



ANNUAL REPORT

2018



The European Group
of Organisations for Fire Testing,
Inspection and Certification



A VIEW FROM THE PRESIDENT

Dear Members, Partners and Stakeholders

Last year reinforced EGOLF's position as an attractive organization which plays a significant role within the international fire safety community. The number of members is steadily increasing. At the end of 2018 there were 64 labs. in membership of EGOLF, 60 within Europe and another four in Hong Kong, Israel, United Arab Emirates and USA. This year we have also received enquiries and applications from a number of potential members. This tells me that we are doing very important work together in EGOLF.



2018 was the first year that we arranged only one set of annual member meetings. These were hosted in April by Cambridge Fire Research UK. There were many lively discussions and it is evident that our members both enjoy and benefit greatly from the informal benchmarking and knowledge sharing which these provide. EGOLF Executive therefore is encouraging members to come forward with more ideas for workshops, meetings and projects where specific topics can be discussed in smaller groups. We have set aside funds in the 2019 budget for these events, and Executive is looking forward to receiving proposals for activities which will benefit the organization and our vision for the future. We have observed a big increase in use of the EGOLF helpdesk forum in 2018 and we encourage all our new and existing members to take advantage of this tool which delivers very fast solutions to common problems. Members describe the forum as an excellent system which has the advantage of kicking off discussions with other labs. and sharing feedback which is extremely useful to the everyday work of their labs. and appreciated too by their clients. No question is considered too simple or difficult, and activity is monitored to ensure that all questions are dealt with.

Discussions in EGOLF have resulted in a number of Position Papers. These are documents which record EGOLF's opinions and recommendations for fire testing issues. Position Papers are forwarded to the appropriate recipient e.g. the relevant Working Group of CEN/TC 127 Fire Safety in Buildings; European Accreditation (EA); or the European Commission. In this way we ensure that, where necessary, EGOLF's expertise in fire testing is used to improve the European system for testing, classification and certification.

I also take this opportunity to warmly thank all of our Members, including our Executive Committee members Gary Blume, Paolo Mele and Jacques Mertens, and also Technical Committee Chairs Lars Boström, Rupert Ehrlenspiel and Andrzej Borowy, for all the good work in 2018. And last but not least I want to thank our Secretary General, Christine Roszykiewicz, for her efforts in the day to day management of EGOLF.

Let us together continue the good work for a fire safe society.

Anne Steen-Hansen

FINANCIAL REPORT

2018	
€	
INCOME	
Membership subscriptions	156 250
Courses	35 600
Other income	4 855
Total income	196 705
EXPENDITURE (INCLUDING VAT)	
Secretary General	83 235
Secretariat FSG of GNB-CPR (SH02)	10 469
Executive & TC Chairmen (travel expenses)	10 654
EGOLF Plenary, TC and SH02 meeting costs	9 343
Round robins, courses & workshops	19 407
Website hosting & developments	5 777
Printing costs	4 879
Company Registration services	1 533
Annual audit	2 564
Other expenses (including membership visits)	5 996
Total expenditure	153 857

EGOLF IN 2018



Author:
Christine Roszykiewicz,
EGOLF Secretary General



The annual meetings of EGOLF in 2018 were hosted by Cambridge Fire Research (CFR) UK and included a visit to CFR's fire resistance testing laboratory which was established in 2005 and has roots going back over 30 years. This was complemented by a guided walking tour of the historic city centre, followed by dinner in the formal dining hall at Christ's College, which dates back to the 16th century and, as demonstrated by the photos here, caused much excitement amongst members who came close to Harry Potter's real-life world of wizardry and the Great Hall of Hogwarts!



EGOLF WORKSHOPS

In addition to the regular series of harmonization courses which are hosted by EGOLF, other events during the year included a workshop hosted by DBI in Denmark on smoke control doors and shutters to EN 1634-3 and another hosted by IBS in Linz on fire dampers to EN 1366-2.

The first workshop was held in January 2018, in response to major issues which had arisen concerning interpretation of the standard and the outcome was a proposed and significant revision to the standard being undertaken by CEN/TC 127 WG3 (Fire Doors). The workshop on fire dampers resulted in a number of EGOLF position papers. Both events are described in more detail in this Newsletter.

EGOLF ROUND ROBINS

Following the SBI round robin which was successfully completed in 2017, **EGOLF TC1 (Reaction to Fire)** recently launched a round robin on smouldering combustion to EN 16733 with participation from 21 member labs. In parallel, **TC2 (Fire Resistance)** launched a round robin on doors to EN 1363-1 and EN 1634-1, with a record number of 44 member labs., 18 of whom selected Option 1 (one test on one test specimen) and 26 chose Option 2 (two identical tests on two replicate test specimens). The results of both round robin tests are expected before the end of this year and will be reported on in our 2019 Annual Newsletter.

During the course of 2018, **EGOLF TC4** (Certification, Inspection and Accreditation) obtained the endorsement of EA (European Accreditation) to develop a Conformity Assessment Scheme (CAS) in accordance with EA-1/22 A:2016 (EA Procedure for the Evaluation of Conformity Assessment Schemes by EA Accreditation Body Members) and the requirements of ISO/IEC 17025. This will allow fire testing laboratories to adopt a uniform approach to the accreditation of classification and EXAP standards.

NEW EGOLF MEMBERS

In 2018, EGOLF was delighted to welcome three new member fire testing laboratories, each of whom has contributed an article to the EGOLF Newsletter:

- FPLUS LTD. in Sofia, Bulgaria
- CERTBUD Sp. z o.o. in Warsaw, Poland
- if ROSENHEIM GmbH in Germany

EGOLF APPOINTMENTS 2018



Appointment of
Executive
Committee member

Jacques Mertens of Peutz bv in the Netherlands was elected a member of the Executive Committee for an initial term of three years commencing May 2018.



Election of Chair TC2
(Fire Resistance)

Stefan Rastocky of FIRES s.r.o. in the Slovak Republic was appointed Chair of TC2 for an initial term of three years commencing October 2018.

EGOLF WORKSHOP AND HARMONISATION COURSE CATALOGUE 2019



WORKSHOP TITLE TEST STANDARD DATE & LOCATION OF WORKSHOP FEES REGISTRATION CONTACT

Fire and smoke dampers workshop	EN 1366-2, EN 1366-10+A1, EN 13501-4	19-20th February, Prague	MEMBERS ONLY Workshop participation is free	Martin Altman altman@pavus.cz
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COURSE TITLE TEST STANDARD DATE & LOCATION OF COURSE COURSE FEE REGISTRATION CONTACT

Penetration seals and linear joint seals	EN 1366-3 & EN 1366-4	24th and 25th January, Peutz, NL	Members €1050 Non-members €1350	Harm Leenders h.leenders@peutz.nl
Fire resistance - General Requirements illustrated through Partitions	EN 1363-1 & EN 1363-2 through EN 1364-1	29th to 30th April DBI, Copenhagen, DK	Members €950 Non-members €1250	Registration: https://brandogsikring.dk/egolf-2019/

REACTION TO FIRE SERIES OF COURSES

Reaction to fire: Floorings	EN ISO 9239-1	6th May RISE Fire Research, Borås, Sweden	Members €910 Non-members €1210	https://www.conferencemanager.dk/EG-OLFR2F2019 Contact: Jenny Sikström jenny.sikstrom@ri.se
Reaction to fire tests. Ignitability of products subjected to direct impingement of flame. Single-flame source test	EN ISO 11925-2	7th May RISE Fire Research, Borås, Sweden	Members €910 Non-members €1210	https://www.conferencemanager.dk/EG-OLFR2F2019 Contact: Jenny Sikström jenny.sikstrom@ri.se
Reaction to fire: Single burning item	EN 13823	8th May RISE Fire Research, Borås, Sweden	Members €1010 Non-members €1310	https://www.conferencemanager.dk/EG-OLFR2F2019 Contact: Jenny Sikström jenny.sikstrom@ri.se
Reaction to fire: Non combustibility	EN ISO 1182	9th May RISE Fire Research, Borås, Sweden	Members €910 Non-members €1210	https://www.conferencemanager.dk/EG-OLFR2F2019 Contact: Jenny Sikström jenny.sikstrom@ri.se
Reaction to fire: Determination of heat of combustion	EN ISO 1716	10th May RISE Fire Research, Borås, Sweden	Members €910 Non-members €1210	https://www.conferencemanager.dk/EG-OLFR2F2019 Contact: Jenny Sikström jenny.sikstrom@ri.se
Reaction to Fire: All of above	EN ISO 9239-1, EN ISO 11925-2, EN 13823, EN ISO 1182, EN ISO 1716	6-10th May RISE Fire Research, Borås, Sweden	Members €3110 Non-members €4610	https://www.conferencemanager.dk/EG-OLFR2F2019 Contact: Jenny Sikström jenny.sikstrom@ri.se

ROOFING

External fire exposure to roofs	CEN TS 1187, T2	6th May RISE Fire Research, Borås, Sweden	Members €910 Non-members €1210	https://www.conferencemanager.dk/EG-OLFR2F2019 Contact: Jenny Sikström jenny.sikstrom@ri.se
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FIRE RESISTANCE

Test methods for determining contribution to fire resistance of steel and concrete structural members – applied protection to concrete members	EN 13381-3	20th and 21st May ITB, Warsaw, Poland	Members €950 Non-members €1250	Piotr Turkowski p.turkowski@itb.pl Admin.: Marta Zakrzewska m.zakrzewska@itb.pl
Test methods for determining contribution to fire resistance of steel and concrete structural members – passive and reactive protection products applied to steel members	EN 13381-4 & EN 13381-8	22nd to 24th May ITB, Warsaw, Poland	Members €950 Non-members €1250	Piotr Turkowski p.turkowski@itb.pl Admin.: Marta Zakrzewska m.zakrzewska@itb.pl

REACTION TO FIRE SERIES OF COURSES IN GERMAN LANGUAGE

Reaction to fire: Floorings	DIN EN ISO 9239-1	20th May MPA NRW, Erwitte, Germany	Members €890 Non-members €1190	Hendrik Rademacher rademacher@mpanrw.de
Reaction to fire: Determination of heat of combustion & non combustibility	DIN EN ISO 1716 & DIN EN ISO 1182	21st May MPA NRW Erwitte,	Members €870 Non-members €1170	Hendrik Rademacher rademacher@mpanrw.de
Reaction to fire: Ignitability of building products – single flame source test	DIN EN ISO 11925-2	22nd May MPA NRW, Erwitte,	Members €820 Non-members €1120	Hendrik Rademacher rademacher@mpanrw.de
Reaction to fire: Single burning item	DIN EN 13823	23rd - 24th May MPA NRW, Erwitte	Members €1090 Non-members €1390	Hendrik Rademacher rademacher@mpanrw.de

AUTUMN 2019

Fire dampers and non-mechanical fire barriers for ventilation ductwork	EN 1366-2, EN 15882-2 & EN 1366-12	13th to 14th November RISE Safety & Transport, Borås	Members €1150 Non-members €1450	Contact: Jenny Sikström jenny.sikstrom@ri.se
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AN ALTERNATIVE ASSESSMENT METHOD FOR HARMONIZATION OF FIRE PERFORMANCE TESTING OF FAÇADES

Johan Anderson & Lars Boström,
RISE Research Institutes of Sweden

BACKGROUND

Several different test standards are employed within the European Union to assess the fire performance of external walls and façade claddings. However, having a variety of methods is impeding industrial innovation and trade between the European countries, thus a harmonization is preferable. Over the years, there have been a few attempts to produce a single European approach to assess the fire performance of façade systems and the outputs from these projects have been used to develop an alternative methodology. In the recent push for a European harmonization, it has been suggested that one medium scale and one large scale test method will replace all previous national methods. In this complex process it is crucial to take into account national regulations and measurements that go beyond the EN 13501 (reaction to fire and fire resistance) classification system e.g. registration of falling parts etc.

A WAY FORWARD

In this work [1], gathering information from the member states was crucial and entailed:

- establishing a register of the regulatory requirements in all Member States in relation to the fire performance of façade systems, and

- identifying those Member States which have regulatory requirements for the fire performance façade systems which go beyond the current EN 13501 (reaction to fire and fire resistance) classification systems, and collating the details of these additional requirements.
- collecting data using a standardised questionnaire by direct contact with regulators, end users, industry and broader stakeholders by project team members and sub-contractors based in the Member States.

To meet the needs of all regulatory provisions of the member states, a simplified classification system and application system were provided which was split in two, one for the proposed method retaining BS 8414-1 and DIN 4102-20 and one for the alternative method.

RESULTS

- To either retain the current BS 8414-1 and DIN 4102-20 test methodologies and develop supplementary protocols and revised classifications to enable the local regulatory requirements to be met, and to retain access to historic data wherever possible

or

- To develop an alternative test method – a combined test and classification system covering the major performance characteristics identified by regulators.

This would be based on modification of the existing BS 8414-1 and DIN 4102-20 test and associated classification methods in order to meet local regulatory requirements but without historical data. A principle sketch is shown in Figure 1.

As described in Ref. 1, the alternative test method for the development of a single European approach to the assessment and classification of the fire performance of façade systems is proposed. In order to realize this as the preferred method, more work is needed in terms of Round Robin tests to assess repeatability and reproducibility of the finally retained method, to develop direct field of application based on preliminary results of the Round Robin phase, to propose extended field of application based on consideration of historical data and to implement the new test method into the various Members State regulations.

ACKNOWLEDGEMENT

The consortium working on the project is thankful to EGOLF for its financial support with "Application in response to EU funding call", in 2016. The project leader Dr. L. Boström presented the results of the project at the EGOLF meeting in Cambridge 2018.

EGOLF followed this up with a letter to the European Commission in November 2018, expressing support for the alternative method presented in the report from the façade project group. EGOLF believes that

the alternative method will mean improvements both in terms of test performance, assessment of test results and a simple classification system. The letter highlighted the fact that EGOLF considers it extremely important for standardised fire tests to be performed in different laboratories and that these should give as similar test results as possible, both within the lab (e.g. having good repeatability) and between labs. (e.g. having good reproducibility). EGOLF subsequently received a letter from Georgios Katsarakis at the European Commission, acknowledging receipt of the letter and informing us that the EGOLF position will be considered in further developments of the final façade assessment method.

References

- [1] Boström, L., Hofmann-Böllinghaus, A., Colwell, S., Chiva, R., Tóth, P., Möder, I., Sjöström, J., Anderson, J., Lange, D., Development of a European approach to assess the fire performance of facades, 2018: doi:10.2873/954759

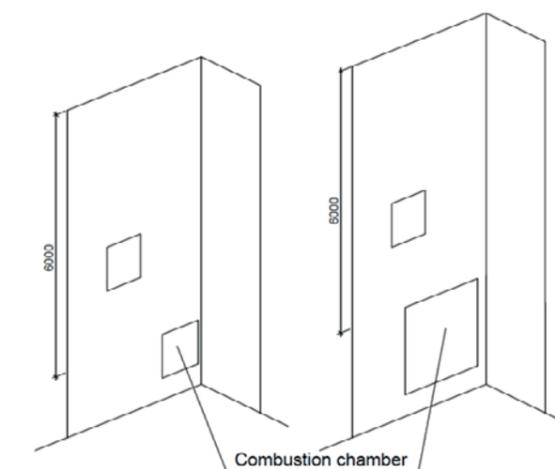


Figure 1. Principle sketch of the alternative method [1]. The alternative method includes a combustion room of variable size to accommodate the large and medium fire and a fictitious window.

NEW FACILITIES IN SOUTHERN EUROPE FOR LARGE SCALE TESTING OF FACADES

Xabier Olano (TECNALIA, Azpeitia)

The risk of fire spread along the facades of high-rise buildings is an issue of concern, and recent fires all over the world have confirmed that materials and products placed in the building envelopes should be designed and tested to ensure safe construction.

Current European testing and classification regimes regarding fire reaction of materials or products for external wall claddings do not properly reflect real fire conditions nor fire performance of the assembled system.

Therefore, large scale fire testing of external wall claddings assembled to reflect end-use conditions and incorporating all key elements or details, appears to be the best way to know and predict potential fire spread routes through external claddings of high-rise buildings.

TECNALIA has shared their findings with the building industry and local authorities and, during the second half of 2018, after significant investment, detailed planning and much effort on the part of staff members, launched new facilities for performing large scale testing (samples up to 10m high) of external cladding systems and exterior wall assemblies.

From the very beginning, the idea has been to offer a multi-standard, highly flexible, state of the art equipment and facilities to manufacturers involved in the development of products or systems, as well as to architects and consultants defining façade projects, to building contractors and many other agents including firefighters and educational authorities.

Products to be tested and validated in these new facilities range from external wall claddings, ETICS/ EIFS, light steel framing assemblies to curtain walling systems.



Figure 2

BS 8414-2 have been launched, together with the corresponding performance criteria and classification methods defined in BRE 135 (UK market) and AS 5113 (Australian market). All are already included in TECNALIA's scope of accreditation.

In addition, new testing standards such as the American NFPA 285 and international ISO 13785-1 are under development and expected to be available for the market in the second half of 2019. Finally, a future European harmonized standard for large scale fire testing is also planned to be incorporated, once this has been clearly defined and agreed with the European Commission.

With these brand new facilities, TECNALIA is able to offer industry a wide range of fire performance services, including reaction to fire and fire resistance testing, smoke control and product certification.



Figure 1

Figure 1:
Fire growth during large scale testing

IFSS: INTERNATIONAL FIRE SAFETY STANDARD

Daniel Joyeux - Efectis

THE AIM

After the Grenfell Tower fire tragedy, a coalition from the fire community observed a lack of international commitment needed to support the implementation of basic fire principles. In October 2017 the coalition confirmed its commitment to creating and promoting the implementation of IFSS to encourage world markets to accept and adopt IFSS as the primary standards for fire safety

The IFSS shall be regularly reviewed to take into account innovations, changes and updates, using the most widely spoken languages and internationally recognised terminology.

The IFSS will be linked to the International Ethics Standard.

The inaugural meeting was hosted by UNECE, at the UN in Geneva in July 2018.



Inaugural meeting in July 2018
at UN - Geneva

MEMBERS

The members come from all stakeholders in construction, from architects to engineering offices, from fire risk management to insurance, including regulatory bodies, fire laboratories, academia and firefighters.

IFSS is represented internationally, with members worldwide, including USA, Asia, Australia and Europe.

An independent Standards Setting Committee (SSC) has been formed. The SSC comprises more than 20 members, representative of IFSS members both geographically and technically. Daniel JOYEUX from EFECTIS is a member of SSC and is the representative for European application and experience.

RECOGNITION

The aim and current state of work was presented by RICS (Royal Institution of Chartered Surveyors) to the 56 member countries of UNECE. This presentation went well and UNECE may consider adopting the IFSS standards in due course. This is an important endorsement of the IFSS initiative. Nevertheless, recognition will come from the endorsement and promotion of IFSS members.

across different nations in a consistent way. The globalisation of construction and markets needs an internationally recognised set of rules, whilst there is currently a proliferation of standards throughout the world without international vision or adoption.

The aim of the International Fire Safety Standard is to define a common internationally accepted set of performance based principles for fire safety design, engineering and construction, use and ongoing management. The IFSS should support local and regional legislation, allowing the achievement of a minimum fire safety level.

For more information, please follow link to online catalogue at
https://www.tecnalia.com/images/stories/Catalogos/Fire_Safety_Façades_TECNALIA.pdf

IFT TECHNOLOGY CENTER IN ROSENHEIM - TESTING POSSIBILITIES IN THE FIRE SECTOR



Anyke Aguirre Cano, iff Rosenheim, Germany

New furnaces for testing the fire resistance of various components have been put into operation over the last three years at the Technology Center of iff Rosenheim. These furnaces are used by iff Rosenheim as well as UL International Germany GmbH.

These are two vertical test rigs measuring 5 m x 5 m and 8 m x 5 m, one small scale test rig measuring 1.50 m x 1.50 m vertically and 1.50 m x 2 m horizontally, one combination test rig measuring 4 m x 2.5 m vertically and 4 m x 5 m horizontally and one column test rig measuring 3 m x 3 m x 3 m.

Load-bearing equipment is also available in the column and combination test rigs, so that fire tests can now also be carried out on loadbearing components such as columns, beams, floors and roofs. Columns can be loaded up to 500 tons. Various load sizes are available for the combination furnace with 16 x 5 tons or 6 x 10 tons or 6 x 20 tons.

All furnaces were built with furnace chamber cameras. This makes it possible to observe the fire exposed side of the specimen inside the furnace during the test.

A modern flue gas cleaning system with technical afterburning and extensive filter technology was installed in order to comply with the required flue gas limit values even under extreme fire loads.

The iff Rosenheim currently employs approximately 205 people in various test areas at several locations in Germany. About 30 employees at the iff Technology Center in Rosenheim support the customers in the areas of fire resistance, smoke protection and durability tests, carry out the tests and prepare the associated documents.

In the iff Rosenheim Technology Center, tests can be carried out in accordance with EN standards as well as UL standards including Hose Stream tests in accordance with our accreditation (<https://www.iff-rosenheim.de/akkreditierung>). The iff Rosenheim is also accredited by the United Arab Emirates - Ministry of Interior Civil Defense G.H.Q. and cooperates with UL International Germany GmbH. The competence in fire protection of the iff Rosenheim is recognized thereby nationally and internationally.

Picture: Fire resistance test of a curtain wall according to EN 1364-3 on the 8 x 5 meter-test furnace

THE F PLUS FIRE LABORATORY, BULGARIA

Author Detelin Spasov, Lab. F Plus

PRESENTATION AND INFORMATION ABOUT THE LABORATORY

F Plus is a laboratory for fire testing, established in the period 2007-2013 and officially opened in 2014. It is accredited to ISO/IEC 17025 by the Bulgarian Accreditation Service (BAS) and notified (NB 2548) to Regulation No. 305/ 2011. F Plus has been a member of EGOLF since July 2018.

SCOPE OF ACTIVITY

F Plus performs fire resistance tests in test chambers which comply with EN standards: horizontal (3 x 4 m) and vertical (3 x 3 m). F Plus can provide testing for the full scope of building elements:

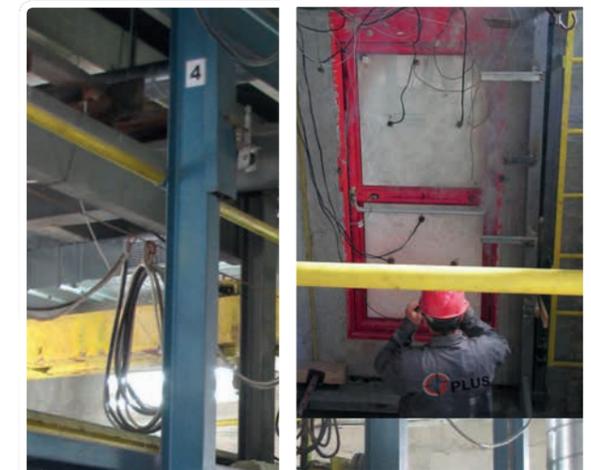
- loadbearing and non-loadbearing elements;
- protection of loadbearing elements;
- service installations;
- systems for fire and smoke control.



F Plus issues classification reports for direct (DIAP) and extended (EXAP) application and also performs reaction to fire testing of materials.

In addition, the laboratory carries out research projects in the field of fire safety. The results of these research activities are used in scientific analyses, dissertations, the development of building products etc. The laboratory also publishes technical literature in the field of fire safety and rescue.

F Plus relies on a team of highly qualified engineers and technicians. The Head of F Plus Laboratory for Fire Testing is dipl.-eng. Detelin Spasov, PhD



FULL SCALE TUNNEL FIRE TEST IN SPAIN

Micha de Jong, Efectis Nederland

On behalf of a Danish sponsor Efectis Nederland performed 2 series of full-scale tunnel fire tests in the San Pedro de Anes test tunnel in Spain from April to September 2018. The objective of the test was to prove that a low pressure water mist system would be able to ensure tenability and structural protection, both in accordance with NFPA502. The tests were performed with test fuels designed to reach heat release rates up to 250 MW as to simulate very large HGV fires, and with ventilation condition designed to reach a velocity as high as 5 m/s.



The Testing and Calibration Laboratory, as an independent body, conducts research (technological, product type or control tests), including its own test methods as well as test methods determined by national standards and harmonized standards and as a notified body determines the type of product based on type tests (based on samples taken for testing by the manufacturer), tabular calculations or descriptive documentation of the product.

The Testing and Calibration Laboratory also prepares assessments and interpretations of the test results obtained, among others fire resistance classifications for sandwich panels.

CERTBUD Sp. z o.o. takes an active part in the work of technical committees, working groups of the Polish Committee for Standardization and CEN, including TC 33 for Windows, Doors, Blinds and Hardware, CEN / TC 127 Fire safety.



NEW EGOLF MEMBER CERTBUD SP. Z O.O.

Maciej Jaśpiński "CERTBUD" Sp. z o.o.

CERTBUD Sp. z o.o., through the Certification Department and the Testing and Calibration Laboratory operating within its scope, conducts the activity of certifying and testing construction products, both in the regulated and voluntary areas. Since 2011 and 2016 respectively, the Certification Department and Testing and Calibration Laboratory have been accredited by the Polish Center for Accreditation (AC 158, AB 1596). The accreditation ranges are being gradually updated and expanded. CERTBUD Sp. z o.o. has been a Notified Body since 2011 and its notification number is 2310.

The Certification Department conducts certification processes in accordance with the provisions of national law and with the requirements of CPR 305, and issues the following as a Notified Body:

- certificates of constancy of performance based on type tests (including sampling), initial inspection of the production plant and factory production control as well as constant supervision, assessment and evaluation of factory production control,

Photo 1:
Specimen after fire resistance test

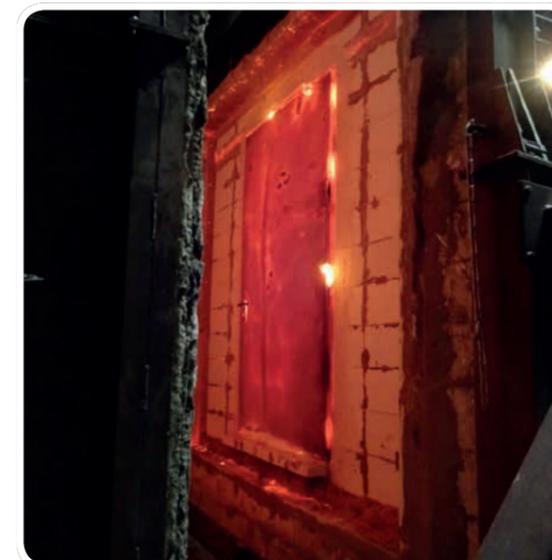


Photo 2:
View into the furnace



FIEP: FIRE INFORMATION EXCHANGE PLATFORM

Yannick Le Tallec, Daniel Joyeux, Roman Chiva - Efectis

WHAT IS FIEP?

FIEP is a platform initiated by the European Commission in 2017. The platform was launched after serious fire accidents in the EU (e.g. Colectiv Nightclub in Bucharest, Grenfell Tower in London), because those fires were caused by non-compliance with existing fire regulations. This points out the need to reinforce the application of existing Member State regulations rather than the need for a new regulation at EU level.

In order to stimulate co-operation between Member States and the exchange of information with relevant stakeholders, the Commission, acting as a facilitator, created FIEP and called for its first meeting in October 2017. The objective of the Commission is not to regulate on the matter but to initiate an exchange on fire related matters between stakeholders in the Construction sector.

Areas for exchange under the FIEP umbrella have been defined as:

- the exchange of experience gained from fire accidents,
- dealing with new regulatory challenges,
- the application of fire prevention principles,
- common terminology and fire statistics,
- the use of a fire engineering approach in building regulations.

And related to all of the above is domestic fire safety because the vast majority of fire deaths occur in victims' houses or apartments.

To assist the work of the FIEP the Commission launched a call for tender for the Technical Secretariat of FIEP in 2018. Efectis was awarded the contract and is managing the Technical Secretariat of FIEP.

HOW DOES FIEP WORK?

Under the FIEP, five project teams have been created. The task of the project team is to prepare a proposal for FIEP plenary meetings.

The Project teams are:

- PT1: Exchange of experience from fire accidents
- PT2: Dealing with new regulatory challenges (e.g. photovoltaic panels, high rise buildings)
- PT3: Application of fire prevention principles
- PT4: Use of a fire engineering approach in building regulations
- PT5: Fire terminology and statistics

At the last FIEP meeting in February 2019, the Commission called for Member States to nominate the chairs of the first three PTs. These plan to meet three times a year. The Commission has also stated: **"The success of FIEP depends on the broad and active participation of Member States, open discussion of the problems encountered, independence and objectivity."**

For the remaining PTs (4 and 5) the approach is different.

For PT4, the Commission will contract with the JRC (Joint Research Center) to:

- examine the feasibility of a European fire safety code ("Firecodes") using fire engineering principles by analogy to the Eurocodes (safety level remains for the Member States through Nationally Determined Parameters - NDPs).
- examine the current CEN work and the current ISO work in order to mandate to CEN the development of European fire design

standards and/or recommend the use of the ISO work in Member States regulations.

- develop guidance and training for engineers.

For PT4, the Commission will outsource the work with the objective to explore the creation of a common terminology and a common basis for the collection and analysis of fire data across the EU.

WHO CAN PARTICIPATE?

The first participants are of course Member States but the Commission is also aiming at promoting exchange with all stakeholders involved in fire safety in buildings.

Access to FIEP documentation is via the website "CIRCABC". Access is granted by the Commission and can be requested directly on the CIRCABC website. (<https://circabc.europa.eu/ui/welcome>)

The Commission has chosen to provide full access to all members of FIEP, meaning that members can upload any document they consider of interest for exchange of information on the platform (providing these are not commercial documents or controversial subjects).

Who to contact for further information?

As Technical Secretariat of FIEP, Efectis is able to provide further information on the Platform. The Technical Secretariat can be contacted at: fiep@efectis.com

EGOLF WORKSHOP ON FIRE DAMPERS – HOSTED BY IBS IN AUSTRIA

Markus Eichhorn-Gruber, IBS, Austria

IBS hosted the two half-day EGOLF Workshop on fire dampers between 12-13 June 2018 in Linz, Austria. Over 30 complex technical questions had been raised and were solved by the 17 participants from 11 EGOLF member labs. These questions were in line with the test standard (EN 1366-2), the EXAP standard (EN 15882-2) and the product standard (EN 15650). The most interesting questions arising from the workshop were related to the location of furnace and unexposed face thermocouples, the change in location of damper blade within the casing and the definition of fire damper actuating mechanism. As a result of the workshop, four main topics were published as EGOLF position papers i.e. the required number of furnace thermocouples and their locations; clarification of the term "actuating mechanism"; the correct interpretation of EXAP rule X.45 (change in gap between the damper and the supporting construction); and X.54 (change in spacing between dampers). The minutes of the workshop were also published as a 'Question and Answer' document for EGOLF Members. This includes the solutions agreed for each of the questions raised, together with the most important observations made by the workshop participants. The host organisation IBS and Member participants hope that this document will be of interest to all EGOLF Members. Due to the overwhelming amount of interest, IBS in co-operation with PAVUS in Czech Republic went on to organise a second workshop in early 2019 on both fire and smoke dampers to EN 1366-2, EN 1366-10+A1, EN 13501-3 & EN 13501-4.

WORKSHOP REGARDING SMOKE CONTROL DOORS

Christian Bjerglund Andersen - DBI

In January 2018, DBI hosted a workshop on smoke control doors (EN 1634-3). We had a full workshop with 12 participants from 10 different labs. The reason for the workshop was that the standard could be interpreted in many different ways. This became clear when DBI posted a helpdesk item containing a lot of questions on the EGOLF helpdesk forum. At the EGOLF meeting in Trondheim it was agreed that a workshop was the best way to deal with these problems.

During the two day workshop we had a lot of very good discussions and all labs. contributed with good knowledge. We used the first day to identify the main problems and to agree how to solve them. In the afternoon, we had time to use DBI's smoke control chamber where the problems with the standard were demonstrated in a practical way.

After a hard day's work we ended the day with a social event. We played Pétanque, had some drinks and a nice dinner, all in the same place. This was a good way to learn more about each other.

The next morning we started working on the actual Word file of the old standard. Participants were divided into three groups and each group focused on a main area of the standard. "Track changes" was used and the result from each group was presented and discussed. From this discussion, a final document with all changes marked up was produced.

This final document was the outcome of the workshop. The document has been forwarded to CEN TC/127 WG3. Furthermore, it has been published as an EGOLF position paper. The next step is for CEN TC/127 WG3 to establish a task group (TG) to deal with the revision of the standard. We expect that the document from our EGOLF workshop will be used as basis for the revision.

After all this work, we received plenty of positive feedback, but it is easy to host a workshop when all are willing to play an active role and contribute positively. Thanks to all who contributed!



FIRE BEHAVIOUR OF GREEN FACADES IN LARGE-SCALE EXPERIMENTS

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BACKGROUND AND PROBLEM DEFINITION

Greening measures, in particular facade greening, are becoming increasingly important, especially for large cities such as Vienna. Global climate change is particularly affecting metropolitan areas, as the heat accumulation in the urban area is high due to the sealing of the areas (this in turn is justified by the increasing population density and the associated area requirements).

The city of Vienna recognized this tendency early on. For almost 20 years, the Vienna Department of Environmental Protection (MA 22) has been dealing with the topic of heat in the city in the form of basic studies, strategic papers and active information work.

There is a broad consensus that more urban green infrastructure (such as parks) or blue infrastructure (such as open water, streams) will improve the situation. However, open spaces and green spaces in particular are under pressure due to the increasing demand for land, the maintenance costs and in part also the low acceptance of green infrastructure. This can largely be avoided if already existing as well as just newly created buildings are greened.

Fire protection is often cited as one of the inhibitors of facade greening since it is generally assumed that plants are burning and because fire cases involving facade greening are reported time and again, but the fire behavior of these in large-scale test arrangements is not described in any currently known literature.

OBJECTIVE

The aim of this study is therefore to first investigate to what extent the fire behaviour of facade greenery has been researched and subsequently to expose different, common facade green plants to large-scale fire tests and observe their behaviour in order to be able to create a plant list with plants that can not be made to inflame with the assumed fire scenario and those in which this was the case. On the basis of this classification, the corresponding fire protection measures could subsequently be formulated in order to achieve the national Austrian goals for fire protection in facades.

From the beginning it was clear that this study had to limit itself to the fire behaviour of ground-based facade greenery, as the facade-bound systems are so diverse that it is not possible to deduce the totality of the systems from a few fire tests.

METHODOLOGY

The work is based on a broad literature review on the topic, which was not very productive.

For large-scale fire tests, a fire scenario based on ÖNORM B 3800-5 (Fire Behavior of Building Materials and Components, Part 5: Fire Behavior of Facades - Requirements, Tests and Evaluations) was chosen. The assumed scenario is a complete fire in a room that breaks out of a window and attacks the adjoining facade. For the assessment, the contribution to the spread of flame, which the present facade design (form, building materials, assembly systems, etc.) offers, in addition to the ever-present spread, is used. The fire load is a 25 kg spruce wood crib.

Assessment criteria are included

- the fire propagation along the facade greening and
- the falling off of large and / or burning parts of the facade.

In total, four large-scale fire tests were carried out with different plants (ivy, akebia, hydrangea, parthenocissus, wisteria) typical for façade greenings in Vienna. In three of these experiments, the plants were mounted mechanically on a metallic climbing aid and in one of the tests were mechanically and directly mounted on the test stand.

RESULTS

It was found that basically all tested plants contribute to a vertical fire propagation in the large-scale fire test by burning away in a straw-like manner within a short time (a few seconds) and sometimes continuing to smolder (see the following figures 1 and 2).

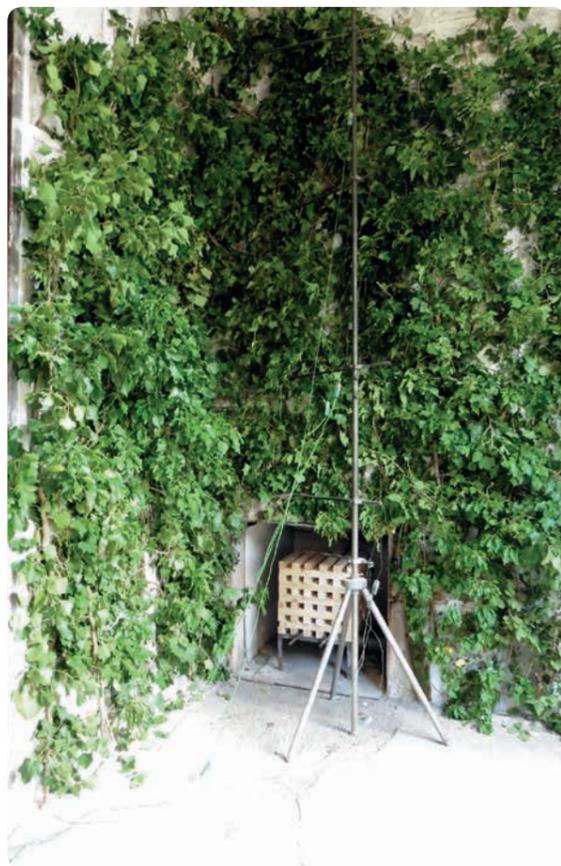


Figure 1:
Ivy on the test bench of the MA 39
before the facade fire test

Figure 2:
short-term vertical fire propagation
during the fire test



In principle, a combustion of the leaves can be seen. A combustion of the lignified shoots is not or only to a very small extent observed in the vicinity of the fire chamber, ie in the range of the highest temperatures of about 850 °C - 900 °C, to recognize. The reason for this is assumed to be the content of essential oils in the leaves after no deadwood was present during the test.

If the plants are mounted at a distance of 60 cm above the fire chamber (= simulated window), the "straw fire effect" is already reduced, at a distance of 1.0 m, no combustion of the facade greening is observed, the critical temperature appears at approx. 500 °C - 550 °C - this is the temperature that was measured in the experiments at this exact height 10 cm in front of the facade greening. Vertical fire propagation was not observed in any of the experiments. The secondary fire hazard due to falling, burning parts was also not given. In any case, the metallic climbing aid does not contribute to a fire spread, it can withstand the fire scenario without falling off.

These results in the following trendsetting insights for future applications of facade greening in Austria:

- For buildings up to building class 3 (i.e. approximately 3 storeys), no evidence with regard to fire propagation is observed and no special fire protection measures are required.
- For higher building classes, incombustible trellis aids (for example made of metal) should be used; depending on the type of crop used, additional fire protection measures (for example, firing barriers in every storey) may be necessary. Distance regulations for the installation of a facade greening must be formulated.
- For higher building classes, a positive test report in accordance with ÖNORM B 3800-5 or other suitable proof must be provided for the façade-bound system used (excluding plants). The systems are then to be set up according to the positively tested details.
- Facade greening must be maintained in a vital, functional condition (building book, clear regulation of the responsibility for the care and maintenance of the greenery). Necessary care measures must be taken into account in the planning and, if necessary, recorded in the building book.

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