



Company Profile



Foreword by General Director

TES was founded already in 1992 as an independent engineering company. Since the very beginning, it has been focused on the nuclear power industry. The founders aimed to share their nuclear related expertise and know-how to contribute to nuclear safety enhancement.

The business activities of the company have developed from electrical equipment services, diagnostics and monitoring solutions to expertise services in the support of nuclear power plant operation. In particular, our service portfolio today covers commissioning of NPPs, support to regulatory authority and computational analyses and nuclear safety analyses of operational and transient conditions as well as design basis and beyond-design basis accidents.

Since its foundation, the company has been maintaining the high standard of its expertise knowledge in the area of measuring and computing technology including necessary software. The company employs a team of highly qualified engineers; many of them have participated in the commissioning of several nuclear power plants. Our experts are continuously improving their qualifications to be able to meet the specific requirements of the services provided.

Over time, we have gained the trust of our customers, which is founded on a reliable approach and ability to fulfil our commitments always meeting high quality and deadline requirements. We strive to follow this approach also in future.

TES has developed fruitful cooperation with technical universities and prestigious research institutes. We participate in tenders supported by the European Commission, where we have been mostly successful.

In line with company governance, TES is managed so it can increase its technical know-how potential continuously and to provide customers with special services of supreme quality and technical standard. The most important strategic goal of the company is to maintain the position of reliable and preferred partner in the nuclear power industry, both in the Czech Republic, as well as abroad, where we want to take on the challenge of growing nuclear power industry markets.

Martin Štajgl
General Director



Who We Are

We are an expert engineering company based in the Czech Republic. Since our foundation we specialize in the field of nuclear power industry engineering services and technical support of nuclear power plant (NPP) operation. We are a reliable supplier of Czech NPP operator (CEZ, a.s.) as well as other Czech and foreign companies involved in power industry. The majority of our activities are focused on the support of safe operation of Czech nuclear power plants Dukovany and Temelín.

Through our active participation in the international projects we have been involved in enhancement of operational and nuclear safety of nuclear power plants in Russia and Slovakia. As leading members of consortia we gained valuable experience in the project management, among others for example in TACIS projects managed by European Commission or R&D projects organized by the Ministry of Industry and Trade of the Czech Republic.

We remain committed to energy with focus on nuclear power industry however thanks to our experienced and innovative team we are able to develop applications of our products and services also for fossil-fuel power plants and other industrial areas.

Our Core Business

- Computational analyses and nuclear safety
- Commissioning of power plants
- Monitoring and diagnostic systems
- Engineering support of NPP operation
- Support of nuclear regulators



Our History

The TES company was established in 1992. It was formed by a group of experts who had participated in the construction and commissioning of Czech and Slovak nuclear power plants. Initially, the company was focused on the measurement and testing of power systems. Since then the scope of company activities has considerably spread out and we have grown into a company with expertize knowledge delivering innovative solutions and comprehensive engineering systems.

Having reached a respectful position in the Czech nuclear sector, TES aims to utilize its long-standing experience with nuclear power plant operation by bringing expertize to international markets. Our know-how, together with a strong and committed team, is a key driver of TES success.

Key Moments in TES History

1992–1998

- Foundation of TES by a group of experts of NPP Dukovany.
- Scientific supervision of Temelín NPP commissioning.
- First delivery of MOSAD®-4 diagnostic system.

2004–2006

- CFD code application research project facilitated by the government of the Czech Republic.
- The first delivery of MOSAD®-MST diagnostic system.

2007–2008

- The development of Hydrogen Control System within European Commission project.
- Engineering support of Dukovany NPP commissioning.

2016 up to the present

- Scientific and technical support of the Nuclear Regulatory Authority (UJD) of the Slovak Republic within commissioning of Unit 3 and 4 of NPP Mochovce.



Our Mission, Values and Vision

Mission

We take an advantage of our nuclear-related expertise and actively participate in projects addressing nuclear safety enhancement. We focus on engineering services and technical support for nuclear power plant operators and develop solutions aiming at optimization of nuclear operation and maintenance as well as solutions supporting various systems and components of ageing management and lifetime extension.

Values

We treat our business partners with respect. We are stable and continually growing company. The first target is to be a reliable partner to our customers and meet their needs bringing high quality services, effective solutions and long-term cooperation.

We value our employees. Our success lies in having a dynamic team made of experienced senior engineers providing leadership and support to young talented specialists. We support further professional growth of our experts and develop cooperation with universities and research institutions.

Vision

Our vision is to broaden our activities in nuclear sector to NPP aging management, lifetime extension and decommissioning. Another challenge is to considerably expand our international activities.

Our Team and Organization

TES headquarters is located in Třebíč, Czech Republic. To ensure continuous supervision over the implementation of our products and services we have established company branches at both Czech nuclear power plants – Dukovany and Temelín.

The company is led by experienced nuclear engineers who provide the leadership of projects and foster growth of young talented specialists. Thanks to dynamic team we provide our customers with innovative solutions while meeting their requirements with highest quality, reliability and professional approach.

Integrated Management System

TES gives the highest priority to quality assurance, industrial safety and environmental protection while providing quality services to our customers. We have introduced and certified an Integrated Management System in accordance with requirements of the following standards:



Quality Management System
ISO 9001



Environmental Management System
ISO 14001



Industrial Safety Management System
ISO 18001

Successful implementation of the Integrated Management System has been maintained by regular re-certification audits. Thus we are among companies that give the highest priority to quality assurance, industrial safety and environmental protection while providing quality services to their customers.

In addition to the above mentioned certification we have also met requirements of the national regulation on quality assurance of activities related to peaceful utilization of nuclear power (Regulation 132/2008 Coll.) which has been verified on regular basis by audits of CEZ, the leading national power production company.

Providing our services in the nuclear power plant radiation-controlled area we implement and enforce regulations required by the radiation safety certification which have been awarded by the State Office for Nuclear Safety (SUJB), a governmental body supervising nuclear safety issues in the Czech Republic.



Business Activities, Products and Services

Computational analyses and nuclear safety

- Thermohydraulic and neutronic calculations
- Support of Accident Management
- Safety documentation (Safety Analysis Report)
- CFD simulations
- 3D modelling and laser scanning

Commissioning of power plants

- Review of project documentation
- Elaboration of commissioning documentation
- Test implementation and auxiliary measurement
- Computational support of the commissioning
- Evaluation of performed tests

Monitoring and diagnostic systems

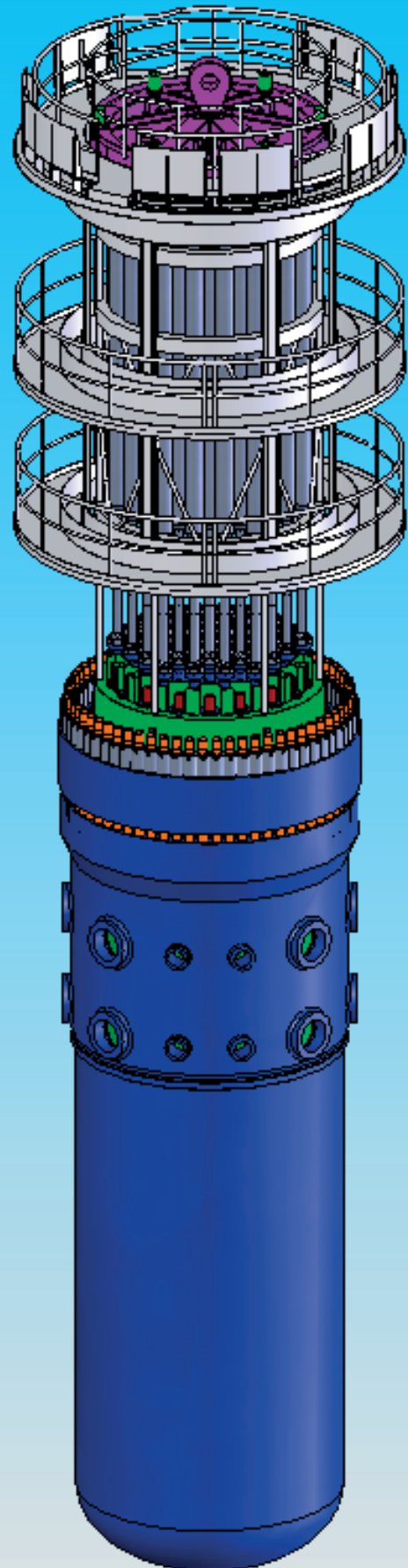
- Monitoring of electrical equipment of NPP
- On-line diagnostics of power oil transformers
- Generator brush gear monitoring system
- Partial discharge detection in oil power transformers
- Electrical circuit diagnostics and reflectometry measurements
- Hydrogen control system
- Branch diagnostic system
- Diagnostics of rotation machinery

Engineering support of NPP operation

- Protection maintenance
- Preparation of operating documentation
- Independent analyses of operational events and failures
- Preparation and implementation of equipment testing
- Measurement of electrical and technological parameters
- Integrated plant information system (IPIS.3D)

Support of nuclear regulators

- Computational support
- Independent expert reviews
- Regulatory documentation
- Independent supervision of commissioning



Research and Development

TES is developing its activities in the research and development area. We have successfully finished several governmental research projects funded by the Ministry of Industry and Trade of the Czech Republic, while several others are currently on-going. The goal of these projects is to increase the nuclear safety and operational effectiveness of the Czech nuclear power plants.

To be open to new ideas, methods and approaches we regard as necessary to cooperate with universities and research institutions. We support academic growth of talented university scientists and actively participate on research projects bringing practical view to innovative products and services. This synergy enables us to enhance the scientific base of our working team and recruit qualified specialists.

We actively participate in the cooperation programs CAMP and CSARP with U.S. Nuclear Regulatory Commission (NRC), in frame of which we contribute to the future development and validation of NRC's thermohydraulic codes. Advanced codes are frequently used by our experts to carry out computational analyses of operational, abnormal and accident conditions in VVER-440 and VVER-1000 nuclear power plants. We also published several research studies under the NUREG/IA series framework.

Some of our reference R&D projects

- Project no. TE01020068: Centre for research and experimental development of reliable power generation (CESEN)
- Project No.FR-TI1/001: Research and development of partial discharge detection in oil power transformers
- Project No. FR-TI3/016: Research and development of advanced methods for testing the electrical equipment of power units at commissioning.
- Project No. 1H-PK/61: Application of CFD codes for research of fluid dynamics in nuclear reactor.
- Project OP PIK 2014-2020: Transfer of know-how in the field of neutronic calculations for safety analyses of nuclear installations.

International Business Activities

After having well established itself on the Czech nuclear engineering market, TES initiated expansion abroad. We have won several European Commission's tenders for TACIS projects aimed at improving the nuclear safety of Russian nuclear power plants. Successful implementation of these projects earned us good reputation and opened the access to the Russian nuclear market.

Working in the team of international experts and experience from the international project management brings us together with other well-known global partners and research institutions in the field of nuclear and fossil power from Slovakia, the United States, Germany, Russia, Great Britain, Spain, Italy and France.

Sharing our Nuclear Knowledge

Recently, our experts on nuclear safety have been included in the list of external experts of the Regional Crisis Center established by the World Association of Nuclear Operators (WANO) – Moscow Center. The purpose of the center is to provide emergency response in case of a severe accident at WANO member's nuclear power plant as well as joint analysis of European Union's stress tests.

Besides cooperation with national nuclear power operator and regulator TES promotes its nuclear program aiming to provide assistance to countries where the nuclear power plant project is in the initial phases of the development or even in the phase of feasibility study.





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