General Introduction
KOTEL 2020

www.kotel.fi

Introduction

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- Product support responsibility for Vacon 100 and NX portfolios
- Customer Claims and Critical Quality Problems Management

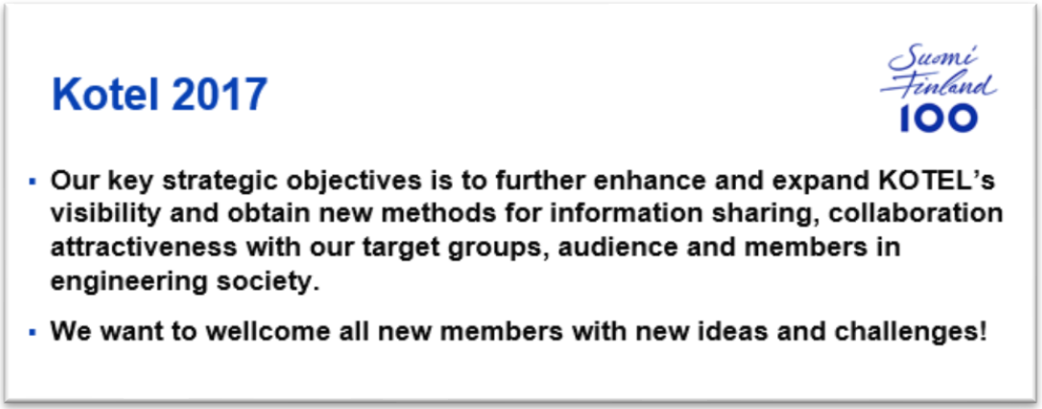
- 9+ years at Vacon (Danfoss Drives) in Quality/Reliability & PEC
- 19+ years at Nokia in Quality, Reliability, Verification, R&D, PM

- KOTEL r.y. chairman since 2016, CEEES vice-chairman 2019-2020
- Involved, more or less in KOTEL activities since 1995

KOTEL

Purpose

- Foundation of KOTEL association has been established already on 1967 = 50 years celebration during 2017
- The purpose of KOTEL is to promote *quality, reliability and efficiency of electronic components, equipment, systems and software design, manufacturing, procurement and maintenance* in Finland
- To achieve these goals, the organization strives for combining the knowhow of its Finnish members and partners, promoting national and international co-operation. The key means and practical measures for success are training seminars, engineering research projects and working group activities around key themes selected by association members.



Collaboration

- KOTEL is based on cooperation and collaboration
  - **25 members** - companies and institutes (various industries and engineering services) and research / educational institutes - approximately 100 active members in working groups and projects.
  - **Working groups and Engineering Research projects** are the essence of cooperation & collaboration
  - In Finland main cooperation with ***Technology Industry of Finland*** and ***SESKO***, *National Electrotechnical Standardization Organization in Finland*
  - In Europe KOTEL participates and contributes actively in **CEEES**, Conferedaration of European Engineering Societies (KOTEL holds currently Vice Precidency position of CEEES).

- KOTEL seeks actively and continuously new opportunities for co-operation and collaboration
  - *Some 2019-2020 themes: Introduction of micromembership for small members (<20 employees), Expansion of Scandinavian collaboration (Sweden, Denmark), CEEES TAB contacts/participation, CEEES 2020 Spring meeting in Finland, new CEEES project proposal/adhoc themes, FIIF collaboration exploration (Finnish Internet Forum, www.fiif.fi), SKY/ASM collaboration, new members introduction and onboarding*

Essence in Working Groups

- Working Groups are the backbone of the operation and open for all KOTEL members
  - Working groups function as forums for active and collaborative information sharing – in the working groups, experts from member companies jointly conduct studies, small projects, benchmarks, workshops etc. (which result working group reports), initiate and organize seminars and provide ideas and concepts for research projects. Working groups can also arrange extended working group meetings about a special topics under interest.

- Active working groups 2015-2020 (approximately 100 members):
  - **WG 5 - Environmental testing**
  - **WG 6 - Reliability technology**
  - **WG 7 - EMC (Electromagnetic Compatibility)**
  - **WG 19 - Environmental compliancy and electronics**
  - Working group meetings are organised typically quarterly; around special or common themes, typically company visits on the agenda. Extended meetings are organised per needs; for example including extended WG meetings for project seminar or visits to some special location - WG5/6 visited RISE's (Borås, Sweden) for SEES collaboration at 2018, WG7 is planning to visit Eurofins laboratories in Germany during 2020.
  - Working groups are self-organized with chairman selected from a member company, with annual action plans and themes under common interest. External (non-KOTEL members) are welcome to workgroups by chairman invitation. KOTEL office assists in seminars, travel arrangements etc. per needs.

Engineering Research Projects

- **Engineering Research projects** typically focus on seeking solutions for the problems of the participating KOTEL member companies/associates
  - Each project is launched on the basis of the membership interest
  - Costs are covered by participants and/or by public funding (e.g. BusinessFinland)
  - Project steering team is establihed by paying project members
  - Board of KOTEL names the responsible board support for the project
  - Project results are immediately available for participating companies
  - Final reports are published latest 2 years after the project in KOTEL report series --- list of reports & prices at Kotel web-pages: http://www.kotel.fi/fi/julkaisut
  - Latest finished projects: *PORE (Reliability of Polymer Materials), RECO (Reduce cost and maintaining reliability through product lifecycle) and REFLEX (Reliability and lifetime of flexible epoxy polymer capacitor)*
- *Projects 2019-2020: KOTEL 192: Study on Aging, Lifetime, Failure Mode and Root Causes for Corrosion Faults (STUCOR)*
- *Projects 2020 (pending/new): KOTEL 191: Study of Conformal and Adaptive Coating and Molding Techniques for Electronic Assemblies Protection (PROTEC), new ideas TBD*

Seminars

- Working groups topics and project are presented in open ***Seminars*** or in ***Extended Working Group Meetings***
  - Fees to members at "self-published" price and external participants available also at affordable price
  - Working group meetings are open for KOTEL members and for others per invitation
  - Examples of seminars and extended work group meetings 2015-2019
    - ✓ Extreme testing (Bofors Test Center, Sweden) visit, Reliability and lifecycle cost seminar
    - ✓ SW Reliability seminar, Reliability Centered Maintenance seminar
    - ✓ Reliability of flexible capacitors and life profiles and uncertainties on reliability and verification
    - ✓ Reliasoft Alta-tools training
    - ✓ IoT & Digitalization and Failure Analyses seminar
    - ✓ EMC ja IoT seminar
    - ✓ Reliability of Polymer Materials project seminar

- ✓ *Seminars for 2020-2021: CEEES Spring meeting and Corrosion Seminar (Rovaniemi, 02/2020), FIIF/KOTEL Reliability (webinar 05/2020), Corrosion in Electronics (05/2020), EMC seminar (2H/2020)*

- ✓ *Open seminar topics for 2020-: Environmental requirements and Corrosion of materials, Material characteristics (polymers & plastics) for Engineering, Latest trends on PCB materials and requirements, 3D printing methods, Condition monitoring and IoT, …*

Key contacts

FAQ, membership issues, questions, information, reports, seminars, ...

KOTEL Office: Antti Takalo / antti.takalo@centria.fi

KOTEL Chairman: Pasi Välimäki / pasi.valimaki@danfoss.com

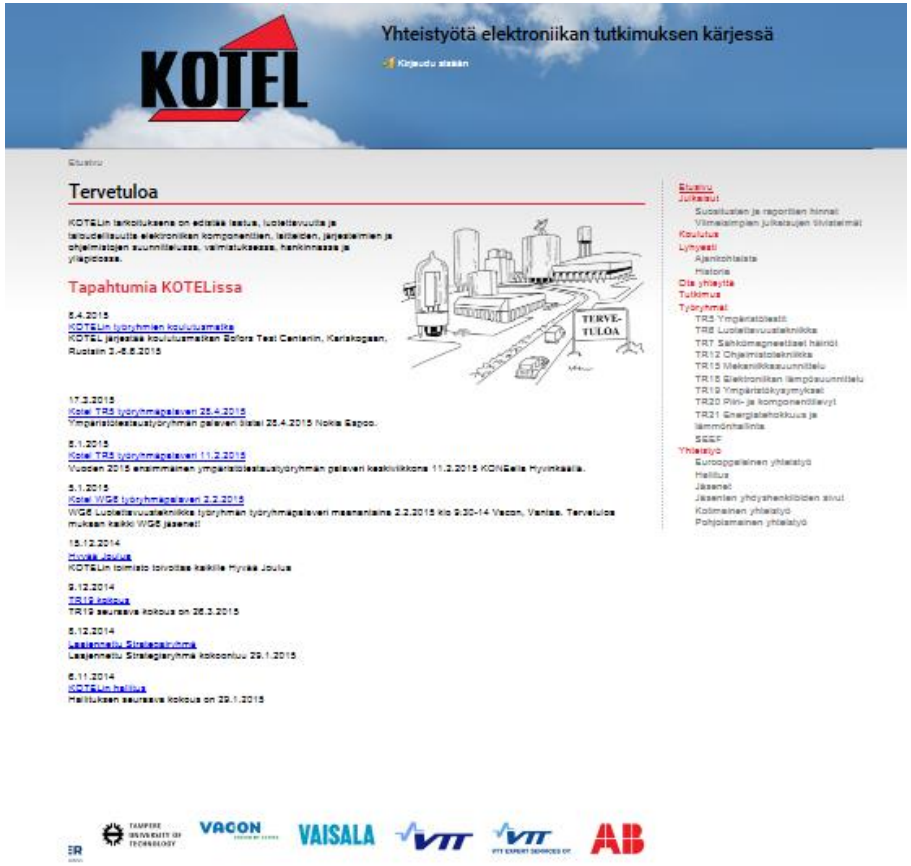
Information channels

Web-pages: www.kotel.fi

Linkedin(group): https://www.linkedin.com/groups/3981897/

Linkedin (company): https://www.linkedin.com/company/11827744/

www.kotel.fi


KOTEL
Yhteistyötä elektroniikan tutkimuksen kärjessä
Kirjaudu sisään
Etusivu
Tervetuloa
KOTELin tarkoituksena on edistää tiestus, luotettavuutta ja taloudellisuutta elektronikan komponenttien, laitteiden, järjestelmien ja ohjelmistojen suunnittelussa, valmistuksessa, hankinnassa ja ylläpidossa.
Tapahtumia KOTELissa
TERVE-TULOA
5.4.2015
KOTELin työryhmien koulutusmatka
KOTEL järjestää koulutusmatkan Before Test Centerin, Karlskogaan, Ruotsiin 2.-5.6.2015
17.3.2015
Kotel TR5 työryhmäpäiväen 25.4.2015
Ympäristötestaustyöryhmän päiväen tilaisuus 25.4.2015 Nokia Espoo.
5.1.2015
Kotel TR5 työryhmäpäiväen 11.2.2015
Vuoden 2015 ensimmäinen ympäristötestaustyöryhmän päiväen keskustelukonna 11.2.2015 KONEella Hyvinkää.
5.1.2015
Kotel WG6 työryhmäpäiväen 2.2.2015
WG6 Luotettavuustekniikka työryhmän työryhmäpäiväen maanantaina 2.2.2015 klo 9.30-14 Vacon, Vaasa. Tervetuloa mukaan kaikki WG6 jäsenet!
15.12.2014
Hyvää joulua
KOTELin toimisto toivottaa kaikille Hyvää Joulua
9.12.2014
TR19 kokous
TR19 seuraava kokous on 26.3.2015
5.12.2014
Laajennettu Strategiaryhmä
Laajennettu Strategiaryhmä kokoontuu 29.1.2015
6.11.2014
KOTELin hallitus
Hallituksen seuraava kokous on 29.1.2015
Etusivu
Julkaisut
Suositusten ja raporttien hinnat
Viimeisimpien julkaisujen tilastelmat
Koulutus
Lyhyesti
Ajankohtaista
Historia
Ota yhteyttä
Tutkimus
Työryhmät
TR5 Ympäristötesti
TR6 Luotettavuustekniikka
TR7 Sähkömagneettiset häiriöt
TR12 Ohjelmistotekniikka
TR15 Mekaniikkasuunnittelu
TR15 Elektronikan lämpösuunnittelu
TR19 Ympäristökysymykset
TR20 Piiri- ja komponenttilevyt
TR21 Energiatehokkuus ja lämmönhallinta
SEEF
Yhteistyö
Eurooppalainen yhteistyö
Hallitus
Jäsenet
Jäsenten yhdyshenkilöiden sivut
Kolmannen yhteistyö
Pohjoismainen yhteistyö
TAMPERE UNIVERSITY OF TECHNOLOGY
VACON
VAISALA
VTT
VTT EXPERT SERVICES OY
AB

CEEES –
Confederation of European Environmental Engineering Societies

http://www.ceees.org./

CEEES is a confederation of the environmental engineering societies of

the United Kingdom **(SEE)**,
France **(ASTE)**,
Germany **(GUS)**,
Sweden **(SEES)**,
Switzerland **(SSEE)**,
Finland **(KOTEL)**,
Belgium **(BSMEE)**,
the Netherlands **(PLOT)**,
Italy (AITPA),
Czech Republic **(NACEI)**
Austria **(ÖGUS)**
&
Portugal **(SOPSAR)**


KOTEL
YHTEISTYÖTÄ
ELEKTRONIIKAN
KÄRJESSÄ
50 VUOTTA