

# Referenzen / References

BRANDRAUCHVERSUCHE – FIRE AND SMOKE TESTS

Auszug ab 2008



## REALBRAND-, BRANDRAUCH- UND WARM- RAUCHVERSUCHE:

### 1. Brandrauchversuche in Gebäuden:

- ▶ **Huawei-Gebäude**, Weilheim in Oberbayern, 2019
- ▶ **BV Erweiterung Experimenta**, Heilbronn, 2019
- ▶ **Halle H100, Fraport**, Frankfurt a. M., 2019
- ▶ **Opernwerkstätten**, Hamburg, 2018
- ▶ **DHL-Frachthalle, Fraport**, Frankfurt a. M., 2018
- ▶ **PEP Einkaufs-Center**, München-Neuperlach, 2018
- ▶ **Geschäftshaus „Upper Zeil“**, Frankfurt a. M., 2018
- ▶ **Erweiterungsbau Möbel Hardeck**, Hilden, 2017
- ▶ **Halle der Firma Decathlon**, Schwetzingen, 2017
- ▶ **Atrium des BV Ebert 13**, Bonn, 2016
- ▶ **Verbindungsbauwerk „Spindel“ zwischen dem Tunnel Kö-Bogen und den angrenzenden Tiefgaragen**, Düsseldorf, 2016
- ▶ **Diskotheek Carpe Noctem**, Bonn, 2016
- ▶ **World Conference Center Bonn**, 2015
- ▶ **Messe-, Kongress- und Eventarena CityCube Berlin**, 2015
- ▶ **Siemens, Bau 26**, Erlangen, 2014
- ▶ **Neubau der Europäischen Zentralbank (EZB)**, Frankfurt a. M., 2014
- ▶ **Europäische Investitionsbank**, Luxemburg, 2014
- ▶ **Erweiterungsbau der Uniklinik**, Frankfurt a. M., 2014

## REAL FIRE TESTS, FIRE AND SMOKE TESTS, HOT SMOKE TESTS:

### 1. Fire and smoke tests in buildings:

- ▶ **Huawei building**, Weilheim in Oberbayern, 2019
- ▶ **BV Extension of the Experimenta**, Heilbronn, 2019
- ▶ **Hall H100, Fraport**, Frankfurt a. M., 2019
- ▶ **Workshops of the Hamburg State Opera**, Hamburg, 2018
- ▶ **DHL cargo storehouse, Fraport**, Frankfurt a. M., 2018
- ▶ **PEP Shopping Center**, München-Neuperlach, 2018
- ▶ **Shopping Center „Upper Zeil“**, Frankfurt a. M., 2018
- ▶ **Extension of the Möbel Hardeck**, Hilden, 2017
- ▶ **Decathlon hall**, Schwetzingen, 2017
- ▶ **Atrium of BV Ebert 13**, Bonn, 2016
- ▶ **Connection „Spindel“ between Kö-Bogen tunnel and adjacent underground car park**, Düsseldorf, 2016
- ▶ **Diskotheek Carpe Noctem**, Bonn, 2016
- ▶ **World Conference Center Bonn**, 2015
- ▶ **New trade fair and congress venue CityCube Berlin**, 2015
- ▶ **Siemens, Bau 26**, Erlangen, 2014
- ▶ **New building of the European Central Bank (ECB)**, Frankfurt, 2014
- ▶ **European Investment Bank**, Luxembourg, 2014
- ▶ **Extension of the University Hospital**, Frankfurt, 2014

## 1. Brandrauchversuche in Gebäuden (Fortsetzung):

- ▶ **OSRAM-Werk**, Berlin Spandau, 2014
- ▶ **Bürogebäude Swisscom**, Ittigen, Schweiz, 2014
- ▶ **Sportgeschäft „SportScheck“**, Kassel, 2014
- ▶ **EmslandArena**, Lingen, 2013
- ▶ **Einkaufszentrum Skyline Plaza**, Frankfurt a. M., 2013
- ▶ **Casino**, Duisburg, 2013
- ▶ **Logistikzentrum** (2. Bauabschnitt), Greven, 2013
- ▶ **Halle Siemens**, Erlangen-Röthelheimpark, 2013
- ▶ **Flughafen BBI, Terminal TP01**, Berlin, 2012
- ▶ **Palmengarten**, Frankfurt a. M., 2012
- ▶ **Einkaufszentrum Forum Mittelrhein**, Koblenz, 2012
- ▶ **Neue Drahthalle im Werk der ArcelorMittal Ruhrort GmbH**, Duisburg, 2012
- ▶ **„Schlaues Haus“ – Haus für die Bürger und die Wissenschaft**, Oldenburg, 2012
- ▶ **Einkaufszentrum Galeria Kaskada**, Stettin, Polen, 2011
- ▶ **Düsseldorfer Schauspielhaus**, 2011
- ▶ **Infrastrukturzentrum der Goethe-Universität**, Frankfurt a. M., 2011
- ▶ **Hochhaus BICC**, Frankfurt a. M., 2011
- ▶ **Möbelhaus Möbel Hardeck**, Bochum, 2010 -2011
- ▶ **Einkaufszentrum Rheingalerie**, Ludwigshafen, 2010
- ▶ **Kongresssaal**, Interlaken, Schweiz, 2010

## 1. Fire and smoke tests in buildings (continues):

- ▶ **OSRAM factory**, Berlin Spandau, 2014
- ▶ **Swisscom office building**, Ittigen, Switzerland, 2014
- ▶ **Sports shop “SportScheck”**, Kassel, 2014
- ▶ **EmslandArena**, Lingen, 2013
- ▶ **Skyline Plaza Shopping Center**, Frankfurt, 2013
- ▶ **Casino**, Duisburg, 2013
- ▶ **Distribution centre** (2nd section of construction), Greven, 2013
- ▶ **Siemens Hall**, Erlangen-Röthelheimpark, 2013
- ▶ **Berlin Brandenburg Airport, TP01 Terminal**, 2012
- ▶ **Palmengarten**, Frankfurt, 2012
- ▶ **Shopping Center Forum Mittelrhein**, Koblenz, 2012
- ▶ **New wire hall of the ArcelorMittal plant in Duisburg**, 2012
- ▶ **“Smart House”** (House for the promotion of science), Oldenburg, 2012
- ▶ **Shopping Center Galeria Kaskada**, Szczecin, Poland, 2011
- ▶ **Düsseldorf Theatre**, 2011
- ▶ **Infrastructure Centre of Goethe University**, Frankfurt, 2011
- ▶ **Hochhaus BICC** (BICC Business Center), Frankfurt, 2011
- ▶ **Furniture store Möbel Hardeck**, Bochum, 2010 – 2011
- ▶ **Shopping Center Rheingalerie**, Ludwigshafen, 2010
- ▶ **Congress Centre**, Interlaken, Switzerland, 2010

## 1. Brandrauchversuche in Gebäuden (Fortsetzung):

- ▶ **Zoofenster**, Berlin, Brandrauchversuche zur Bewertung der Rauchkontrolle und Löschwirkung von HDN-Anlagen, 2010
- ▶ **Einkaufszentrum Serdika Center**, Sofia, Bulgarien, 2010
- ▶ **Parlamentsgebäude**, Bern, Schweiz, 2009
- ▶ **Einkaufszentrum Stücki**, Basel, Schweiz, 2009
- ▶ **Bildungszentrum Grünenthal**, Aachen, 2009
- ▶ **Atrium des Science College**, Jülich, 2009
- ▶ **Sicherheitstreppenraum des Nikolaihof**, Hamburg, 2009
- ▶ **Einkaufszentrum**, Nümbrecht, 2009
- ▶ **Kongresszentrum Eurogress Aachen**, 2008
- ▶ **Bürogebäude Office Center**, Aachen, 2008
- ▶ **Freizeit- und Einkaufszentrum Westside**, Bern, Schweiz, 2008
- ▶ **Einkaufszentrum Aachen Arkaden**, Aachen, 2008
- ▶ **Kaufhaus Loeb**, Bern, Schweiz, 2008
- ▶ **Broker Office Center II**, Frankfurt a. M., 2008
- ▶ **Magistrale des BMW Informationszentrums**, München, 2007 und 2008
- ▶ **Freizeit- und Einkaufszentrum Westside**, Bern, Schweiz, 2008
- ▶ **Einkaufszentrum Aachen Arkaden**, Aachen, 2008
- ▶ **Kaufhaus Loeb**, Bern, Schweiz, 2008
- ▶ **Broker Office Center II**, Frankfurt a. M., 2008

## 1. Fire and smoke tests in buildings (continues):

- ▶ **Zoofenster**, Berlin, real fire tests for assessing the smoke control and the extinguishing capacity of high pressure mist systems, 2010
- ▶ **Shopping Centre Serdika Centre**, Sofia, Bulgaria, 2010
- ▶ **Parliament Building**, Bern, Switzerland, 2009
- ▶ **Stücki Shoppingcenter**, Basel, Switzerland, 2009
- ▶ **Learning Centre Grünenthal**, Aachen, 2009
- ▶ **Atrium of Science College**, Jülich, 2009
- ▶ **Safety staircase of the Nikolaihof**, Hamburg, 2009
- ▶ **Shopping centre**, Nümbrecht, 2009
- ▶ **Congress Center Eurogress Aachen**, 2008
- ▶ **Office building Office Center**, Aachen, 2008
- ▶ **Leisure and shopping complex Westside Center**, Bern, Switzerland, 2008
- ▶ **Shopping Center Aachen Arkaden**, Aachen, 2008
- ▶ **Department store Loeb**, Bern, Switzerland, 2008
- ▶ **Broker Office Center II**, Frankfurt, 2008
- ▶ **Main corridor of the BMW information centre**, Munich, 2007 and 2008
- ▶ **Leisure and shopping complex Westside Center**, Bern, Switzerland, 2008
- ▶ **Shopping Center Aachen Arkaden**, Aachen, 2008
- ▶ **Department store Loeb**, Bern, Switzerland, 2008
- ▶ **Broker Office Center II**, Frankfurt, 2008

## 2. Brandrauchversuche in Straßentunneln:

- ▶ **Tunnel Velbert-Langenberg** (L 107), 2019
- ▶ **Engelbergtunnel**, Leonberg, 2019
- ▶ **Petuelunnel**, München, 2013 und 2018
- ▶ **Lärmschutzeinhausung** (A 1), Köln-Lövenich, 2018
- ▶ **Engelbergtunnel** (A 81 bei Loenberg), 2017
- ▶ **Agnesburgtunnel**, Aalen/Ellwangen, 2017
- ▶ **Tunnel Pfaffenstein** (A 93), Regensburg, 2017
- ▶ **Meisterntunnel**, Bad Wildbad, 2017
- ▶ **Brudermühltunnel**, Mittlerer Ring, München, 2017
- ▶ **Tunnel Micheville**, Esch-sur-Alzette, Luxemburg, 2016
- ▶ **Bühltunnel** (B 62n), Siegen, 2016
- ▶ **Tunnel Kö-Bogen** (2. Bauabschnitt), Düsseldorf, 2016
- ▶ **Tunnel Deggendorf**, 2016
- ▶ **Autobahntunnel Schwarzer Berg** (A 70), Bamberg, 2005 und Eltmann, 2016
- ▶ **Kiesbergtunnel**, Wuppertal, 2016
- ▶ **Tunnel Grouft und Tunnel Stafelter**, Luxemburg, 2015
- ▶ **Riedbergtunnel**, Regen, 2015
- ▶ **Luise-Kiesselbach-Tunnel und Heckenstaller-tunnel**, München, 2015
- ▶ **Richard-Strauss-Tunnel**, München, 2015
- ▶ **Tunnel Grötzingen**, 2014
- ▶ **Tunnelgruppe Kö-Bogen**, Düsseldorf, 2014
- ▶ **Tunnel Oberkirch**, 2014
- ▶ **Tunnel Wagenladungsstraße**, Stuttgart, 2014
- ▶ **Hugenwaldtunnel**, Waldkirch, 2014

## 2. Fire and smoke tests in road tunnels:

- ▶ **Tunnel Velbert-Langenberg** (L 107), 2019
- ▶ **Engelbergtunnel**, Leonberg, 2019
- ▶ **Petuelunnel**, Munich, 2013 and 2018
- ▶ **Köln-Lövenich noise protection tunnel** (A 1), 2018
- ▶ **Engelbergtunnel** (A 81 bei Loenberg), 2017
- ▶ **Agnesburgtunnel**, Aalen/Ellwangen, 2017
- ▶ **Tunnel Pfaffenstein** (A 93), Regensburg, 2017
- ▶ **Meisterntunnel**, Bad Wildbad, 2017
- ▶ **Brudermühltunnel**, Mittlerer Ring, Munich, 2017
- ▶ **Tunnel Micheville**, Esch-sur-Alzette, Luxemburg, 2016
- ▶ **Bühltunnel** (B 62n), Siegen, 2016
- ▶ **Tunnel Kö-Bogen** (2nd section of construction), Düsseldorf, 2016
- ▶ **Tunnel Deggendorf**, 2016
- ▶ **Motorway tunnel Schwarzer Berg** (A 70), Bamberg, 2005 and Eltmann, 2016
- ▶ **Kiesbergtunnel**, Wuppertal, 2016
- ▶ **Grouft and Stafelter Tunnel**, Luxemburg, 2015
- ▶ **Riedbergtunnel**, Regen, 2015
- ▶ **Luise-Kiesselbach-Tunnel and Heckenstaller-tunnel**, Munich, 2015
- ▶ **Richard-Strauss-Tunnel**, Munich, 2015
- ▶ **Tunnel Grötzingen**, 2014
- ▶ **Tunnel group Kö-Bogen**, Düsseldorf, 2014
- ▶ **Tunnel Oberkirch**, 2014
- ▶ **Tunnel Wagenladungsstraße**, Stuttgart, 2014
- ▶ **Hugenwaldtunnel**, Waldkirch, 2014

## 2. Brandrauchversuche in Straßentunneln (Fortsetzung):

- ▶ **Reutherbergtunnel**, Ortsumfahrung Wolfach, 2014
- ▶ **Tunnel Wambel**, Dortmund, 2013 – 2014
- ▶ **Westringtunnel**, Ulm, 2013
- ▶ **Meisterntunnel**, Bad Wildbad, 2013
- ▶ **Gmünder Einhorn-Tunnel**, Schwäbisch Gmünd, 2013
- ▶ **Tunnel Gernsbach**, 2013
- ▶ **Michaelstunnel**, Baden-Baden, 2012
- ▶ **Saukopftunnel**, Weinheim, Überprüfung der Druckbelüftung der Rettungstollen, 2012
- ▶ **Tunnel Mainzer Ring**, 2012
- ▶ **Tunnel Gruibingen** (an der A8 zwischen Karlsruhe und München), 2012
- ▶ **Löwenherz- und Barbarossatunnel**, Annweiler am Trifels, 2011
- ▶ **Kreuzstraßentunnel**, Tuttlingen, 2011
- ▶ **Theatertunnel**, Frankfurt a. M., 2010
- ▶ **Tunnel Leutenbach** (B 14), Winnenden, 2009
- ▶ **Felderhaldetunnel**, Isny, 2009
- ▶ **Grotztunnel**, Bietigheim-Bissingen, 2009
- ▶ **Saukopftunnel**, Weinheim, 2008 – 2009
- ▶ **Schützenalleetunnel**, Freiburg, 2008

## 2. Fire and smoke tests in road tunnels (continues):

- ▶ **Reutherbergtunnel**, local bypass Wolfach, 2014
- ▶ **Wambel Tunnel**, Dortmund, 2013 – 2014
- ▶ **Westringtunnel**, Ulm, 2013
- ▶ **Meisterntunnel**, Bad Wildbad, 2013
- ▶ **Gmünder Einhorn-Tunnel**, Schwäbisch Gmünd, 2013
- ▶ **Gernsbach Tunnel**, 2013
- ▶ **Michaelstunnel**, Baden-Baden, 2012
- ▶ **Saukopftunnel**, Weinheim, examination of the pressurization in the emergency galleries, 2012
- ▶ **Mainzer Ring Tunnel**, 2012
- ▶ **Gruibingen Tunnel** (A8 between Karlsruhe and Munich), 2012
- ▶ **Löwenherz- and Barbarossatunnel**, Annweiler am Trifels, 2011
- ▶ **Kreuzstraßentunnel**, Tuttlingen, 2011
- ▶ **Theatertunnel**, Frankfurt, 2010
- ▶ **Leutenbach Tunnel** (B 14), Winnenden, 2009
- ▶ **Felderhaldetunnel**, Isny, 2009
- ▶ **Grotztunnel**, Bietigheim-Bissingen, 2009
- ▶ **Saukopftunnel**, Weinheim, 2008 – 2009
- ▶ **Schützenalleetunnel**, Freiburg, 2008

### 3. Brandrauchversuche in Parkhäusern:

- ▶ **Parkhaus WIKA**, Klingenberg, 2019
- ▶ **Tiefgarage des BV Patio**, Kuhwaldstraße, Frankfurt a. M., 2018
- ▶ **Parkhaus Reglermauer**, Erfurt, 2016
- ▶ **Tiefgarage des BV T8 Taunusanlage**, Frankfurt a. M., 2016
- ▶ **Flughafen BBI**, Berlin, **Parkhäuser MWC, PNA und PSA**, 2012
- ▶ **Garage der Coens Galerie**, Grevenbroich, 2011
- ▶ **Parkhaus des A10-Einkaufs- und Freizeitcenters**, Wildau, 2011
- ▶ **Parkhaus des Neubaus Hertie**, Essen, 2011
- ▶ **Tiefgarage des BMW Informationszentrums**, München, 2007 und 2009

### 4. Brandrauchversuche in Verkehrsanlagen:

- ▶ **Zentralbahn Luzern**, unterirdische Haltestelle „Messe/Allmend“, Schweiz, 2012
- ▶ **Tramdepot**, Bern, Schweiz, 2011

### 5. Brandrauchversuche in Industriegebäuden:

- ▶ **Pumpspeicherkraftwerk Vianden**, Luxemburg, 2016
- ▶ **Schluchseewerke AG**, Bad Säckingen und Wehr, 2015

### 3. Fire and smoke tests in car parks:

- ▶ **Car park WIKA**, Klingenberg, 2019
- ▶ **Underground car park of project Patio**, Kuhwaldstraße, Frankfurt a. M., 2018
- ▶ **Car park Reglermauer**, Erfurt, 2016
- ▶ **Underground car park of project T8 Taunusanlage**, Frankfurt a. M., 2016
- ▶ **Berlin Brandenburg Airport, MWC, PNA and PSA car parks**, 2012
- ▶ **Double-storey car park of the Coens Galerie**, Grevenbroich, 2011
- ▶ **Multi-storey car park of the A10 Center**, Wildau, 2011
- ▶ **Car park of the new building of Hertie**, Essen, 2011
- ▶ **Underground car park of the BMW information centre**, Munich, 2007 and 2009

### 4. Fire and smoke tests in traffic facilities:

- ▶ **Zentralbahn Luzern**, underground station “Messe/Allmend”, Switzerland, 2012
- ▶ **New tram depot**, Bern, Switzerland, 2011

### 5. Fire and smoke tests in industrial buildings:

- ▶ **Pumpspeicherkraftwerk Vianden**, Luxemburg, 2016
- ▶ **Schluchseewerke AG**, Bad Säckingen and Wehr, 2015

## 6. Brandrauchversuche für Feuerwehrübungen:

- ▶ **Tunnel Leutenbach** (B 14), 2017
- ▶ **Agnesburgtunnel**, Aalen, 2014
- ▶ **Tunnel Rastatt**, 2013
- ▶ **Tunnel Mainzer Ring**, 2012

## 7. „Fahrende Brände“:

- ▶ Demonstrationsversuch eines „**Fahrenden Brandes**“ (Fahrzeug fährt brennend und rauchend im Tunnel ein und bleibt dort stehen); **Pieterlen-Tunnel**, Schweiz, 2012

## 6. Fire and smoke tests for fire drills:

- ▶ **Tunnel Leutenbach** (B 14), 2017
- ▶ **Agnesburgtunnel**, Aalen, 2014
- ▶ **Rastatt Tunnel**, 2013
- ▶ **Mainzer Ring Tunnel**, 2012

## 7. “Driving Fires”:

- ▶ Demonstration test of a “**driving fire**” (the vehicle enters the tunnel on fire and comes to a standstill in the tunnel); **Pieterlen Tunnel**, Switzerland, 2012