



The Technical Institute of Fire Protection



FOREWORD

The Technical Institute of Fire Protection (TIFP) has a tradition lasting more than thirty years. The main aim for establishing our institute was to provide support for firefighters. We have undergone tumultuous development over the past thirty or more years. At the beginning of the third millennium, our activities deviated from the original conception of the establishment of the institute. Both the academic and commercial spheres began to show great interest in our services. As a result of this division of our services, our institute was unable to provide firefighters with the services they deserve and which we want to provide them with. However, it was the realization of this fact that became a springboard for us. Thus, thanks to the long-term and systematic work of a number of interested people and thanks to the support of the Ministry of the Interior-General Directorate of the Fire Rescue Service of the Czech Republic (FRS CR), the institute began to change significantly. It has expanded and improved its activities for firefighters, and today it is one of the recognized supports of FRS CR units in the field of services, and there is more and more interest in its use. Even more positive is the fact that TIFP is still on the rise and this is not expected to change in the coming years.

Every year, the Technical Institute of Fire Protection issues dozens of certificates, carries out more than a hundred fire technical assessments, implements scientific projects and, in cooperation with firefighters, solves a number of problems. Nevertheless, we still encounter the fact that (not only) firefighters do not actually know what TIFP does. That's a fundamental problem, because if you don't know what we can do, and we don't know what you need, we won't be able to help you even in areas where we could. This is why this publication was created. It should give you an overview of our activities and, at the same time, a menu of our services. We firmly believe that this publication will help to bridge some gaps mentioned and contribute to streamlining our services (not only) for firefighters.

col. Ondřej Suchý, MSc., Ph.D.

director of the Technical Institute of Fire Protection in Prague

ACKNOWLEDGEMENT

This publication would not have been possible without the support of the General Directorate of the FRS CR. Namely, I would like to thank to Brig. Gen. František Zadina, MSc., Deputy DG for IRS and Operational Management, without whose consent this work would never have been created. Thanks also belong to Col. Rudolf Kramář, MSc., who helped with the editing and simplifying of the text to give it a more coherent form. The biggest thanks however belong to Col. Libuše Chvojková, MSc., who not only helped with the preparation of the publication but also took part in ensuring of the graphic design of the publication.

CONTENTS

| | |
|--------------------------------------|-----------|
| CERTIFICATION | 8 |
| TESTING LABORATORY | 14 |
| SCIENCE | 22 |
| FIRE INVESTIGATION | 32 |
| FINANCIAL MANAGEMENT | 40 |
| ACCREDITED TESTING LABORATORY | 42 |

HISTORY

TIFP has undergone a relatively dynamic development since its inception. The most important milestones in its existence include:

- in 1989, the Technical Institute of the Main Administration of the Fire Protection Corps was established. The interior of the institute was under construction, and the organization of the institute and the rules of its activities were determined
- in 1992, the Testing Laboratory for Technical Equipment was created, later renamed as the Department of Technical Equipment of Fire Protection
- in 1992, **the Technical Institute of the Main Administration of the Fire Protection Corps** was formally abolished on 31 December, and on 1 January, 1993, **the Technical Institute of Fire Protection** was established
- in 1994, the Operation and Economic Department was created to provide systematic support for the operation, services and financial management of the institute
- in 1998, the Research and Development Department was established, which makes it possible to cover increased requirements for solving of research and development projects
- in 2001, the Workplace of Authorized Services was established, which deals with certification
- in 2006, activities of TIFP in the field of fire investigation were strengthened and the Department for Investigation of Fire Causes was established, which was renamed as the Department of Fire Technical Expertise in 2012



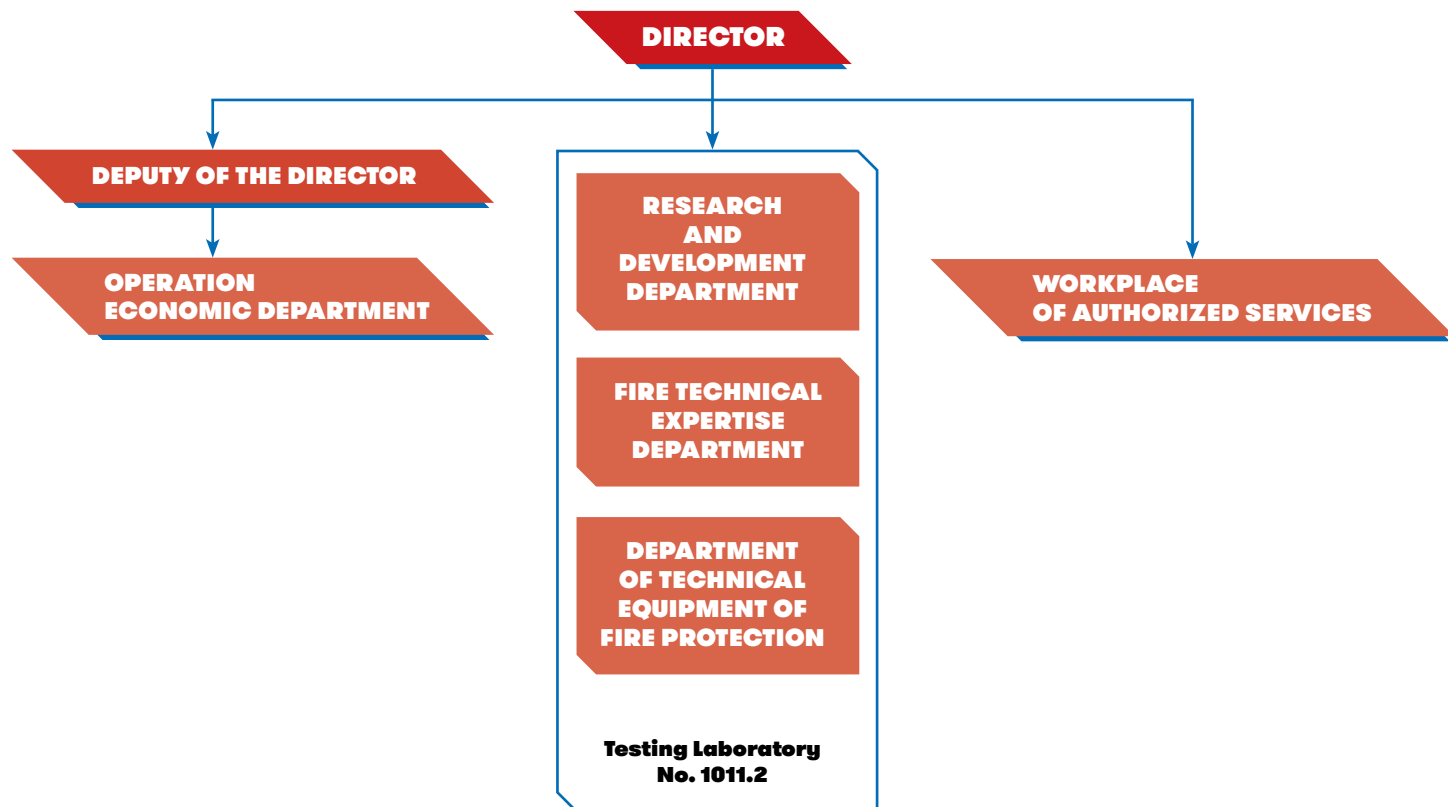
TIFP in the 90's

ORGANIZATIONAL STRUCTURE OF TIFP

The Technical Institute of Fire Protection is:

- **Authorized Body No. 221** for conformity assessment of fire equipment, material means of fire protection and personal protective equipment for firefighters
- **EU Notification Body No. 1022** for personal protective equipment for firefighters and for fire hose systems for first intervention
- **accredited Certification Body No. 3080**, having authorization for issuing examinations for atypical products

Organizationally, it consists of five departments. The Research and Development Department, the Department of Fire Technical Expertise and the Department of Technical Equipment of Fire Protection create the Testing Laboratory No. 1011.2.



MV-generální ředitelství HZS ČR
TECHNICKÝ ÚSTAV POŽÁRNÍ OCHRANY
 Certifikační orgán pro certifikaci výrobků č. 3080
 akreditovaný ČIA dle normy ČSN EN ISO/IEC 17065:2013

OSVĚDČENÍ TYPU č. C>NNN /YYYY vystavené

Výrobci
 identifikační číslo:
 na výrobek:

Certifikační orgán tímto osvědčením potvrzuje, že předmětný výrobek
 vlastnosti shodné s:

*)
 Posuzování proběhlo ve shodě s certifikačním schématem u
 v ČSN EN ISO/IEC 17067:2014, certifikační schéma produktu 3.
 Na základě posouzení systému řízení výroby certifikační o
 schopnost výrobce trvale dodržovat stanovené technické param

Nedílnou součástí tohoto osvědčení je Závěrečná zpr
 č.C>NNN/YYYY ze dne

*)Osvědčení je vydáno v rámci aktualizovaného rozsahu akr
 Toto osvědčení platí do:

CERTIFICATION

workplace of authorized services



Písková 42, 143 01 Praha 4, Tel.: 950 810 111, E-mail: tupo@tupo.izscr.cz

MV-generální ředitelství HZS ČR
TECHNICKÝ ÚSTAV POŽÁRNÍ OCHRANY
 AUTORIZOVANÁ OSOBA 221
 autorizace číslo 1/2001 ze dne 4.1.2001

CERTIFIKÁT VÝROBKU č. 221/.../20.. vydaný

Výrobci (dovozci):
 (distributor) jméno tučně, adresa
 identifikační číslo:
 na výrobek: (název výrobku tučně, výrobní číslo)

u kterého byla provedena certifikace podle ustanovení § 10 zákona č. 22/1997 Sb.,
 o technických požadavcích na výrobky a o změně a doplnění některých zákonů, ve znění pozdějších
 předpisů.

Výše uvedená autorizovaná osoba tímto certifikátem osvědčuje, že u vzorku předmětného
 výrobku zjistila shodu jeho vlastností se základními požadavky nařízení vlády č.173/1997 Sb.,
 ve znění pozdějších předpisů, a s tímto technickým předpisem:

*)
 Nedílnou součástí tohoto certifikátu je Závěrečná zpráva o posouzení shody číslo
 ze dne, která je přílohou tohoto certifikátu.

Tento certifikát se vydává pro účely vydání prohlášení výrobce (dovozce, distributor) o shodě
 výrobku s výše uvedenými předpisy

V Praze dne



Jméno a příjmení
 ředitel Technického ústavu PO

Písková 42, 143 01 Praha 4, Tel.: 950 810 111, E-mail: tupo@tupo.izscr.cz

Certification is one of the main tasks of Workplace of Authorized Services. The purpose of certification is to ensure that firefighters are equipped with the technical equipment on which they can rely in crisis situations. For these purposes, the Technical Institute of Fire Protection is designated by the Office for Standards, Metrology and Testing as Authorized Body No. 221. On the basis of this appointment, we mainly issue certificates confirming the suitability of given equipment.

At the same time, we are accredited by the Czech Accreditation Institute as Certification Body No. 3080. Based on this authorization, we issue certificates of constancy of performance. This concerns mainly non-standard products.

Manufacturers or importers (not firefighters) are obliged to request conformity assessment. An application for conformity assessment should always precede the purchase of a product for firefighters.



Certification of a fire vehicle



Climbability tests



Improper storage of cylinders

WE PERFORM CONFORMITY ASSESSMENTS (ACCORDING TO ACT NO. 22/1997 COLL., ON THE TECHNICAL REQUIREMENTS FOR PRODUCTS) FOR:

- ▾ products for intervention activity:
 - fire trucks (*with the exception of command vehicles and vehicles for fire investigation with a total weight of up to 2000 kg, fire cranes and rescue trucks*) and containers
 - fire pumps
 - hydraulic rescue equipment
 - airbags
 - ladders
 - rescue equipment for emergency escape from heights
- ▾ fire hoses, fire hose nozzles and fire fittings
- ▾ extinguishing agents
- ▾ fire hose and hydrant systems
- ▾ mobile and fixed fire extinguishers



Replacement of bronze pump with aluminium pump



Change-out of stabilizer to meet weight requirements

UNFORTUNATELY, WE OCCASIONALLY ENCOUNTER:

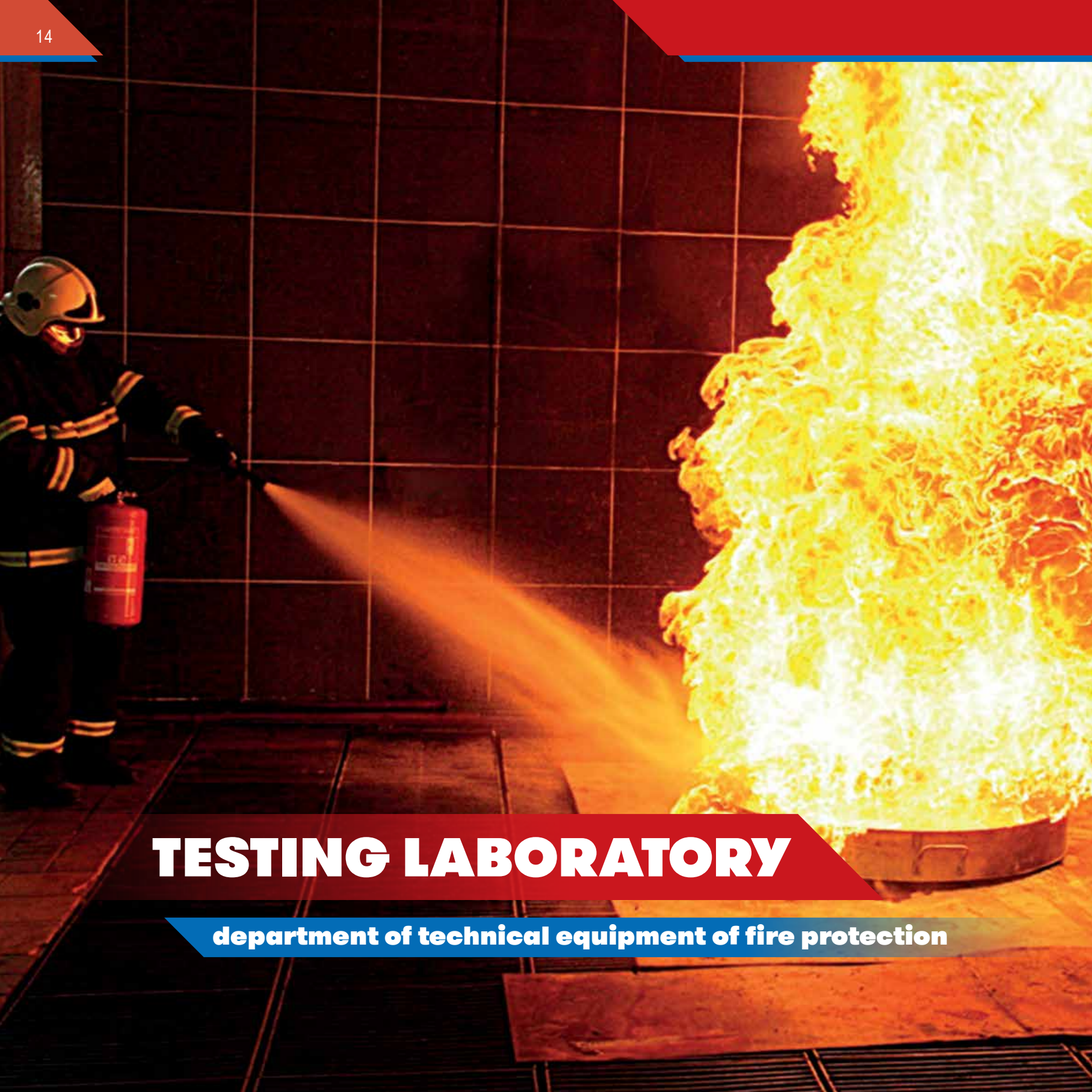
- attempts by some manufacturers or suppliers to circumvent given regulations
- misunderstanding the principles of conformity assessment:
 - *certification is carried out on the basis of decrees and standards (not the requirements of tenders)*
 - *on the basis of the application, tests are performed but a certificate is not necessarily issued (issued only when the requirements are met)*



Methods for testing extinguishing agents

OTHER ACTIVITIES OF THE DEPARTMENT INCLUDE:

- preparation of technical requirements based on updated regulations and standards
- annual control inspections focused on the system of production of certified products
- in cooperation with Research and Development Department development of new methods (*e.g. for testing fire extinguishers*)



TESTING LABORATORY

department of technical equipment of fire protection

The Testing Laboratory (officially called the Department of Technical Equipment for Fire Protection) performs a number of tests on the basis of which a certificate may subsequently be issued (without which the technical equipment should not be included in fire protection units). Our goal is to equip the firefighters with equipment on which they can rely in crisis situations. This is the reason why the vast majority of our tests are accredited by the Czech Accreditation Institute (CAI).

WE CONDUCT THE TESTS OF TECHNICAL EQUIPMENT FOR:

- firefighting machinery
- extinguishing agents
- firefighting equipment



Reinforcing the Titan Firetruck



Driving characteristics test

**Aerial fire apparatus test****FIREFIGHTING MACHINERY TESTS PERFORMED BY TIPF:**

- fire pumps (e.g. pressure measurement, pressure test, measurement of flow, test of long-term operation)
- fire automobiles (e.g. determination of turning radius and length dimensions, geometric dimensions, weight, dynamic driving parameters)
- fire lifting platforms (e.g. static and dynamic overload tests)
- fire truck ladders (e.g. static and dynamic stability tests, operation time test)



Foaming agent extinguishing test

WE OFTEN TEST FIRE EXTINGUISHING AGENTS. FOR EXAMPLE, WE CONDUCT:

- foaming agent extinguishing tests *(the aim of which is to verify the manufacturer's quality declaration and the extinguishing efficiency of foaming agents – class of extinguishing ability, level of resistance to backfire, etc. are determined)*
- viscosity measurement of foaming agents *(Newtonian and non-Newtonian foaming agents)*
- determination of fluorinated substances in foaming agents *(the aim is to verify whether the foaming agents comply with current and pending legislation)*
- quality control of stored foaming agents *(in cooperation with DG, we conduct checks at the State Material Reserves)*
- tests of foam inductors and foaming agents *(verification of the actual mixing of foam in %)*



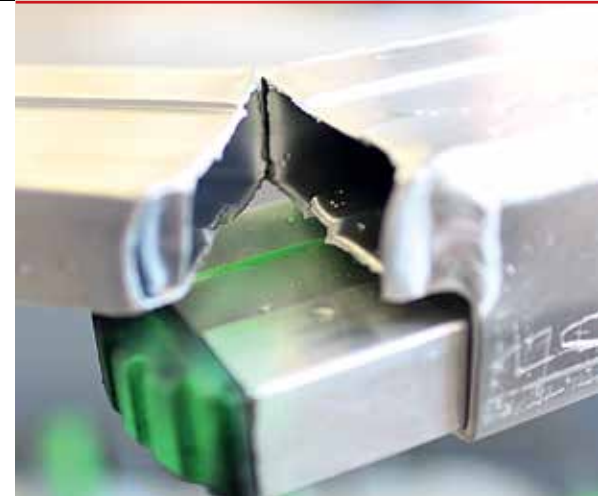
Extinguishing tests of foaming solutions



Endurance test contact heat

AMONG THE FIREFIGHTING EQUIPMENT, WE TEST, IS FOR EXAMPLE:

- fire nozzles (*e.g. pressure tests, control element tests under heat and frost conditions*)
- fire fittings (*pressure tests*)
- hose systems (*e.g. resistance test against internal pressure, flow measurement*)
- fire hoses (*pressure tests, determination of flame resistance, determination of elongation etc.*)
- portable ladders for firefighters (*e.g. deflection test, torsion test of rungs, supports*)
- lifting bags (*e.g. pressure test, penetration resistance*)

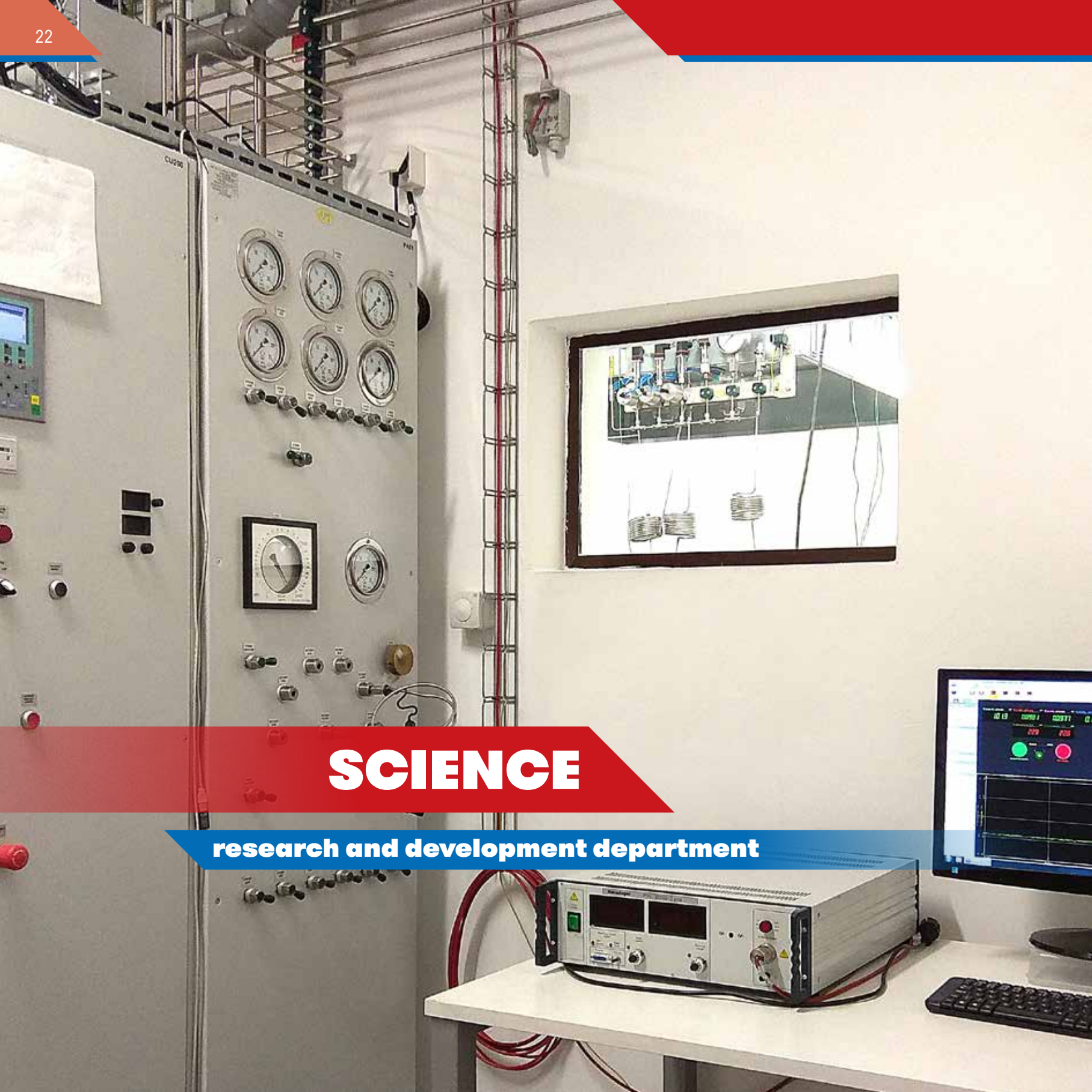




Firefighting nebulizer test in cooperation with Central Bohemian Regional Fire Rescue Service

BESIDES TESTING OF EQUIPMENT, WE ALSO PERFORM AND OFFER MUCH MORE:

- cooperation with the Fire and Rescue Service (FRS) of the Czech Republic according to the needs of the FRS (*e.g. in cooperation with DG D-program, tests of foam inductors*)
- we participate in the elaboration of technical requirements for the performance of tests
- cooperation with domestic and foreign institutions dealing with testing, certification, etc.



SCIENCE

research and development department

Our Scientists are engaged in applied research in the field of fire safety. The main goal of our research is to help firefighters to safely carry out their duties. We carry out a wide range of large-scale tests especially for the needs of firefighters, but we also remember to support investigators or to deal with current topics as electromobility or decontamination (ozone decontamination and disinfection). The results of this research are presented to the public either in the form of publications or through various conferences, seminars, etc. They can also be downloaded from our website.

Our research was awarded in 2019 the Minister of the Interior's Prize for extraordinary results in the field of security research, experimental development and innovation.



CNG bus fire tests - cooperation with FRS Olomouc Region



Tests to determine the temperature resistance of the chassis

AT FIREFIGHTERS' REQUEST, WE CONDUCT LARGE-SCALE TESTS, IN WHICH WE MEASURE:

- ▀ temperatures and temperature fields
- ▀ presence and concentration of selected combustion products (*most often it is the determination levels of carbon monoxide, carbon dioxide, sulfur dioxide, nitrogen oxides and oxygen*)



Thermal stress of firefighter ladders - a research project in cooperation with the Department of Technical Equipment of Fire Protection

SOME FIREFIGHTER RESEARCH NEEDS ARE ADDRESSED AT THE INITIATIVE OF THE GENERAL DIRECTORATE OF FRS CR:

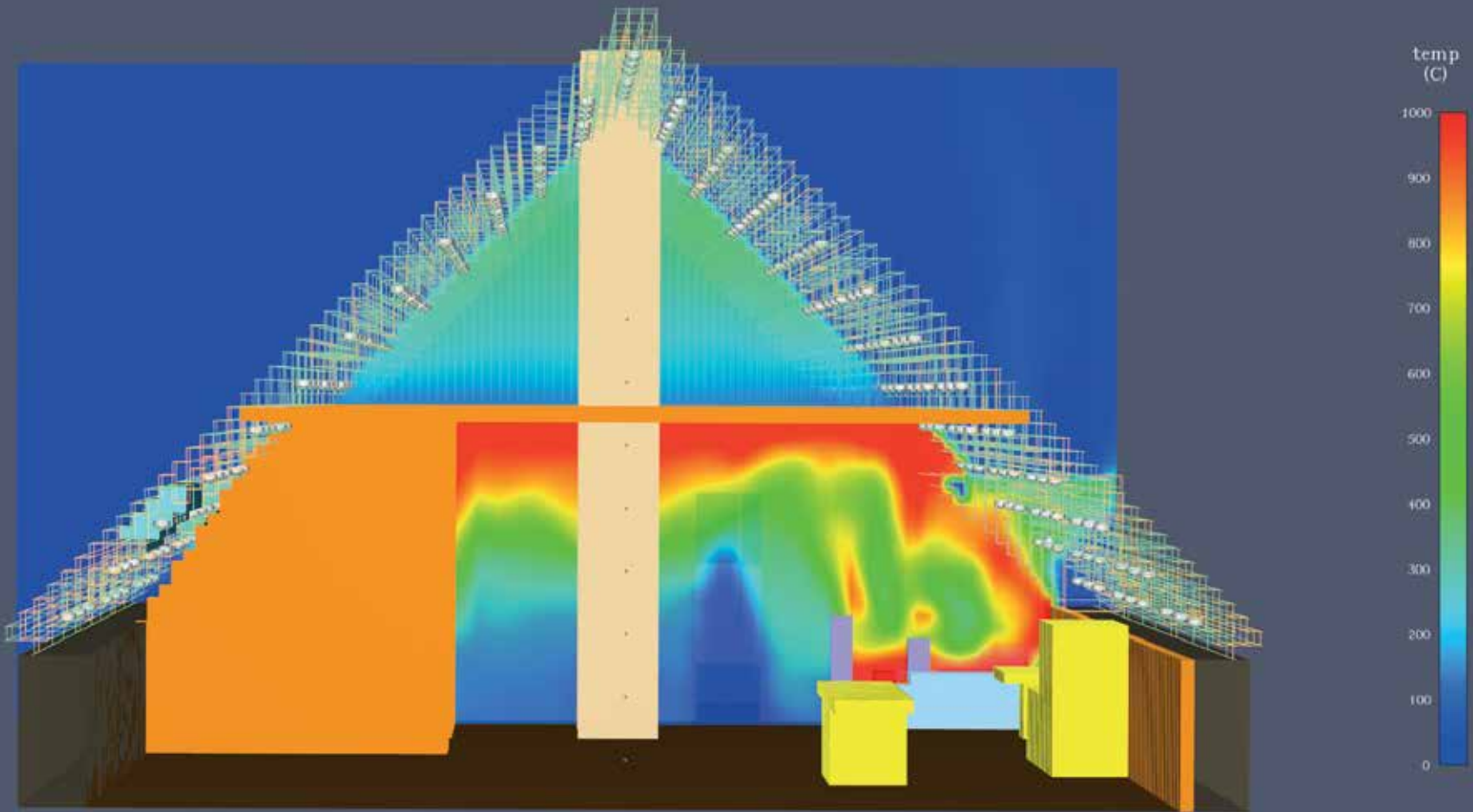
- analytical methods in the field of extinguishing agents (*e.g. determination of extinguishing agent purity or composition of gaseous extinguishing agents*)
- project “Safety Improvement of Extension Ladders for Firefighters”
- project “Fire Rescue Vehicle Color Marking”



Cooperation with the Fire Technical Expertise Department on tests of burning vehicles

WE WORK VERY CLOSELY WITH OUR FIRE INVESTIGATORS:

- we develop methods that we accredit through the Czech Accreditation Institute, and we subsequently perform analysis of samples taken from fire locations
- as part of the project “Study of Traces of Fire Spread and Flammability of Vehicle Components for Fire Rescue Service of the Czech Republic”



Simulation of temperatures using SW FDS

WE USE MODELING NOT ONLY FOR INVESTIGATIVE PURPOSES, BUT ALSO FOR PREVENTION:

- we are able to verify or refute hypotheses about the origin and spread of a fire using mathematical (numerical) simulation (CFD model) – it is not possible to predict the location or the cause of the origin of fire
- our recent projects dealing with modeling fires cover the following areas:
 - use of models in assessing the fire safety of buildings
 - accidental leakage of CNG from passenger cars
 - thermal degradation and combustion of wood-based board materials



Conical calorimeter iCone mini

OUR LABORATORIES PROVIDE A WIDE RANGE OF METHODS TO DETERMINE THE FIRE TECHNICAL CHARACTERISTICS OF SUBSTANCES AND PRODUCTS AND THE EXPLOSION CHARACTERISTICS OF GASES AND VAPORS:

- these characteristics include flammability of materials, determination of oxygen index, indexes of toxicity, explosion limits, calorific value and many others
- among other things the results are used for:
 - investigation of the causes of fires (*e.g. to determine the flash point of a sample*)
 - for research purposes (*e.g. as input values for mathematical models*)
 - for commercial purposes within the TÚPO Testing Laboratory No. 1011.2



One of our analytical laboratories

OUR HIGHLY ADVANCED ANALYTICAL LABORATORIES ARE USED FOR:

- support for investigators of fires in identifying unknown substances and accelerators of combustion
- testing of liquid and gaseous extinguishing agents for the needs of FRS
- assisting research activity
- most analytical methods are accredited by Czech Accreditation Institute



Tests of towing of an electric car - cooperation with FRS Olomouc Region

THE CURRENT TOPIC THAT WE ARE DEALING WITH IS ELECTROMOBILITY:

- especially the repressive part of electromobility (*from the operational level to the intervention*)
- preparation of the project proposal "Protection of bodies of integrated rescue system of the Czech Republic against the danger of gaseous toxicants released from Li-batteries in emergencies"



Decontamination tests - cooperation with DG and FRS Moravian-Silesian Region

IN RESPONSE TO THE PANDEMIC CONNECTED WITH THE SPREAD OF CORONAVIRUS, WE HAVE PERFORMED DECONTAMINATION TESTS:

- in cooperation with firefighters, the National Institute of Public Health, and other participants, we have performed disinfection and ozonation tests
- preparation of the project proposal "Possibilities of using ozone for decontamination of air and surfaces not only by the bodies of integrated rescue system of the Czech Republic"



FIRE INVESTIGATION

fire technical expertise department

Investigators (officially experts of the Fire Technical Expertise Department) mainly perform fire technical expertise with **authority throughout the Czech Republic**.

Fire technical expertise in the field of investigation of the causes of fires is processed on the basis of a request, where the main applicants are fire investigators of FRS in regions and territorial departments. Two members of the department always are on constant alert in order to cover the requirements of firefighters. An emergency group is sent by the Operations and Information Center (hereinafter referred to as the OPIC) of the General Directorate of the FRS CR on the basis of a request from the OPIC of the locally competent region.



Equipment of vehicle for fire investigation



Investigation at the scene of a fire

THE MAIN GOAL AT THE SCENE OF A FIRE IS TO FIND THE LOCATION AND CAUSE OF THE FIRE. THEREFORE, WE PERFORM:

- thorough and detailed analysis of all information *(to clarify the mechanism of fire and its subsequent spread)*
- sampling *(these are then subjected to expert examination in our laboratories)*



AN INTEGRAL PART OF THE WORK AT THE FIRE SCENE IS DOCUMENTING OF THE FIRE SCENE:

- professional level photographic techniques (*our investigators complete professional courses to achieve the required level*)
- the spherical camera (*allowing you to virtually go through the space, insert detailed photos and texts into images, measure distances or dimensions of selected objects*)



Fire documentation by drone

WE ALSO USE UNMANNED AERIAL VEHICLES (DRONES) TO DOCUMENT THE FIRE SCENE:

- images and videos from the drone allow views from above and to places that cannot be viewed even using a high-altitude techniques
- we use drones in agreement with firefighters also for other purposes (*e.g. for firefighter-climber training or for the purpose of tactical exercise on the topic "intervention with a large number of injured people"*)

**Implementation of a model test****IN OUR LABORATORIES WE SUBSEQUENTLY IMPLEMENT:**

- model tests (*used to confirm or exclude a hypothesis as to the mechanism of a fire*)
- tests to determine the material composition of samples and to determine fire technical characteristics
- in cooperation with the Research and Development Department, analysis to confirm the presence of a combustion accelerator (*i.e. a substance accelerating combustion – e.g. petrol*)



Model test to address a research project

IN COOPERATION WITH THE RESEARCH AND DEVELOPMENT DEPARTMENT, WE DEAL WITH RESEARCH PROJECTS:

- within the framework of the project “Study of traces of fire spread and flammability of vehicle components for Fire Rescue Service of the Czech Republic” the following were developed and can be downloaded from our website:
 - an e-learning program and publication (*especially for fire investigator purposes*)
 - a database of catalog sheets of examined vehicles (*usable also for mathematical modeling*)



Teaching in action

WE ALSO PARTICIPATE IN TEACHING ACTIVITIES:

- cooperation on the education of fire investigators with FRS CR (*e.g. in the form of instructional and methodical jobs, conferences, publication of articles*)
- international cooperation (*e.g. with a firefighter unit from Singapore, a seminar in the Netherlands and others*)



Podpisová kniha



SMLOUVA O DÍLO
Smluvní strany budou řídit své závazkové vztahy zákonem č. 89/2012 Sb., občanský zákoník, ve znění pozdějších předpisů (dále jen „občanský zákoník“)

OBJEDNATEL:
Ministerstvo vnitra ČR
Praha 7, Nad Štolou 936/1
PSC 170 34

č. objednatele: /2020
č. zhotovitele:

sboru ČR

FINANCIAL MANAGEMENT

operational economic department

The Operational Economic Department (OED) ensures the processing of the financial budget and its implementation, including procurement of purchases. Furthermore, it is responsible for the registration of assets, warehousing and disposal of unnecessary assets. The main operational activity of the OED is to ensure operational aspects of the institute, routine and building repairs, maintenance of the buildings, ensurance of maintenance of outdoor and interior areas of the buildings, ensurance of operation of our vehicles, ensurance of the activities of the utilities engineer, water manager and environmentalist.

An integral part of our activity is also preparation of investment plans that lead to the modernization of TIFP or to building of new space (e.g. testing laboratories), that subsequently expand the range of our services.



Warehouses and additional parking place built in 2020

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| MV - GR HZS ČR Technický ústav požární ochrany | PŘÍRUČKA KVALITY | strana č. z celkem stran 1 z 61 |
| Zkušební laboratoř TÚPO | | Změna č.: |
| Datum vydání: 2. 1. 2019 | | Datum změny: |

**PŘÍRUČKA KVALITY
ZKUŠEBNÍ LABORATOŘ TÚPO**
Písková 42, 143 01 Praha 4 - Modřany

Datum vypracování: 29. 12. 2018

Vypracoval: Ing. Petra Bursiková, Ph.D.

[Signature]
Manažer kvality

Datum schválení: 2. 1. 2019

Schválil: Bc. Jan Karl

[Signature]
Vedoucí ZL TÚPO

Platnost dokumentu od 2. 1. 2019

Vydání č. 8

Rozdělovník:

- výt. č. 1 - ředitel Technického ústavu PO
- výt. č. 2 - vedoucí Zkušební laboratoře TÚPO
- výt. č. 3 - manažer kvality
- výt. č. 4 - akreditační orgán

Ministerstvo vnitra
GR HZS ČR - Technický ústav požární ochrany

Výtisk č.: 2
Počet listů: 18



CENÍK SLUŽEB
ZL č. 1011.2

Vypracovali:

Ing. Jan Karl
Ing. M. Vedral
Ing. O. Sanža Šafránek

Rozdělovník:

- výt. č. 1 - ředitel TÚPO
- výt. č. 2 - vedoucí ZL
- výt. č. 3 - vedoucí OPTE
- výt. č. 4 - vedoucí OTPPO

[Signature]

Schválil: plk. Ing. Jan Karl
Vedoucí ZL TÚPO
1011.2

ACCREDITED TESTING LABORATORY

TÚPO testing laboratory no. 1011.2

TÚPO Testing Laboratory No. 1011.2 is accredited by Czech Accreditation Institute. It consists of three departments of the Technical Institute of Fire Protection:

- the Department of Technical Equipment of Fire Protection
- the Research and Development Department
- the Fire Technical Expertise Department

You can find the current range of all methods on our website (www.tupo.cz) in the tab Akreditovaná zkušební laboratoř, under the link to our currently valid **appendix to the accreditation certificate**. In this tab, you can find more information about how to order a test or about the price of our tests.



PRESENTATION OF TIFP

We regularly present the results of our activity here:

- www.tupo.cz
- www.facebook.com/GRHTUPO
- professional journal 112
- conferences
- instructional and methodical employment
- excursions etc.



NEWS

Summary Magazine 112 year 2021



January, February, March, April, May, June

Summary Magazine 112 year 2020



January, February, March, April, May, June, July, August, September, October, November...

Summary Magazine 112 year 2019



January, February, March, April, May, June, July, August, September, October, November...
Redakce - 16.1.2019

PHOTO GALLERY



Director General of Fire Rescue Service of the Czech Republic visited the Hradec Kralovce region

During his two-day visit Director General of FRSS CR brig. gen. Drahošlav Ryšánek visited firefight...

REGIONAL AND OTHER BODIES



Emergency unit of FRSS CR

Population Protection Institute in Lázně Bohdaneč, CZ

facebook



Technický ústav
požární ochrany

Poslat zprávu

Hlavní stránka

Technický ústav požární ochrany
Věda, technologie a strojírenství v Praze

Komunita

Zobrazit vše

- 756 lidem se to líbí
- 828 lidí to sleduje
- 10 oznámení polohy

Informace

Zobrazit vše



Poslat zprávu

Technický ústav požární ochrany
Věda, technologie a strojírenství v P

Komunita

Zo

- 756 lidem se to líbí
- 828 lidí to sleduje
- 10 oznámení polohy

Informace

Zo

CONTACTS

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Testing Laboratory No. 1011.2

| | | | |
|-------------|---------------------|----------------------------------|------------------------|
| Head | Col. Jan Karl, MSc. | 950 810 106 / 778 424 771 | jan.karl@tupo.izscr.cz |
|-------------|---------------------|----------------------------------|------------------------|

Research and Development Department

| | | | |
|-------------|---------------------|----------------------------------|------------------------|
| Head | Col. Jan Karl, MSc. | 950 810 106 / 778 424 771 | jan.karl@tupo.izscr.cz |
|-------------|---------------------|----------------------------------|------------------------|

Department of Fire Technical Expertise

| | | | |
|-------------|----------------------------------|----------------------------------|---------------------------------|
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Department of Technical Equipment of Fire Protection

| | | | |
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| Head | Col. Miloš Vedral, MSc. | 950 810 105 / 602 813 286 | milos.vedral@tupo.izscr.cz |
|-------------|-------------------------|----------------------------------|----------------------------|

Workplace of Authorized Services

| | | | |
|-------------|----------------------------|----------------------------------|--------------------------------|
| Head | Col. Vladislav Straka, MSc | 950 810 117 / 725 558 997 | vladislav.straka@tupo.izscr.cz |
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Operation and Economic Department

| | | | |
|-------------|--------------------------|----------------------------------|-----------------------------|
| Head | Col. Peter Konečný, MSc. | 950 810 104 / 778 424 773 | peter.konecny@tupo.izscr.cz |
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