Workshop.

7. SOCIAL EVENT – 20 February 2013 at 7.30 pm

Delegates and accompanying persons who have registered are invited for a flying buffet offered by the German National Committee on Wednesday, 20 February 2013 at the Lobby of the Maritim Hotel at 7.30 p.m.

8. GENERAL INFORMATION

BUSINESS HOURS

	<i>Weekdays</i>	<i>Saturdays</i>	<i>Sundays</i>
Banks	09:00/09:30-16:00/18:00	closed	closed
Post office	08:00/8:30-18:00	08:00/08:30-12.00	closed
Major shops	08:00/10:00-18:00/20:00	08:00/10:00-16:00/20:00	closed
Public offices	10:00-15:00	closed	closed

ELECTRICITY SUPPLY



Voltage in Germany is 230 V at 50 Hz. Germany uses 16 amp round pin plugs and sockets, and most visitors using laptops will require adaptors. Adaptors may also be purchased either at Frankfurt airport shop on arrival, or in shopping centres.

FIRST AID

All Hotels provide fast emergency aid. In case of emergency, dial 112 (this number is free of charge and accessible all over Germany) or contact the reception of the hotel.

INSURANCE

The German National Committee cannot accept any responsibility for accidents, losses, and/or damages which may occur. Participants are advised to obtain travel, medical, personal accident and luggage insurance in their home country prior to departure.

PASSPORT, VISA AND VACCINATION

All visitors from non EU countries need a valid passport to enter Germany. Details of regulations related to all countries are available from all German embassies.

Participants are advised to check their local travel agency about regulations regarding passport, visa and vaccination and, particularly, the length of notice required for obtaining a visa, if required. In case of doubt, information can be obtained from the nearest German embassy, consulate or diplomatic mission. (<http://www.auswaertiges-amt.de>)

If needed, the German National Committee will send an official invitation to delegates. Please contact Ms Melanie Feuerriegel (melanie.feuerriegel@vde.com) for that purpose.

No special vaccination to enter Germany is required. Nevertheless, vaccination against tetanus and diphtheria is recommended.



SHOPPING

For shoppers, Frankfurt is a real 'el dorado' with its many shopping streets and centres. In addition to the famous shopping mile, 'Zeil', in the city centre, cosy or even exclusive shopping districts invite you to shop. For more information have a look at the following link: [explore Frankfurt](#)

TAXES

Value added tax (VAT) at 19 % is levied in Germany on most goods and is included in the price.

TIPPING

Tipping should be at your own discretion and for good service only. As a guide, add 5 % to a restaurant bill.

9. TOURIST INFORMATION/PUBLIC TRANSPORT

Frankfurt has a lot to offer, please have a look at the following link: [Frankfurt.de](#)

Frankfurt has a fully developed network of local transport. The extended system of U and S-Bahn lines, buses and trams will take you easily, safely and cheaply to any sight or attraction.

For further information, please refer to the following link: [Frankfurt - Public transport](#)

10. YOUR WAY TO MARITIM HOTEL

Arrival from Frankfurt Airport

From the Airport, please take from the train station at the Airport "Frankfurt (Main) Flughafen Regionalbahnhof" the S-Bahn line number "S8" heading "Hanau Hauptbahnhof" and get off at station "Frankfurt Hauptbahnhof". From there on take tram line number 16 direction "Ginnheim" or tram number 17 direction "Rebstockbad" and get off at stop "Ludwig-Erhard-Anlage". From there on it is 3 min. walking distance to Maritim Hotel in Theodor-Heuss-Allee 3.

Arrival from Frankfurt Hauptbahnhof

From "Frankfurt Hauptbahnhof", please take tram line number 16 direction "Ginnheim" or tram number 17 direction "Rebstockbad" and get off at stop "Ludwig-Erhard-Anlage". From there on it is 3 min. walking distance to Maritim Hotel in Theodor-Heuss-Allee 3.

As the suggested Hotels where block reservations have been made, are near the Central railway station (Hauptbahnhof), please follow the description from Frankfurt Hauptbahnhof to get to the Hotel Maritim.