

# Brandschutzforum Austria

Vorlesung

„Traue keiner Statistik, die Du nicht selber gefälscht hast!“

## Heiße Zahlen

Statistik & Brandschäden

© Univ.-Lektor Dr. Otto Widetschek, KFU Graz

---

---

---

---

---

---

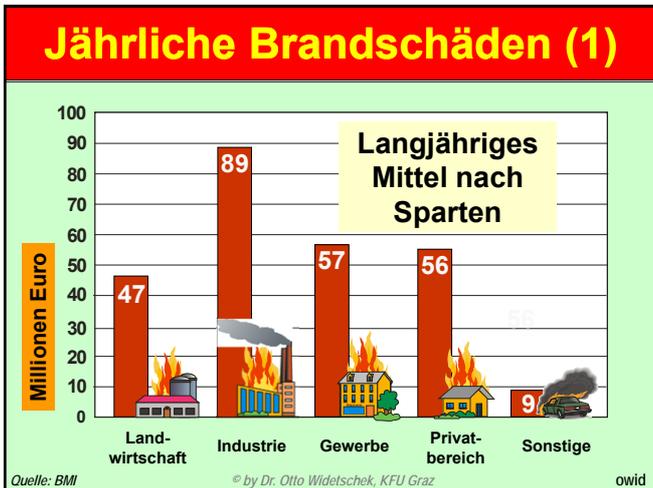
---

---

---

---

1




---

---

---

---

---

---

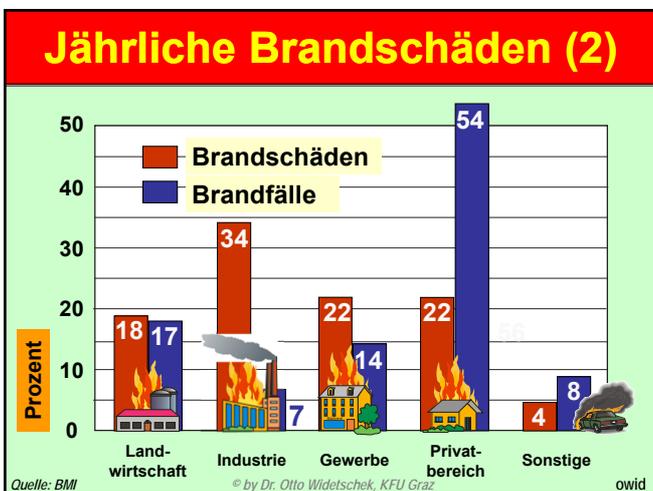
---

---

---

---

2




---

---

---

---

---

---

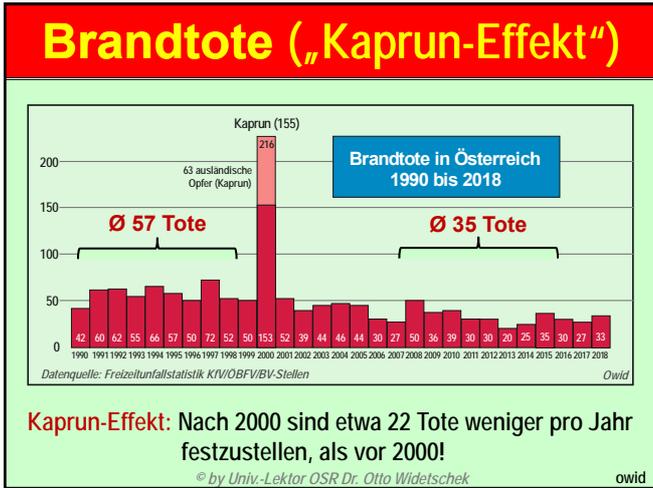
---

---

---

---

3



4

---

---

---

---

---

---

---

---

---

---

---

---



5

---

---

---

---

---

---

---

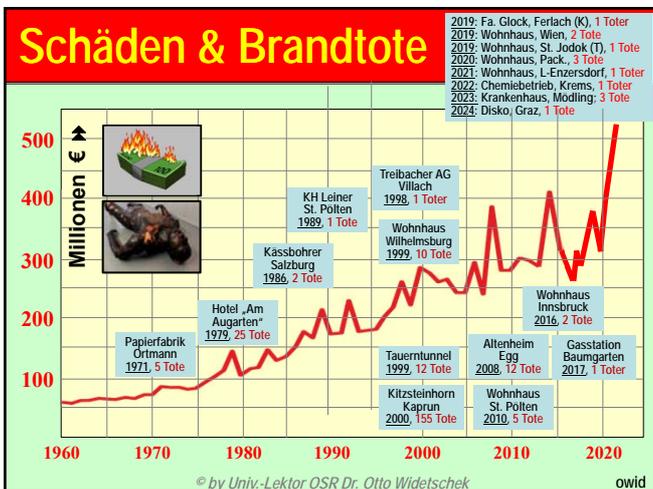
---

---

---

---

---



6

---

---

---

---

---

---

---

---

---

---

---

---

## Tankwagenbrand (1964)



**Graz, Grieskai**

**10.000 l Benzin  
brennen!  
18 Verletzte**

**Zusammenstoß**

7

---

---

---

---

---

---

---

---

## Industriebrand (1971)



**Papierfabrik  
Ortmann, NÖ**

**5 Tote Feuerwehr-  
männer**

**Schweißen**

8

---

---

---

---

---

---

---

---

## Wohnhaus-Explosion (1976)



**Graz,  
Plabutscherstr.**

**Umstellung von  
Stadtgas auf Erdgas  
(Dichtungen), 2 Tote**

**Rauchen**

9

---

---

---

---

---

---

---

---



10

---

---

---

---

---

---

---

---



11

---

---

---

---

---

---

---

---



12

---

---

---

---

---

---

---

---



13

---

---

---

---

---

---

---

---



14

---

---

---

---

---

---

---

---



15

---

---

---

---

---

---

---

---

## Gasflaschenexplosion (1990)



Fa. Rigips, Bad Aussee, ST

- ▶ 10.000 m<sup>2</sup> Halle zerstört!
- ▶ Acetylen
- ▶ PCB-Trafos

Schweißen

16

---

---

---

---

---

---

---

---

## Kulturbau (1992)



Redoutensäle, Hofburg, Wien

Zerstörung von Kulturgütern!

Raucherwaren

17

---

---

---

---

---

---

---

---

## Textilbrand (1993)



Fa. Palmers, Wr. Neudorf

Kunststoffe, Löschen mit Überdruck!

Vermutlich Brandstiftung

18

---

---

---

---

---

---

---

---



19

---

---

---

---

---

---

---

---



20

---

---

---

---

---

---

---

---



21

---

---

---

---

---

---

---

---



22

---

---

---

---

---

---

---

---



23

---

---

---

---

---

---

---

---



24

---

---

---

---

---

---

---

---

## Brand in einer Bank (1998)



25

---

---

---

---

---

---

---

---

## Hotel & Freizeitclub (1998)



26

---

---

---

---

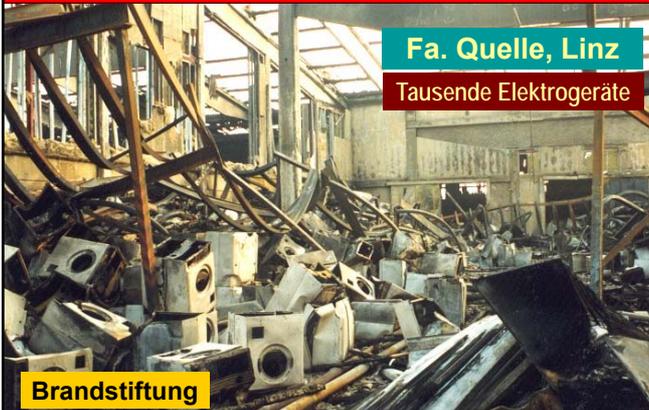
---

---

---

---

## Lagerhausbrand (1998)



27

---

---

---

---

---

---

---

---

## Tunnelbrand (1999)



**Tauerntunnel,  
Salzburg**

- ▶ 12 Tote
- ▶ 16 LKW, 24 PKW
- ▶ 24.000 Lackspraydosen
- ▶ 6,4 km einröhriger Tunnel

**Auffahrunfall mit Brand**

28

---

---

---

---

---

---

---

---

## Wohnhaus (1999)



**Wilhelmsburg,  
NÖ**

**Gasexplosion, 10 Tote**

**Anbohren einer Gasleitung  
Zündfunken**

29

---

---

---

---

---

---

---

---

## Standseilbahn (2000)



**Kaprun, Kitzstein-  
horn, S**

- ▶ 155 Tote
- ▶ 12 Personen gerettet
- ▶ 3,2 km Tunnel
- ▶ 16 Angeklagte

**Heizlüfter**

30

---

---

---

---

---

---

---

---



31

---

---

---

---

---

---

---

---



32

---

---

---

---

---

---

---

---



33

---

---

---

---

---

---

---

---



34

---

---

---

---

---

---

---

---



35

---

---

---

---

---

---

---

---



36

---

---

---

---

---

---

---

---



37

---

---

---

---

---

---

---

---



38

---

---

---

---

---

---

---

---



39

---

---

---

---

---

---

---

---

## Altenheim (2008)



**KLEINE ZEITUNG**  
Inferno im Seniorenheim  
19.10.2008

**Altenheim, Egg, V**  
Desolater Brandschutz, 12 Tote

**Rauchwaren**

40

---

---

---

---

---

---

---

---

## Tankwagenbrand (2009)



**Lassnitzhöhe/ Graz**  
30.000 l Benzin und Dieselöl, Umweltkatastrophe

**Reifenplatzer**

41

---

---

---

---

---

---

---

---

## Holzindustrie (2009)



**Fa. Holzbau Weiz**  
Ursache: Ölgetränkte Putzlappen

**Selbstentzündung**

42

---

---

---

---

---

---

---

---



43

---

---

---

---

---

---

---

---



44

---

---

---

---

---

---

---

---



45

---

---

---

---

---

---

---

---



46

---

---

---

---

---

---

---

---



47

---

---

---

---

---

---

---

---



48

---

---

---

---

---

---

---

---



49

---

---

---

---

---

---

---

---



50

---

---

---

---

---

---

---

---



51

---

---

---

---

---

---

---

---



52

---

---

---

---

---

---

---

---



53

---

---

---

---

---

---

---

---



54

---

---

---

---

---

---

---

---



55

---

---

---

---

---

---

---

---



56

---

---

---

---

---

---

---

---



57

---

---

---

---

---

---

---

---



58

---

---

---

---

---

---

---

---



59

---

---

---

---

---

---

---

---



60

---

---

---

---

---

---

---

---



61

---

---

---

---

---

---

---

---



62

---

---

---

---

---

---

---

---



63

---

---

---

---

---

---

---

---

### Recyclinganlage (2021)



St. Michael, Stmk.  
Totalbrand, Hoher Brandschaden

Lithium-Ionen-Batterie (?)

Quelle: BLAULICHT 7/2021

64

---

---

---

---

---

---

---

---

### Waldbrand (2021)



Höllental (Rax), NÖ

- ▶ Größter Waldbrand in Österreich
- ▶ 13 Tage Einsatz
- ▶ 7.753 Einsatzkräfte
- ▶ 1.355 Fahrzeuge
- ▶ 16 Fluggeräte

Ursache unbekannt (Mensch)

Quelle: BLAULICHT 12/2021 owid

65

---

---

---

---

---

---

---

---

### Holzspänelager (2022)



Gußwerk und Kirchberg, Stmk.  
Hoher Brandschaden

Technischer Defekt an Förderanlagen

Quelle: BLAULICHT 3/2022

66

---

---

---

---

---

---

---

---

## Chemiebetrieb (2022)



**Krems, NÖ**

**Demontagearbeiten,  
1 Toter, 2 Verletzte,  
Totalschaden**

**Leck am Propan-Sauerstoff-  
Schweißbrenner**

Quelle: BLAULICHT 6/2022

67

---

---

---

---

---

---

---

---

## Historische Mühle (2023)



**Rösselmühle, Graz**

- ▶ Schwierige Brandbekämpfung
- ▶ Kapazitätsgrenzen der Berufsfeuerwehr

**Brandstiftung**

Quelle: BLAULICHT 6/2023

68

---

---

---

---

---

---

---

---

## Krankenhaus (2023)



**LKH Mödling, NÖ**

- ▶ 3 Tote, 11 Verletzte,  
90 Pers. evakuiert
- ▶ Organisatorische  
Mängel (Alarmierung,  
BTF, Sauerstoff?)

**Rauchen im Bett**

Quelle: BLAULICHT 6/2023

69

---

---

---

---

---

---

---

---

## Brand im Tunnel (2023)



**Terfenertunnel, Tirol**

- ▶ Tunnel 16 km lang!
- ▶ Zwei Autos brennen
- ▶ 151 Personen gerettet
- ▶ Beinahe-Katastrophe à la Kaprun

**Lichtbogen**

Quelle: BLAULICHT 7-8/2023 © by Dr. Otto Widetschek, KFU Graz

70

---

---

---

---

---

---

---

---

## Diskothekenbrand (2024)



**Stern-Bar, Graz**

- ▶ 1 Tote, 4 Schwerverletzte
- ▶ 9 Personen gerettet
- ▶ Extreme feuerpolizeiliche Mängel
- ▶ Christbaum

**Pyrotechn. Artikel?**

Quelle: BLAULICHT 2/2024 © by Dr. Otto Widetschek, KFU Graz

71

---

---

---

---

---

---

---

---

## Anstieg der Brandschäden



**Große Brandabschnitte**

© by Dr. Otto Widetschek, KFU Graz owid

72

---

---

---

---

---

---

---

---



73

---

---

---

---

---

---

---

---



74

---

---

---

---

---

---

---

---

**Anstieg der Brandschäden**

Gigantismus

Große Brandabschnitte

Hohe Wertdichte

EDV- und Roboteranlagen

© by Dr. Otto Widetschek, KFU Graz owid

75

---

---

---

---

---

---

---

---



76

---

---

---

---

---

---

---

---



77

---

---

---

---

---

---

---

---



78

---

---

---

---

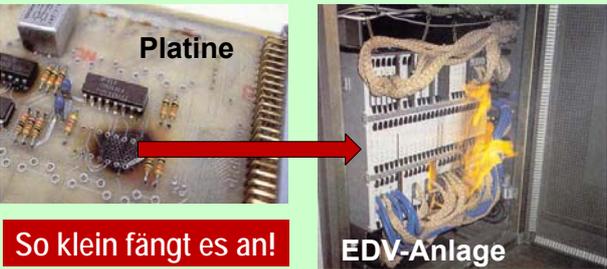
---

---

---

---

## Brände in EDV-Anlagen



**So klein fängt es an!**

Hier kann man z. B. mit stationären Gaslöschanlagen den Brandschutz gewährleisten!

© by Dr. Otto Widetschek, KFU Graz owid

79

---

---

---

---

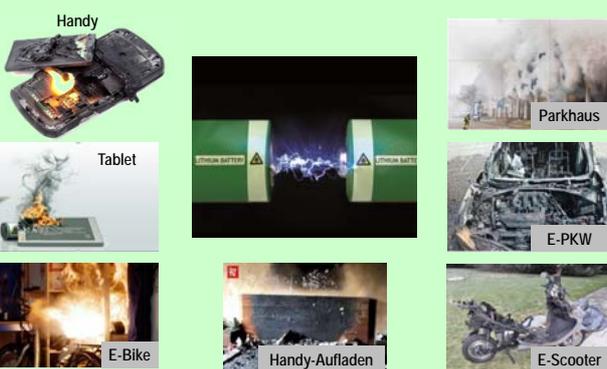
---

---

---

---

## Lithium-Ionen-Batterien



© by Dr. Otto Widetschek, KFU Graz owid

80

---

---

---

---

---

---

---

---

## Technisierung



© by Dr. Otto Widetschek, KFU Graz owid

81

---

---

---

---

---

---

---

---



82

---

---

---

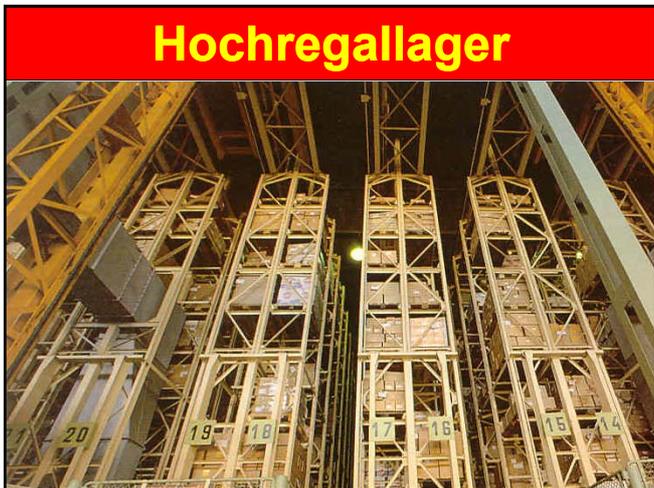
---

---

---

---

---



83

---

---

---

---

---

---

---

---

**Anstieg der Brandschäden**

Gigantismus  
Große Brandabschnitte

Hohe Wertdichte

Kunststoffe & Chemikalien  
Große Brandbelastung

EDV- und Roboteranlagen

© by Dr. Otto Widetschek, KFU Graz owid

The infographic features a light green background with four distinct icons. In the top left, an elephant is shown next to a tall, thin vertical bar, representing 'Gigantismus' (gigantism) and 'Große Brandabschnitte' (large fire sections). In the top right, a computer monitor and a robot are shown, representing 'EDV- und Roboteranlagen' (IT and robotic systems). In the bottom left, a chair and a stack of barrels are shown, representing 'Kunststoffe & Chemikalien' (plastics and chemicals) and 'Große Brandbelastung' (high fire load). The text 'Hohe Wertdichte' (high value density) is centered between the top and bottom icons. At the bottom, the copyright information '© by Dr. Otto Widetschek, KFU Graz' and the logo 'owid' are visible.

84

---

---

---

---

---

---

---

---

## Brennbare Lagerungen



85

---

---

---

---

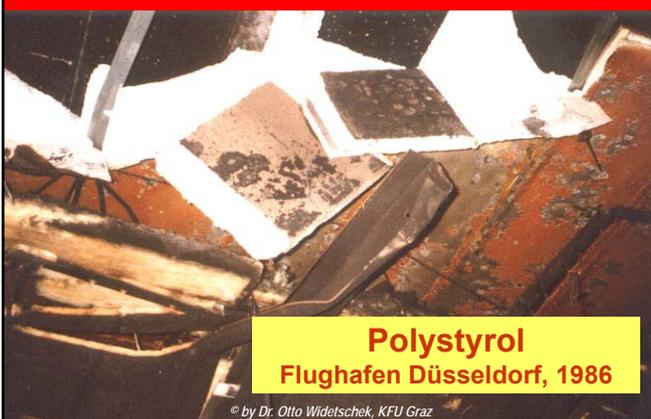
---

---

---

---

## Schaumkunststoffe



86

---

---

---

---

---

---

---

---

## Brennbare Wärmedämmung



87

---

---

---

---

---

---

---

---

## Verpackungen



88

---

---

---

---

---

---

---

---

## Brennbare Flüssigkeiten



89

---

---

---

---

---

---

---

---

## Lacke, Lösungsmittel



90

---

---

---

---

---

---

---

---

## Anstieg der Brandschäden

Gigantismus  
Große Brandabschnitte

Hohe Wertdichte  
EDV- und Roboteranlagen

Kunststoffe & Chemikalien  
Große Brandbelastung

„Gift-Cocktail“  
CO, HCl, HCN

Folgeschäden (HCl, Dioxine...)

© by Dr. Otto Widetschek, KFU Graz owid

91

---

---

---

---

---

---

---

---

## PVC-Brand

Lengerich, BRD, 1992

92

---

---

---

---

---

---

---

---

## Kabelisolierungen

Nationalbank, Wien 1979

Flughafen Düsseldorf, 1996

© by Dr. Otto Widetschek, KFU Graz owid

93

---

---

---

---

---

---

---

---

## Chloridschäden

ca. 1 Liter Salzsäure

1 kg PVC

einige 100 Liter HCl-Dampf

© by Dr. Otto Widetschek, KFU Graz owid

94

---

---

---

---

---

---

---

---

## Ultragifte

Düsseldorf 1996

© by Dr. Otto Widetschek, KFU Graz

95

---

---

---

---

---

---

---

---

## Korrosionen

Fa. MACO, Trieben, 2003

Bild: Belfor

96

---

---

---

---

---

---

---

---

## Kontaminierter Schaltschrank



97

---

---

---

---

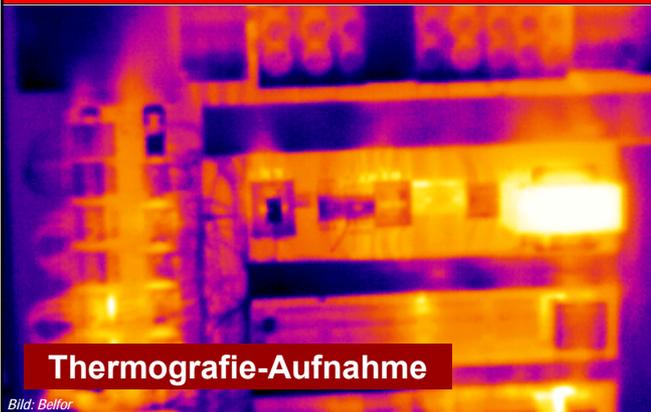
---

---

---

---

## „Heiße Stellen“



98

---

---

---

---

---

---

---

---

## Brandkatastrophen



99

---

---

---

---

---

---

---

---



100

---

---

---

---

---

---

---

---



101

---

---

---

---

---

---

---

---



102

---

---

---

---

---

---

---

---



103

---

---

---

---

---

---

---

---



104

---

---

---

---

---

---

---

---



105

---

---

---

---

---

---

---

---



106

---

---

---

---

---

---

---

---

---

---



107

---

---

---

---

---

---

---

---

---

---



108

---

---

---

---

---

---

---

---

---

---

## Kommunikationsprobleme



109

---

---

---

---

---

---

---

---

## Die 10 Todsünden

- 1. Große Brandabschnitte, mangelnder baulicher Brandschutz**
- 2. Unzureichende Flucht- und Rettungswege**
- 3. Hohe Brandbelastung (Plaste, gefährliche Stoffe)**
- 4. PVC, organische Stoffe (▶ Folgeschäden)**
- 5. Keine Brandmeldeanlage**

© by Dr. Otto Widetschek, KFU Graz

owid

110

---

---

---

---

---

---

---

---

## Die 10 Todsünden

- 6. Keine Sprinkleranlage**
- 7. Fehlende RWA (▶ Flashover)**
- 8. Schlechter Betriebsbrandschutz**
- 9. Kein Intrusionsschutz (▶ Brandstiftung)**
- 10. Menschliches Versagen**  
▶ Brandkatastrophe

© by Dr. Otto Widetschek, KFU Graz

owid

111

---

---

---

---

---

---

---

---

## Brandschutz-Sparpaket

**Brandschutzgesetz**

<p><b>Pflichtvorlesung</b></p> <p><b>Brandschutz-Fortbildung (Planer)</b></p> <p><b>Brandschutz-SV in Jury</b></p> <p><b>Einheitliche Gesetze (OIB-Richtlinien) und Sprachregelung</b></p> <p><b>Bauinstanz 1.Ordnung</b></p> <p><b>Bundesbauten</b></p> <p><b>Betriebsbrandschutz</b></p>	<p><b>Selbst(Zivil)schutz</b></p> <p><b>Feuerwehren, BV</b></p> <p><b>Versicherungen</b></p> <p><b>Rechtssprechung (Verursacherprinzip)</b></p> <p><b>Zentrale Brandstatistik</b></p> <p><b>Safety &amp; Security (Brandstiftung)</b></p> <p><b>SV (einheitliche Ausbildung)</b></p>
--	--



© by Dr. Otto Widetschek, KFU Graz owid

112

---

---

---

---

---

---

---

---

## Welche Strategie?

**Beten beruhigt !**



**Versichern hilft !**



**Vorbeugen schützt !**



© by Dr. Otto Widetschek, KFU Graz owid

113

---

---

---

---

---

---

---

---

## Ende des Vortrags



Danke!

Owid

Letzte Überarbeitung:  
Oktober 2024

owid

114

---

---

---

---

---

---

---

---