香港電器工程商會
Hong Kong Electrical Contractors' Association
會員通訊
Newsletter
Sep - Dec 2016
二零一六年九月至十二月

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HKECA Newsletter Sep - Dec 2016
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Methods of Testing for Electrical Cables

Mr. Grant Leslie
Technical / Quality Manager, IDH Cables Limited

In order to control and quality assure manufacture of any electrical cable products stringent quality management systems that document process control and product test regimes based on product application are required.

The nature of product testing required is dictated by product application. The data generated as a result of following these documented test and process control procedures is fully traceable and can be accurately linked to raw materials and process equipment.

Both external and internal product evaluation is required during design and product manufacture during which product is subjected to internationally recognised test procedures that verify product performance with regard to physical properties,fire performance and in service performance requirements.

Testing can take the form of

1. Routine in process testing
2. Type testing

Type testing is used typically during the design and development stages of manufacture to verify that individual cable components and their combination in the final design perform adequately. As the name suggests routine in process testing is used to control and verify product quality during commercial manufacture.

When applied to single core fire resistant cables as approved under the standards BS6387 & BS8592 such tests are used to assess the performance of the conductor resistance and quality, cable insulation physical properties and resistance to accelerated ageing and fire performance including flame propagation, resistance to fire and compliance with combustion gas and smoke release.

Sample Selection

Sampling of product during the design and manufacturing stages are important considerations. They must be representative and testing must yield relevant and accurate data.

In the case of single core fire resistant cable, product samples will be taken either from trial batches or if commercialised from typical batch production following a product size or construction change.

A typical sampling plan would involve selecting a representative portion of cable (5m) at the start and midpoint of a production campaign. Colour of the product would likely change but the samples taken would be representative of the start-up and steady state phase of the manufacturing process. These samples would then typically be set aside and conditioned for 8 -16 hrs @ laboratory temperature / humidity and then the required test pieces prepared as required from the master sample. This process would be repeated following a product size change eg 1.5mm^2 to 2.5mm^2.

Typical tests used in evaluation include:

- Conductor Resistance Testing
- Physical properties of Polymer (tensile strength, elongation), insulation resistance and/or sheathing thickness, ageing properties, deformation characteristics and concentricity.

Finished Cable Product Type Testing

Internal and external testing and verification of finished product performance is required in addition

to testing of the individual cable product components before certification by Approved Bodies is possible.

Typical tests used in evaluation of finished product include
Dimensional testing (outer diameter & ovality), high voltage resistance, fire performance testing and bend testing.

Of importance in the case of single core fire resistant products is the vertical flammability test IEC 60332-1 which measures the tendency of a single cable in the vertical configuration to be ignited and spread flames when exposed to a small Bunsen burner.

High Fire Performance Cables

Some of the most rigorous application areas in cable manufacture are those requiring high fire performances. The term encompasses a number of fire performance attributes required of cable products including low smoke emission, reduced heat release, and reduced toxic gas emission and the ability to inhibit fire propagation whilst maintaining the necessary mechanical properties.

All of these performance criteria must be tested and assured by Approval Bodies such as the Loss Prevention Council Board (LPCB) before a cable can be commercialised and released to market.

Materials selection is the key to an effective construction. Thermoplastics that exhibit enhanced reaction to fire through thermal adsorption, intumescence or release of non-combustible by-product into the combustion atmosphere require to be selected in discussion with compound manufacturers that specialise in manufacture of such products.

Close collaboration with specialist material suppliers during the design of cable products of this type is required so that when used in demanding applications these products display the best reaction to fire through the composite performance of a number of carefully chosen materials.

Examples of materials used are fire resistant mineral tapes, fire retardant thermoplastics, ceramifiable thermoplastic rubbers and high temperature resistant metallic tapes.

Single Core Fire Resistant Cables

In order to categorise and assure the high fire performance of single core fire resistant cables, they are tested rigorously to three protocols to the scope of BS 6387:2013. To satisfy the requirement of BS6387:2013, for CWZ categories, some certification bodies use a steel conduit as the other metallic element.

Protocol C (Clause 6) Resistance to fire alone

A sample of cable is placed within a steel conduit in the fire test rig and the conductor of the cable exposed to allow a current to be applied throughout the test. A flame is then applied to the sample (950°C) for three hours. If circuit integrity is maintained, the sample will be deemed to have passed the test.

Protocol W (Clause 7) Resistance to fire with water

A sample of cable is placed within a steel conduit in the fire test rig and the conductor of the cable exposed to allow a current to be applied throughout the test. A flame is then applied to the sample (650°C) for 15 minutes followed by a water spray for a further 15 minutes. If circuit integrity is maintained, the sample will be deemed to have passed the test.

Protocol Z (Clause 8) Resistance to fire with mechanical shock

A sample of cable is placed within a steel conduit in the fire test rig and the conductor of the cable exposed to allow a current to be applied throughout the test. In this case the sample is bent to form two equal horizontal lengths with a double bend in the middle. A flame is then applied to the sample (950°C) for 15 minutes with a metal bar striking the test rig mounting board every thirty seconds for the duration of the test. If circuit integrity is maintained, the sample will be deemed to have passed the test.

A further set of criteria that require to be met in order to become accredited by Approval Bodies such as LPCB are fire performance requirements with regard to acid gas and smoke emission. For example
EN 61304 - 2 : 2005 +A1:2013 - Smoke emission
IEC 60331-21 : 1999 - Fire resistance
EN 60754-1:2014 - Acid gas emissions
EN 60754-2:2014 - Emission of acidic and corrosive gases

搵食資料 Notes To Trade

香港房屋委員會 招標公告

香港房屋委員會招標公告可在以下網頁查看:http://www.housingauthority.gov.hk/en/common/pdf/business-partnerships/tenders/BP_Tender_Notice_23_Sep_2016_3.pdf

恭賀順昌電器工程有限公司
Congratulations to
Shun Cheong Electrical Engineering Co Ltd

本會恭賀順昌電器工程有限公司中標於居者有其屋發展計劃建築工程的電力裝置工程在何文田常樂街及啟德發展區1G1(B)號地盤，並祝順利如期完成。

On Behalf of Hong Kong Electrical Contractors' Association, we would like to convey our congratulations to **Shun Cheong Electrical Engineering Co Ltd** for the Electrical Installation for Construction of Home Ownership Scheme Development at Sheung Lok Street, Homantin (Sub-contract to Contract No. 20140269) and Kai Tak Site 1G1(B) (Sub-contract to Contract No. 20150362).

商會活動 Organised Activities

廣州國際照明展覽會
Guangzhou Electrical Building Technology

廣州國際照明展覽會已於2016年6月9日至12日（星期四至星期日）在廣州中國進出口商品交易會展館舉行。展商及觀眾透過一連串同期舉行的高端論壇會議及同業交流活動，探討最新照明技術及設計新思維，拓展合作機會。

Guangzhou Electrical Building Technology was held on 9 to 12 June 2016 (Thur to Sun) at China Import and Export Fair Complex, Guangzhou, China. Through a series of concurrent seminar & networking events presenting cutting-edge lighting technology, inspired lighting design ideas and market intelligence.

香港理工大學發展基金茶聚
PolyU Foundation Tea Reception

本會永遠會長陳理誠工程師太平紳士於2016年6月20日(星期一）代表出席香港理工大學發展基金茶聚及參觀。

on 20 June 2016 (Mon), our Life President Ir Chan Lee Shing William, JP attended The Hong Kong Polytechnic University Development Foundation Tea Reception and visited the University campus.

沙頭角之旅
HKECA Tour2016 - Sha Tau Kok

沙頭角之旅一天遊已於2016年5月29日(星期日)舉行。旅遊沙頭角禁區情緣：沙頭角之旅、沙頭角有機農莊、長山古寺、雲泉仙館齋宴一天遊，活動當天，我們安排了非常豐富的節目，多謝各會員參加。

HKECA Tour 2016 - Sha Tau Kok was held on 29 May 2016 (Sunday). Thank you all members to join.

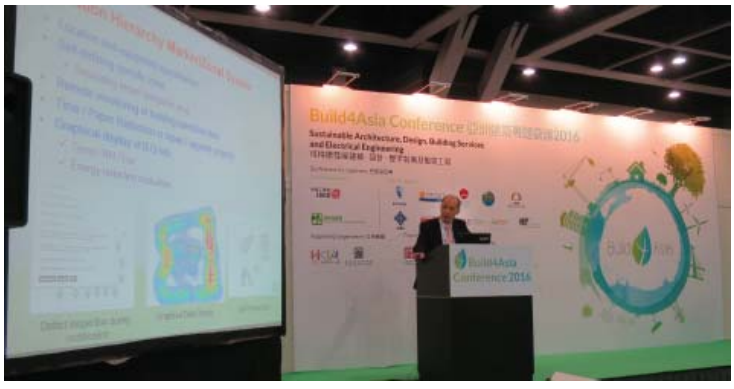
建材科技、電氣照明及防火保安展覽會
Build4Asia 2016

Build4Asia 2016 - 建材科技、電氣照明及防火保安展覽會已於2016年5月4至6日(星期三至五)假香港會議展覽中心舉行，為業界提供全港最大型的建築工程及保安商貿平台，500家國際參展商將向本地及海外建築業買家展示最新的綠色產品及方案。另外，香港電器工程商會將聯同香港機電工程署、環保署及各大學會全力支持Build4Asia會議2016，致力推進可持續發展知識及實際應用的發展。

Build4Asia 2016 – The Technology Showcase For The Building, Electrical Engineering and Security Industries was held on 4 to 6 May 2016 (Wed to Fri) at the Hong Kong Convention & Exhibition Centre. It is the largest trading platform for Building and Security industry in Hong Kong to showcase the latest green products and solutions to over 15,000 local and overseas building industry professionals. Also, Build4Asia Conference 2016, aims at advancing the frontier of sustainability transitions knowledge and practical applications in the building industry, is well supported by The Electrical and Mechanical Services Department and The Environmental Protection Department of HKSAR, Hong Kong Electrical Contractors' Association Ltd and various institutes etc.

建材科技、電氣照明及防火保安展覽會
Build4Asia 2016

Build4Asia Conference 2016

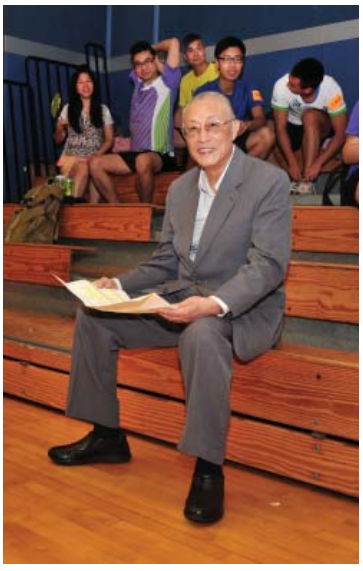


2016年永遠會長方宏浩盃羽毛球賽
2016 Badminton Competition – The Life President Martin Fong Cup

2016年永遠會長方宏浩盃羽毛球賽
2016 Badminton Competition – The Life President Martin Fong Cup

2016年永遠會長方宏浩盃羽毛球賽，已於2016年8月8,15及17在順利邨體育館及香港專業教育學院沙田分校舉行。經過3日激烈的比賽，本年度羽毛球精英已順利誕生。在此多謝永遠會長方宏浩先生的慷慨支持。

The 2016 Life President Martin Fong Cup Badminton Competition was successfully held on 8, 15 and 17 August 2016 at Shun Lee Tsuen Sports Centre and IVE Sha Tin, NT. Once again we would like to extend our sincere thanks to our Life President Mr. Martin Fong for his generous support to the competition.



2016年永遠會長方宏浩盃羽毛球賽
2016 Badminton Competition – The Life President Martin Fong Cup

男子單打 Men's Single		
獎項	參賽者	代表機構
冠軍	陸智釗	保誠工程服務有限公司
亞軍	歐健煒	安樂機電設備工程有限公司
季軍	康劍	PIZZA LIGHT LIMITED

女子單打 Women's Single		
獎項	參賽者	代表機構
冠軍	林咏	喜利得(香港)有限公司
亞軍	郭敏婷	喜利得(香港)有限公司
季軍	吳綺珊	南華智能自動化有限公司

男子雙打 Men's Doubles			
獎項	參賽者		代表機構
冠軍	姚穎貞	吳凌峰	喜利得(香港)有限公司
亞軍	楊保威	聶育堂	輝越科技有限公司
季軍	陳漢生	陳志強	東昇科技有限公司

女子雙打 Womem's Doubles			
獎項	參賽者		代表機構
冠軍	譚碧敏	黃佳筠	輝越科技有限公司
亞軍	梁嘉雯	李豐瑋	豐盛創建機電工程集團有限公司
季軍	陳詠怡	郭敏婷	喜利得(香港)有限公司

男女子混合雙打 Mixed Doubles			
獎項	參賽者		代表機構
冠軍	林咏	姚穎貞	喜利得(香港)有限公司
亞軍	陳佩柔	陳漢生	東昇科技有限公司
季軍	黃佳筠	楊保威	輝越科技有限公司

即將舉辦之活動 Upcoming Activities

新一代工業基礎建設解決方案講座
PANDUIT Seminar

新一代工業基礎建設解決方案，講者：美國泛達(PANDUIT)，將於2016年10月12日（星期三）在本會舉行。歡迎各會員參加。

PANDUIT Seminar will be help on 12 October 2016 (Wed). All members are welcome to join.

上海國際專業燈光音響展覽會2016
Prolight + Sound Shanghai 2016

業內推崇的亞洲專業燈光、音響、娛樂及大型活動技術行業盛會——上海國際專業燈光音響展覽會（Prolight + Sound Shanghai）將於2016年10月26至29日(星期三至六)在上海舉行，繼續打造專業燈光音響行業海內外企業商貿、技術交流的重要橋樑。展會由法蘭克福展覽（香港）有限公司及上海國際展覽中心有限公司聯合舉辦，今屆展會迎來了500家行業領先品牌及企業展示最新產品和技術，多項精彩的戶外演示及同期活動繽紛呈現，幫助與會者掌握行業各領域前沿資訊。

Prolight + Sound Shanghai is one of Asia's best known professional audio and lighting, event and entertainment technology show. The show is organised by INTEX Shanghai Co Ltd and Messe Frankfurt (HK) Ltd, attracted 500 leading brands and companies to showcase their latest products and technologies at the Shanghai New International Expo Centre in 2015 edition. A massive area for outdoor demonstrations and series of seminars and forums provide you an all-in-one platform for sourcing, networking and education. The coming show will be held in 26 to 29 October (Wed to Sat) 2016. If you want to take your business to the next level and gain excellent networking opportunities with industry peers, then plan your trip to Prolight + Sound Shanghai in October 2016!

第十六屆國際電力設備及技術展覽會
EP China & Electrical 2016

「第十六屆國際電力設備及技術展覽會（EP China & Electrical 2016)」 暨「第九屆國際電工裝備展覽會 (Electrical China 2016) 」將於2016年11月2日至4日(星期三至五)在北京中國國際展覽中心盛大舉行。國內電力行業中規模最大、最具影響力的品牌電力展—國際電力電工展（EP），始於1986年，由中國電力企業聯合會及雅式展覽服務有限公司主辦，是國內唯一獲得UFI國際認證之專業電力展，每年輪流於北京、上海舉辦。展會面積達35000平方米，佔用8個展館，包括1A、1B、2-5、8A及8B號館，預計吸引來自中外900家參展商／品牌。

EP China & Electrical 2016 will be held on 2 to 4 November 2016 (Wed to Fri) at China Int'l Exhibition Center in Beijing. Total 8 exhibition halls are used, including Hall 1A, 1B, 2-5, 8A and 8B, which expecting for a total of about 900 exhibitors/brands all over the world. Established in 1986, with annual rotation in Beijing and Shanghai in alternate years, EP China is organized by the most authoritative organization, China Electricity Council, and fully supported by all major Power Group Corporations and Power Grid Corporations. 30 years successful track record and experience, it has become the largest and the most reputable electric power exhibition endorsed by UFI Approved Event in China and has been widely recognized by global market leaders and international trade associations.

第22屆理事選舉
The 22nd Term Executive Committee Election

2017年至2019年 - 第22屆理事選舉將於2016年12月份舉行。

2017 to 2019 - The 22nd Term Executive Committee Election will be held in December 2016.

2016年會員週年大會及四十週年晚宴
2016 Annual General Meeting and 40th Anniversary Dinner

2016年會員週年大會及四十週年晚宴，定於2016年11月28日（星期一）在香港九龍尖沙咀彌敦道20號喜來登酒店宴會廳舉行。 在晚宴中有特備節目去回顧過去四十年香港電器工程商會的發展，分四個環節來展示: 奮鬥、成長、貢獻及展望。 請所有商會會員擁躍出席。

2016 Annual General Meeting and 40th Anniversary Dinner will be held on 28 November 2016 (Mon) at Sheraton Hong Kong Hotel, 20 Nathan Road, Kowloon. There will be a special programme to present the 40 years' development of HKECA, consisting of four parts: namely Strive, Growth, Contribution and Future. It is a 'Must Attend' function for HKECA members.

2016電力規例研討會
2016 Electricity Regulations Technical Seminar

由機電工程署主辦，港九電器工程電業器材職工會和本會協辦的電力規例研討會將於2016年11月10日(星期四)在九龍荃灣大會堂演奏廳舉行。歡迎各會員參加。

2016 Electricity Regulations Technical Seminar with EMSD and the HK & Kowloon Electrical Engineering & Appliance Trade Workers Union will be held on 10 November 2016 (Thur) at Tsuen Wan Town Hall. All members are welcome to join.

機電安全健步嘉年華2016
E&M Safety Walk and Carnival Fair 2016

機電安全健步嘉年華2016，今年的活動定於12月4日(星期日) 在屯門「大欖涌燒烤樂園」舉行，此活動乃是連續第十四年由香港機電工程商聯會與香港機電業工會聯合會合作舉辦機電安全推廣計劃之項目。活動當天，節目非常豐富，有山徑步行、健身操、機電安全話劇、問答遊戲及親子活動等，值以宣傳安全信息，中午更有自助燒烤，是一個老少咸宜的家庭同樂日，既可以郊外步行增進身心健康，又有遊戲獎品助慶。這是機電行業界每年舉辦安全推廣活動之一，歡迎各會員參加。

The E&M Safety Walk and Carnival Fair for this year will be held on 4 December 2016 (Sun) at BBQ 385 Tai Lam Tung Road, Tuen Mun. The programme includes morning drill exercise, hiking, safety quiz and various games and lucky draws. Lunch will be provided in BBQ style. All members are welcome to join.

資訊平台 Information Platform

《電力（線路）規例工作守則2015年版》
Code of Practice for The Electricity (Wiring) Regulations 2015 Edition

最新出版之《電力（線路）規例工作守則2015年版》已於2015年12月31日出版，會員可於政府新聞處刊物銷售小組自行購買，地址：香港北角渣華道333號北角政府合署6樓626室，查詢電話:2537 1910。

"Code of Practice for The Electricity (Wiring) Regulations 2015 Edition" the release date was held 31 December 2015. Sales Counter at Publications Sales Unit, Room 626, 6/F North Point Government Offices, 333 Java Road, North Point, Hong Kong, Tel : 2537 1910.

《競爭條例》
Competition Ordinance

有關《競爭條例》下的行為指引已於2016年8月4日在本會網頁刊登，詳情請參閱www.hkeca.org 。

For The Competition Ordinance, Please click the link: www.hkeca.org .

會員動態 Members' News

香港電器工程商會 05/2016 - 08/2016年度新會員名單

入會日期	申請會員名稱	會籍	代表人
Joining Date	Applicant Name	Membership Types	Representative
05/2016	孫名林先生 Mr. Suen, Ming Lam	永遠會員 Life Member	
05/2016	佳濤電業有限公司 Goodway Electrical Engineering Ltd.	普通會員 Ordinary Member	魏家榮先生 Mr. NGAI, Ka Wing
06/2016	眾光電器工程有限公司 Chung Kwong Electric Engineering Ltd.	普通會員 Ordinary Member	陳漢堅先生 Mr. CHAN, Hon Kin
07/2016	永基消防工程公司 Wing Kai Engineering Company	普通會員 Ordinary Member	何始基先生 Mr. HO, Chi Kee
08/2016	凱邦工程有限公司 Ever Rich E&M Engineering Co., Ltd.	普通會員 Ordinary Member	鄺加森先生 Mr. KWONG, Ka Sum

高球專線 Golfers Link

四十週年會長高爾夫球盃
The 40th Anniversary President Cup Golf Competition

四十週年會長高爾夫球盃，已於2016年8月12至14日(星期五至日)在泰國曼谷舉行，在此多謝會長的慷慨贊助，隊員的支持和參與，令比賽能順利完成。

The 40th Anniversary President Cup Golf Competition was held on 12 to 14 August 2016 (Fri to Sun) at Thailand. We would like to express our appreciation to President for the kind sponsorship and the keen participation of team members and guests, all of you have made the tournament successfully held.

四十週年會長高爾夫球盃
The 40th Anniversary President Cup Golf

12 - 14 Aug 2016　2016年8月12-14日
Thailand, Bangkok　泰國曼谷

Champion	Mr. Cheung Chong Lap	冠軍	張壯立先生
1st Runner Up	Mr. Yip Wing Ho	亞軍	葉穎豪先生
2nd Runner Up	Mr. Chan Kwok Sing	季軍	陳國成先生
Best Gross	Mr. Siu Ka Wing Sammy	最低杆	蕭嘉榮先生
Best Front Nine	Mr. Siu Ka Wing Sammy	最佳前九	蕭嘉榮先生
Best Back Nine	Mr. Chui Hin Chi	最佳後九	徐顯枝先生
Longest Drive Hole No 7	Mr. Kwan Wai Yuen	最遠發球獎:第7洞	關偉元先生
Longest Drive Hole No 12	Mr. Siu Ka Wing Sammy	最遠發球獎:第12洞	蕭嘉榮先生
Close to Pin Hole No 2	Mr. Law Chu Heung	最近洞獎:第2洞	羅柱香先生
Close to Pin Hole No 8	Mr. Siu Ka Wing Sammy	最近洞獎:第8洞	蕭嘉榮先生
Close to Pin Hole No 11	Mr. Siu Kwok Chuan, David	最近洞獎:第11洞	蕭國銓先生
Close to Pin Hole No 16	Mr. Yip Wing Ho	最近洞獎:第16洞	葉穎豪先生

高球專線 *Golfers Link*

施耐德盃高爾夫球賽　Schneider Busway Cup Golf

26 Aug 2016　2016年8月26日
Mission Hill Golf Club　觀瀾高爾夫球會

Champion	Mr. Yip Wing Ho	冠軍	葉穎豪先生
1st Runner Up	Mr. Lee Kwok Tai	亞軍	李國泰先生
2nd Runner Up	Mr. Tse Wai Tung	季軍	謝偉童先生
Best Gross	Mr. Jason Mak	最低杆	麥家傑先生
Best Front Nine	Mr. Kwan Wai Yuen	最佳前九	關偉元先生
Best Back Nine	Mr. Chui Hin Chi	最佳後九	徐顯枝先生
Longest Drive Hole No 4	Mr. Jason Mak	最遠發球獎:第4洞	麥家傑先生
Longest Drive Hole No 13	Mr. Gary Hui	最遠發球獎:第13洞	許純光先生
Close to Pin Hole No 3	Mr. lu Chu Leung	最近洞獎:第3洞	姚柱良先生
Close to Pin Hole No 5	Mr. Li Tai Kwong	最近洞獎:第5洞	李大光先生
Close to Pin Hole No 15	Mr. Michael Fung	最近洞獎:第15洞	馮英明先生
Close to Pin Hole No 17	Mr. Gary Hui	最近洞獎:第17洞	許純光先生
Guest Winner	Mr. Michael Tong	嘉賓組冠軍	Mr. Michael Tong

施耐德盃高爾夫球賽
Schneider Busway Cup Golf Competition

施耐德盃高爾夫球賽，已於2016年8月26日(星期五)在觀瀾高爾夫球會 - 艾斯場舉行，在此多謝施耐德電氣(香港)有限公司的慷慨贊助，隊員的支持和參與，令比賽能順利完成。

Schneider Busway Cup Golf Competition was held on 26 August 2016 (Fri) at Mission Hill Golf Club - Els Course. We would like to express our appreciation to Schneider Electric (HK) Limited for the kind sponsorship and the keen participation of team members and guests, all of you have made the tournament successfully held.

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