

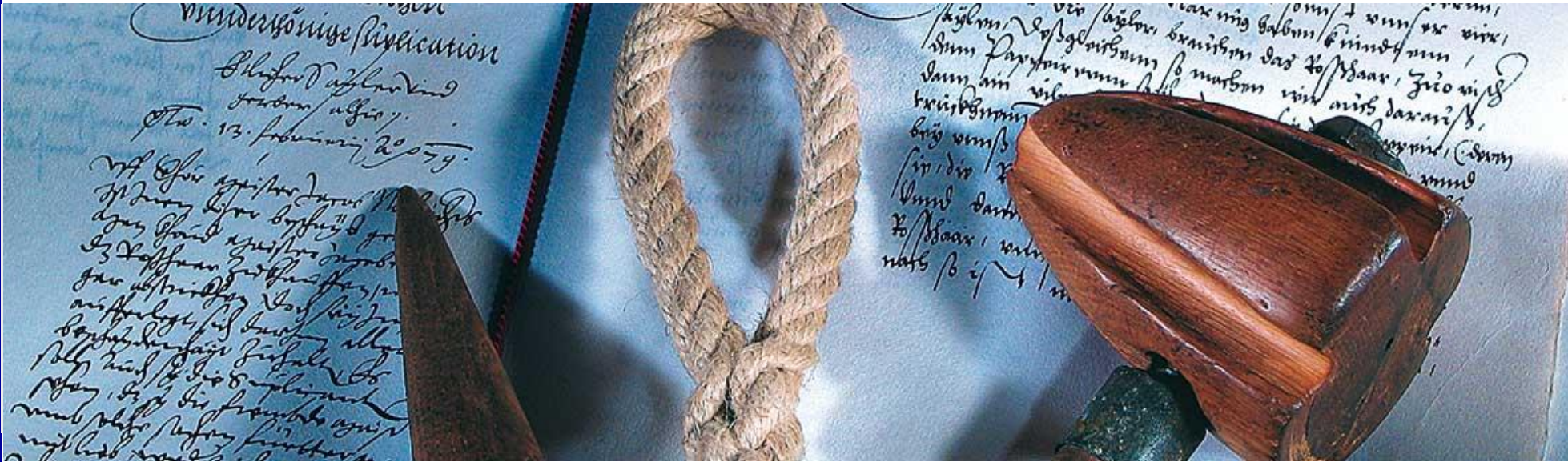


## **PFEIFER – Tehnologii de îmbinare și ancorare pentru ridicare, la structuri prefabricate din beton armat**

**Conferință internațională PREFBETON Cluj Napoca, 04.10.2018**

**Dipl. Ing. Szabo Levente**

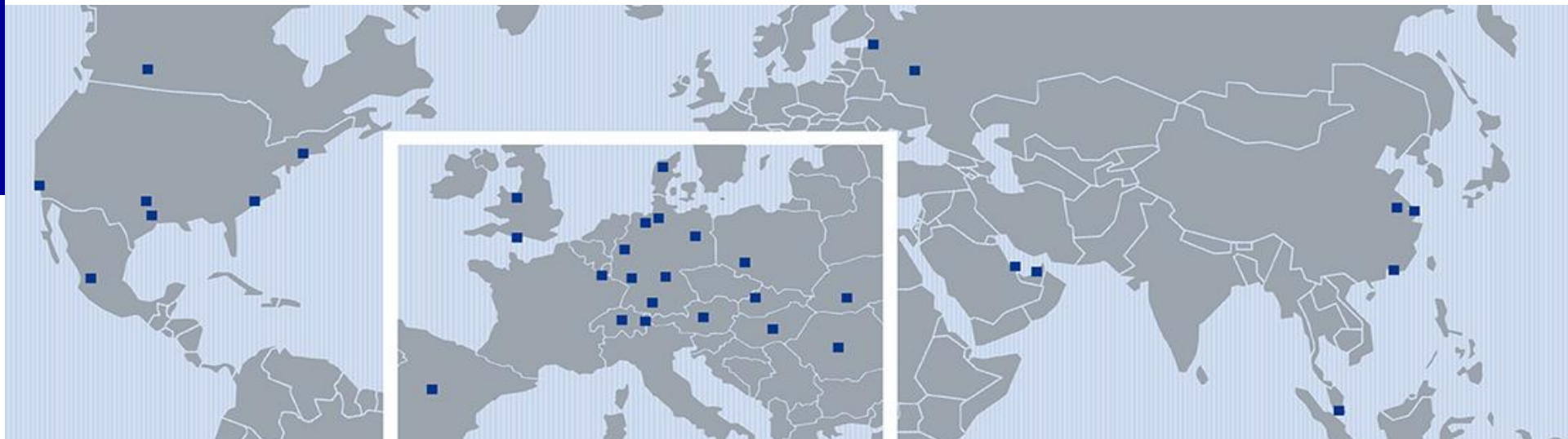
- Prezentare grup PFEIFER
- Importanța sistemelor de îmbinare și ridicare
- Aprobări pentru zone seismice
- Seminarii PFEIFER în România







# Prezență globală





## Departamentul de cabluri pentru utilaje



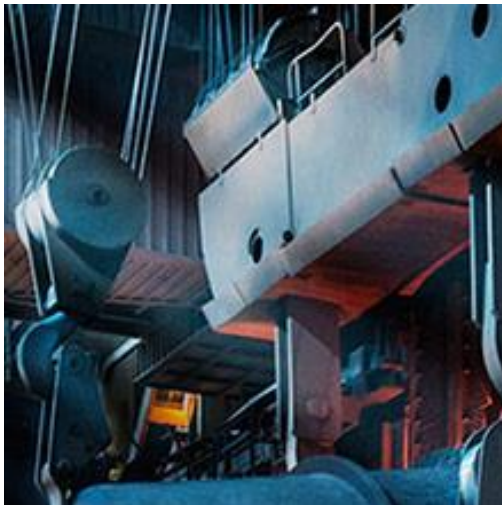
▪ Cabluri pentru macarale



▪ Cabluri pentru macarale turn



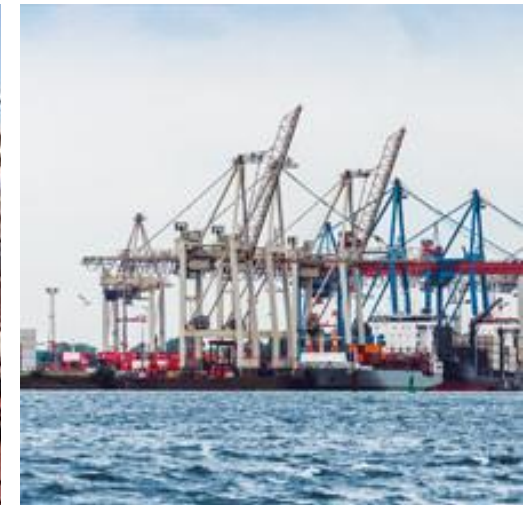
▪ Cabluri pentru utilaje de forat



▪ Cabluri pentru industrie



▪ Cabluri pentru utilaje de minerit



▪ Cabluri pentru macarale portuare

## Departamentul de cabluri pentru utilaje

### Original LIEBHERR spare parts



**LIEBHERR GENUINE ROPE**  
BY  
**PFEIFER**

- As a supplier of original equipment for LIEBHERR cranes, we also supply the original spare parts. **These are the only ropes which LIEBHERR approves for!**
- Recognizable by the yellow label

**LIEBHERR original replacement ropes guarantee decisive advantages**

- Highest operational safety



## Departamentul de cabluri pentru lifturi



▪ Elevator ropes



▪ Rope end fastenings



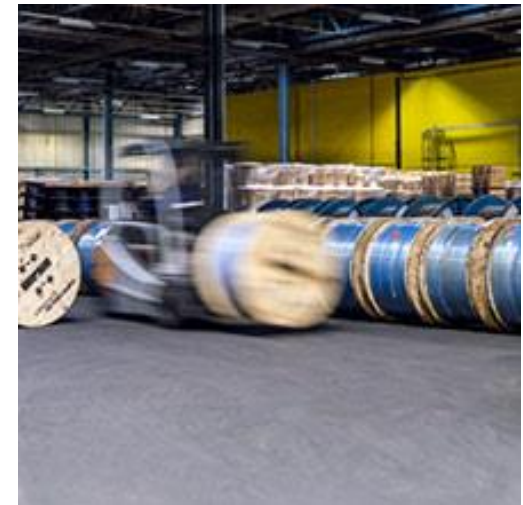
▪ Weight compensation



▪ Rope care and maintenance



▪ Technical advice



▪ Logistics solutions



## Cabluri pentru lifturi

### References



**Burj Khalifa,  
U.A.E.**



**One World Trade Center,  
USA**



**Lotte World Tower,  
Korea**

**PFEIFER DRAKO elevator products – solutions for the most demanding elevator systems in the world.**

**High-performance ropes from PFEIFER DRAKO "Made in Germany" are used for the highest, fastest and most demanding elevator systems worldwide.**

**Examples for the implementation of application-based wire rope solutions in cooperation with our customers are installed in 7 of the 10 tallest buildings in the world.**

# Cabluri cu aplicații speciale - soluții împotriva calamităților naturale



▪ Rockfall protection systems



▪ Rockface covering systems



▪ Avalanche protection system



▪ Mudflow protection systems



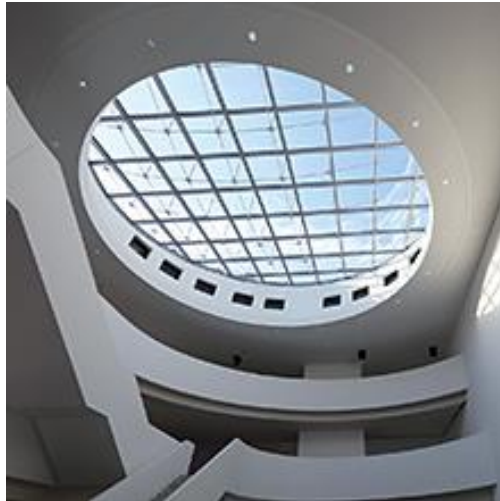
▪ Anchoring technology



▪ Services



## Departamentul de cabluri structurale



▪ Acoperișuri



▪ Fațade



▪ Închideri



▪ Forme arhitecturale



▪ Poduri



▪ Structuri mobile

# Departamentul de cabluri structurale

## Learn more about PFEIFER Cable Structures



**Contacts**

Contacts >



**New simplicity in  
Lightweight Construction**

Learn more >



**Roof replacement,  
Mercedes-Benz Arena,  
Stuttgart, Germany**

Learn more >



**Slaski Stadium - How to  
rebuild a legend.**



**Olympic Stadium London  
Roof Transformation**



**Erection of roof structure,  
Moses Mabhida Stadium,  
Durban, South Africa**



## Departamentul de echipamente de ridicare



▪ Sheet handling



▪ Coil grabs



▪ Turning devices



▪ Spreader beams



▪ Lifting clamps



▪ Special equipment

## Departamentul de tehnologii pentru construcții



**Sisteme de ancore de transport**



**Tehnologie de fixare**



**Tehnologie de îmbinare**



**Tehnică de armare**



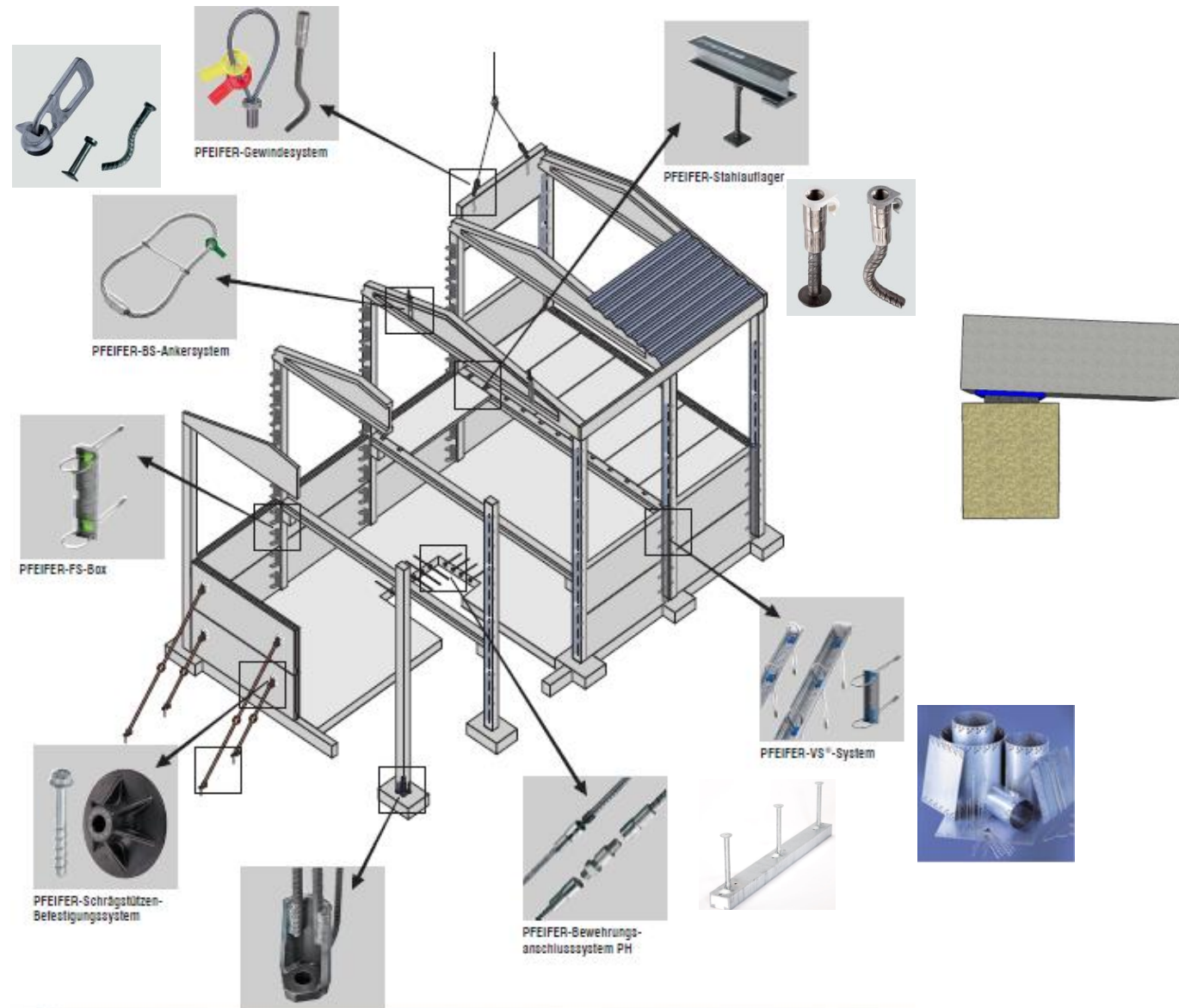
**Seminarii de specialitate**



**Support**



## Departamentul de tehnologii pentru construcții



## Sisteme PFEIFER aprobate pentru zone seismice

**PFEIFER**  
**Ancoră cu talpă DB682**



- ETA-11/0288
- Categorie de performanță seismică C1 și C2

**Sistem PH**



- Soluții personalizate
- Seism moderat S1 și seism violent S2

**VS Slim Box**



...In lucru...



## Sisteme PFEIFER aprobate pentru zone seismice

### PFEIFER Ancoră cu talpă DB682



- ETA-11/0288
- Categorie de performanță seismică C1 și C2

Deutsches Institut für Bautechnik **DIBt**

Approval body for construction products and types of construction  
Bautechnisches Prüfamt  
An institution established by the Federal and Lander Governments

Member of **ETA**  
www.eta.eu

★ ★ ★  
★ Designated according to Article 39 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment) ★ ★ ★

Deutsches Institut für Bautechnik **DIBt**

Page 3 of 26 | 27 July 2017

**European Technical Assessment**      **ETA-11/0288**  
of 27 July 2017

English translation prepared by DIBt - Original version in German language

**General Part**

Technical Assessment Body issuing the European Technical Assessment: Deutsches Institut für Bautechnik

Trade name of the construction product: PFEIFER DB Anchor System

Product family to which the construction product belongs: Cast-in anchor with internal thread

Manufacturer: Pfeifer Seil- und Hebeotechnik GmbH  
Dr.-Karl-Lenz-Str. 66  
87700 Memmingen

Manufacturing plant: Pfeifer Seil- und Hebeotechnik GmbH  
Dr.-Karl-Lenz-Str. 66  
87700 Memmingen

This European Technical Assessment contains: 26 pages including 3 annexes

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of: European Assessment Document No. 330012-01-0601

This version replaces: ETA-11/0288 issued on 10 September 2017

Deutsches Institut für Bautechnik  
Kolonnenstraße 30 B | 10629 Berlin | GERMANY | Phone: +49 30 78730-0 | Fax: +49 30 78730-320  
Z28146.17

**European Technical Assessment**  
ETA-11/0288  
English translation prepared by DIBt

**Specific Part**

**1 Technical description of the product**

The PFEIFER-DB-Anchor-System in the size of 12, 16, 20, 24 and 30 is an anchor consisting of an internal threaded socket pressed on a ribbed reinforcement bar. The socket is made of galvanneal steel or stainless steel. The reinforcement bar may be waved (PFEIFER Waved Anchor DB 682) or may be straight with a head pressed on one end (PFEIFER Foot-Mounted Anchor DB 682). The anchor is imbedded surface-flush or sunk in the concrete. The anchorage is characterised by bond of the waved reinforcement bar or mechanical interlock at the head. The product description is given in Annex A.

**2 Specification of the intended use in accordance with the applicable European Assessment Document**

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the anchor of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

**3 Performance of the product and references to the methods used for its assessment**

**3.1 Mechanical resistance and stability (BWR 1)**

Essential characteristic	Performance
Characteristic values for resistance for static and quasi-static loads and displacements	See Annex C1 to C6
Characteristic resistance for seismic performance categories C1 and C2 and displacements	See Annex C7 to C10

**3.2 Safety in case of fire (BWR 2)**

Essential characteristic	Performance
Reaction to fire	Anchorage satisfy requirements for Class A1

**4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base**

In accordance with EAD No. 330012-01-0601, the applicable European legal act is: [96/582/EC].  
The system to be applied is: 1

Z28146.17
8.06.01-26015

## Sisteme PFEIFER aprobate pentru zone seismice

### Sistem PH



- Soluții personalizate
- Seism moderat S1 și seism violent S2



Materials Testing Laboratory  
for Construction Engineering  
Technische Universität München



**PRODUCT  
CERTIFICATE**  
Ü2358 - 2018

Herewith it is certified, that

the product **"Bewehrungsschraubanschluss couplers and anchorage of reinf B500B/B500C, nominal diameter**

of the company **Pfeifer Seil- und Hebetechne  
Dr.-Karl-Lenz-Straße 66  
87700 Memmingen**


plant **see above**

is surveillanced by MPA BAU and, considering the results of the and of the external surveillance by the department „Bau“ satisfies the requirements of


**ISO 15835-1:2009 and ISO 15835-2:21  
and declared producer values (see Ann**

This certificate expires on 2022-09-04.





Materials Testing Laboratory  
for Construction Engineering  
Technische Universität München




**ANNEX 1 to PRODUCT  
CERTIFICATE**  
Ü2358 - 2018


Product **"Bewehrungsschraubanschluss PH" Mechanical couplers and anchorage of reinforcing steel bars B500B/B500C, nominal diameter: 8 to 40 mm**

**Characteristics and values:**

Characteristics	Test method	Unit	Declared value	Annotation
Tensile strength of the mechanical splice: $R_m$	ISO 15835-2:2009 DIN EN ISO 15630-1:2011	N/mm <sup>2</sup>	$R_m \geq 550$	
Ductility of the mechanical splice: $A_{g0}$ - percentage of total elongation at maximum force	ISO 15835-2:2009 DIN EN ISO 15630-1:2011	%	$A_{g0} \geq 3.0$	
Slip of the mechanical splice: $\Delta L_s$ - calculated slip at $0.6 \cdot R_{eH, Spec}$ (specified yield strength)	ISO 15835-2:2009	mm	$\Delta L_s \leq 0.10$	
"High cycle elastic fatigue loading": N - Load cycles in the dynamic fatigue test with $\sigma_{max} = 0.6 \cdot R_{eH, Spec}$ (maximum stress) and $2\sigma_s = 70$ N/mm <sup>2</sup> (stress range)	ISO 15835-2:2009	-	$N \geq 2 \cdot 10^6$	Diameter 8 to 32 mm only
"Low cycle reverse elastic-plastic fatigue loading": $u_{20}$ - remaining deformation of reverse tensile and compression loading from earthquakes, category S1 (moderate)	ISO 15835-2:2009	mm	$u_{20} \leq 0.3$	Only for the combination of (PH-MU)-(PH-K)-(PH-MU), diameter 8 to 28 mm, steel grade B500C
"Low cycle reverse elastic-plastic fatigue loading": $u_4$ and $u_4$ - remaining deformation of reverse tensile and compression loading from earthquakes, category S2 (violent)	ISO 15835-2:2009	mm	$u_4 \leq 0.3$ $u_4 \leq 0.6$	Only for the combination of (PH-MU)-(PH-K)-(PH-MU), diameter 8 to 28 mm, steel grade B500C



Munich, 05.09.2017



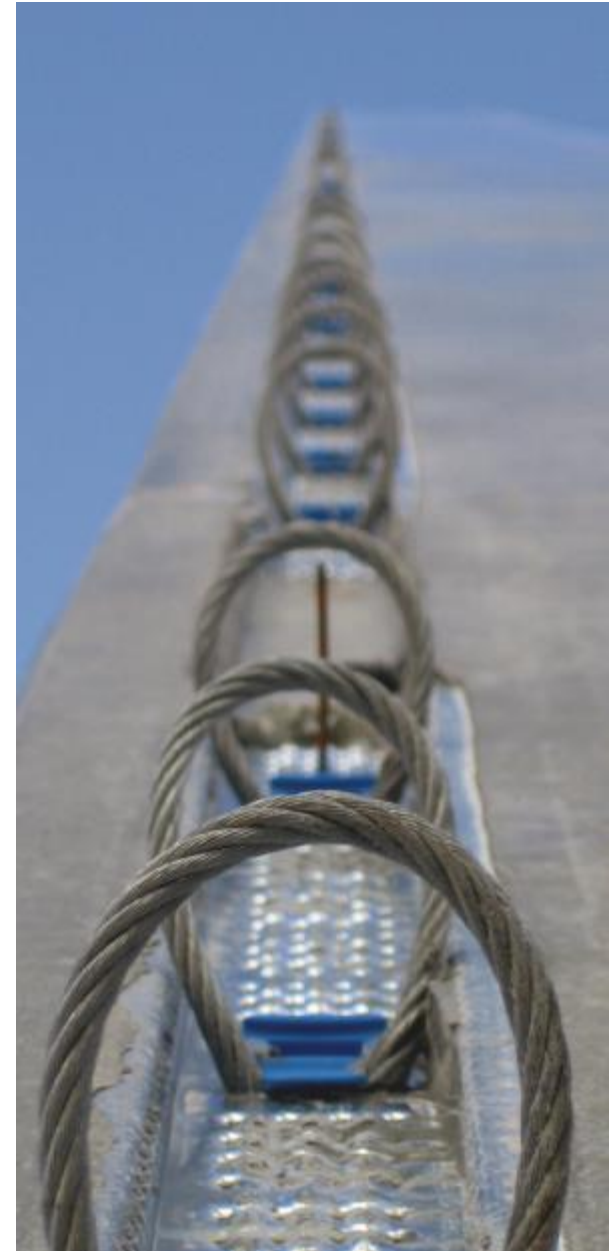
Dr.-Ing. Bernd Wallner  
(Deputy Head of Certification body)



VS Slim Box

*În lucru*

*Aprobarea pentru zone seismice  
în anul 2019*



## Seminarul PFEIFER

### Technical seminars

In our proven technical seminars, competent and experienced instructors present all the important and interesting facts on theory and practice to your employees as well as the newest standards. Why not also make use of our on-site technical seminars and instructions, with contents that we customize especially to suit your applications, loads and products?



#### **Precast Construction and Practice Seminar for structural engineers**

The field of prefabricated concrete construction is characterized by short



#### **Technical seminar on basic principles for competent persons (technical experts) Lifting Anchor Systems (7a)**

The seminar teaches the basic



#### **Technical seminar on the safe application of Transportankersysteme (7b)**

This seminar is an abbreviated version of the seminar Basic





# Seminarul PFEIFER – Sibiu, 11 Septembrie 2018

**PFEIFER**

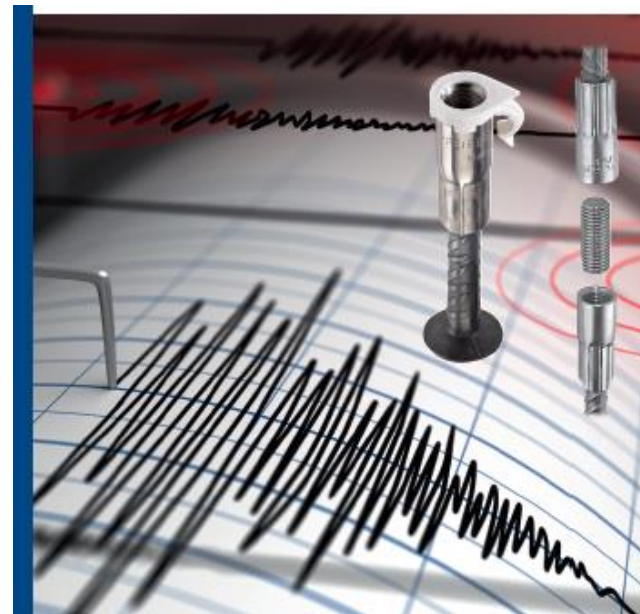


# Seminarul PFEIFER – Sibiu, 11 Septembrie 2018

# PFEIFER

## Agendă:

- 08:30 - 09:00 **Sosire invitați**
- 09:00 - 09:15 **Introducere și prezentare program**  
*Dipl.-Ing. Szabó Levente, limba română*
- 09:15 - 10:00 **Îmbinări cu Șine de Ancorare JORDAHL sub acțiunea forțelor seismice**  
*Dipl.-Ing. Florian Juller, limba engleză*
- 10:00 - 10:45 **Structuri cu cabluri și membrane – Noul sistem PFEIFER UMIX**  
*Dipl.-Ing. Christian Fitz, limba engleză*
- 10:45 - 11:15 **Pauză de cafea**
- 11:15 - 12:00 **Invitați speciali – Dr. Ing. Mihai Pavel, vicepreședinte AICPS și Prof. Dr. Ing. Viorel Popa, decan UTCB**  
**Calculul structurilor cu planșee dală în zone seismice**  
*Limba română*
- 12:00 - 12:45 **Construcții din beton impermeabil și membrane preinstalate pentru creșterea performanței. H-BAU Technik GmbH**  
*Dipl.-Ing. Björn Wingerter, limba engleză*
- 13:00 - 15:30 **Pauză de masă și tur al orașului Sibiu**
- 15:30 - 16:15 **Calculul prinderilor permanente sub acțiunea forțelor seismice. Ancora PFEIFER DB**  
*Dipl.-Ing. Erwin Scholz, limba engleză*
- 16:15 - 17:00 **Calculul aparatelor de reazem fixe și cu suprafețe de glisare. CALENBERG Ingenieure GmbH.**  
*Dipl.-Ing. Byung-Yong Jang, limba engleză*
- 17:00 - 17:30 **Noutăți produse PFEIFER. Grinda hibridă PFEIFER și noul connector LCOM**  
*Dipl.-Ing. Erwin Scholz, limba engleză*
- 17:30 - 18:00 **Discuții finale - Încheiere**



**Email:**

**[Lszabo@jordahl-pfeifer.ro](mailto:Lszabo@jordahl-pfeifer.ro)**

**Telefon:**

**+40.740.898.509**



# Seminar PFEIFER – Sibiu, 11 Septembrie 2018

**PFEIFER**



## 11.09.2018 PFEIFER Technical Seminar: Seismic Solutions

Von	Bis	Programmteil	Referent
08:30	09:00	Anmeldung	
09:00	09:15	Programm und Firmenvorstellung	Dipl.-Ing. Szabo
09:15	10:00	Connections with anchor channels under seismic loads	Dipl.-Ing. Florian Julier
10:00	10:45	Cable and membran structures: New PFEIFER UMX System	Dipl.-Ing. Christian Fitz
10:45	11:15	Pause	
11:15	12:00	Seismic design of flat slab structures	Prof. Dr. Ing. Viorel Popa
12:00	13:00	Waterproof concrete constructions and system upgrade with Pre-applied membranes	Dipl.-Ing. Björn Wingerter
13:00	15:30	Mittagessen und Stadtführung Hermannstadt (Sibiu)	
15:30	16:15	Seismic calculation and design for preinstalled threaded anchors	Dipl.-Ing. Erwin Scholz
16:15	17:00	Calculation and design of elastomeric bearing support elements	Dipl.-Ing. Byung-Yong Jang
17:00	17:30	New PFEIFER Products: LCON and seismic	Dipl.-Ing. Erwin

### PFEIFER Technical Seminar: Seismic Solutions

**11.09.2018 08:30 - 18:00 Uhr Sibiu Judetul Sibiu F180306**

Veranstalter: JORDAHL&PFEIFER Rumänien

Seminar für Ingenieure aus Ingenieurbüros und Fertigteilverken in englischer und rumänischer Sprache. Schwerpunkt Seismic bzw. Erbebenbemessung.

Produkte und Zulassungen für Seismic werden vorgestellt. Vorträge von Professor Viorel Popa (UTCB Technische Universität Bukarest) und Mihai Pavel (Vizepräsident der Rumänischen Ingenieurekammer) stehen im Mittelpunkt.

Teilnehmer aus Rumänien und Deutschland.

# CERTIFIKAT

Mr.

successfully participated at the

## „PFEIFER TECHNICAL SEMINAR: SEISMIC SOLUTIONS“

on September 11th, 2018 in Sibiu.

The following topics were presented to the participants:

- Connections with anchor channels under seismic loads
- The new simplicity for lightweight architecture
- Seismic design of flat slab structures
- Waterproofed concrete constructions and the system upgrade with Pre-applied membranes
- Seismic calculation and design for preinstalled threaded anchors
- Calculation and design of elastomeric bearing support elements
- New PFEIFER Products: LCON and seismic approved PH Reinforcement continuity system

This seminar is recognized as a training course by the Bavarian Chamber of Engineers under the registration number F 180306 with 7,25 time units.

Sibiu, September 11th, 2018

Dipl.-Ing. (FH) Klaus-Peter Gehl  
Head of Engineering Support

PFEIFER-Steel and Hebeltechnik GmbH  
Dr.-Karl-Lenz-Strasse 88  
87799 Memmingen

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Telefax: 08331-937-385

Dipl.-Ing. Szabo Levente  
Member of PFEIFER Engineering Team

bautechnik@pfeifer.de  
www.pfeifer.de



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**Vă mulțumim pentru atenție!**

**PFEIFER**

[www.pfeifer.info](http://www.pfeifer.info)