CEPS

Solutions that fit

ANNUAL REPORT
2015–2016

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COMPANY PROFILE

CEPS, a joint-stock company, was established on January 1, 1999, as a subsidiary of two Czech companies, Český plynárenský servis, spol. s r. o., Tábor, and SEPS, a. s., Praha.

Both parent companies had been active for many years in the field of reliability of high-pressure pipeline systems, gas, oil and oil products pipelines, by that time. Many employees had a track record of more than 20 years in the field, because they had been involved in research works at the Research and Development Centre of the Czech gas industry (founded in Plynoprojekt Praha), since the seventies. As a part of this research activity they cooperated not only with other top research centres such as the Institute of Theoretical and Applied Mechanics (ÚTAM) at the Academy of Sciences the Czech Republic, National Research Institute for Materials (SVÚM) in Prague, Faculty of Mechanical Engineering at Czech Technical University in Prague, University of Chemistry and Technology in Prague (UCT) or Institute of Fuel Research, but also with the departments of applied measuring methods, for example with Modřany Power, ADA Plzeň, SVÚSS (National Research Institute for Machine Construction) Prague, etc.

The parent companies transferred to CEPS all business related to high-pressure steel pipes, i. e., complete working teams, including the equipment. The new company therefore received strong technical and engineering background and, above all, wide knowledge and expertise acquired both from research work executed over the preceding years and from practical application of their results to specific high-pressure pipelines in the terrain. This makes possible to assess and maintain reliability of pipeline system in a highly qualified manner right from its construction over number of years of operation.

On April 1, 2012, CEPS merged with both its parent companies, as well as with its subsidiary Energy Prague Holding, a. s., and CEPS has become their single successor company.

Even at present time, CEPS continues to closely cooperate with top scientific and R & D institutions, with the ÚTAM at the

Academy of Sciences Czech Republic, SVÚM Praha, the Department of Gas Technology, Coke Chemistry and Air Protection at UCT Praha, the Institute of Fuel Research (ÚVP) Praha, RCP Praha and the Czech Welding Institute in Ostrava, in particular.

Special technologies that CEPS normally applies to high-pressure gas, oil and product pipelines, are also used on other installations, for example on high-pressure water pipelines both in classic and nuclear energy industry, or on high-pressure steam pipes and on other pipelines in chemical industry.

CEPS is a member of both prestigious national professional organisations, the Czech Gas Association and the Association of Pipeline Contractors. In both organisations, CEPS's representatives are actively involved in activities of their working teams and management boards.

Since its foundation CEPS has been a holder of a certification for installation and repair of the dedicated (by Czech Technical Safety Act) gas devices – gas pipelines without any pressure limitation, pressure regulating and compression stations, appliances – and authorization to perform inspections and testing of dedicated gas equipments, issued according to the Act No. 174/1968 Coll. by the organization of the state professional supervision – the Institute of Technical Inspection Praha (now Technical Inspection of Czech Republic –TIČR).

In 2011 CEPS also received permission for manufacturing, installations, repairs and testing of mining dedicated technical gas devices, issued in accordance with the Act No. 61/1988 Coll. by the state mining supervision, the Mining Office Board OBÚ Kladno.

The fact that our company still faces itself with increasing demands resulted in the certification of our quality management system under ISO 9001:2000 by the auditor Det Norske Veritas (DNV) in December 2002. In 2005 CEPS introduced an integrated management system and this comprehensive system was in February 2014 at the same time recertified by the auditor Det Norske Veritas according ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007.

In 2014 the company ran through the recertification of welding system according ISO 3834-2:2005, another recertification is to take place in 2016. In February 2003, technical level of our company endorsed certification for work on gas pipelines without dimension and pressure limitations within the system of certification and registration of companies in Czech gas industry GAS. Recertification of the company in this system was successfully completed in April 2012, next recertification will be in April 2016.

In August 2010, CEPS was successfully screened by the National Security Authority for the access to classified information with classification Reserved.

CORE BUSINESS

CEPS provides its clients with comprehensive service of pipeline systems intended for the transportation and distribution of gases, crude oil and oil products, and chemical substances; in particular, the following:

- stress-tests, hydrostatic pressure tests, and pipeline inspection
- pipeline cleaning and calibration after construction
- pipeline and technological equipment drying before commissioning
- off-line inspection of pipelines, performed by inspection tools run by water flow, or a combined hydro-pneumatic method
- pipeline rehabilitation after a long time of operation and pipeline integrity revalidation
- pipe defects fixing without service interruption using repair sleeves and other special technologies
- overload tests of pipelines intended for hazardous liquids transportation
- nitrogen services – inertization of pipelines and technological equipment up to the pressure of 25 bar
- displacement, cleaning and decontamination of pipelines for oil and oil product transport before testing, repair or shutdown of operation
- chemical cleaning of oil pipelines from paraffins without service interruption
- measurement of hydraulic parameters of high-pressure natural gas pipelines in the course of standard operation
- trouble-shooting in case of water occurrence in low-pressure and intermediate-pressure gas distribution pipeline network
- tests of pipe materials and qualified acceptance of pipes directly from manufacturers
- repairs and renovation of above-ground pipeline sections crossing water streams and other structures
- interventions in pipelines under full operating pressure using TDW Hot Tapping and TDW STOPPLE technologies
- pipeline construction and its renovation
- assessment of the reliability and residual life of pipeline systems; development of high-pressure pipeline reliability management systems
- safety and environmental analyses
- emergency services

Work for high-pressure pipeline operators and contractors accounts for more than 90% of the company's output. These services are mainly aimed at specialised operations on high-pressure pipelines that exceed conventional technologies used by other companies in construction or repairs. This year CEPS has run more than 10 cases of cleaning, calibration, stress-tests or pressure tests and drying of newly constructed sections of pipelines prior to commissioning. Furthermore, CEPS has performed rehabilitation of reconstructed high-pressure gas pipelines DN 300 and 500 at Prague.

In the field of Czech oil and product pipelines, we have run 4 actions of emptying and chemical cleaning of pipelines before carrying out tests and subsequent repairs. These works are done with a routine use of generators, which produce inerting nitrogen based mixture made in mobile units, which

we developed ourselves and which work on the principle of membrane separation of nitrogen from the atmospheric air.

We have carried out number of repairs on the oil pipeline DN 500 Druzhba (after the on-line inspection) using the welded steel sleeves with composite filling. CEPS does not only install these sleeves, but it is also their manufacturer.

Application of steel sleeves is extremely important especially in case of crack-type defects because wound sleeves from composites based on glass or graphite fibres bands are not safe for this type of defects. This view, already presented by number of experts at the global level, has been confirmed by our own experiments. For the same reason one of the largest pipeline operators in the world, Malaysia's Petronas, expressed the interest in our type of steel composite-filled sleeves and bought and certified several pieces for use on their grids. CEPS has delivered two sets of these sleeves to Petronas this year.

CEPS has successfully participated in a tender for off-line inspection of a 6,5km long pipeline DN 300 in Brno. The primary aim of this inspection is to particularise the geometry of those bands, which show material defects and need to be replaced. Successful inspection can significantly speed up and cheapen the exchange, because it will be no more necessary to dig out the band to measure the geometry at the place. The secondary objective will be to check up, whether there was the corrosion damage or some mechanical damage caused by a third party intervention. Preparations for this action took off in February and the implementation will take place in April 2016. During this action, smart pigs will be pushed through the pipeline in water flow, with the use of high capacity pumps, which CEPS had obtained in a project supported by OPPI. This project of off-line inspection will be the first action of this kind in the Czech gas industry. Similar operation, focused on check-up of potential corrosion, was implemented on a shorter section of DN 100 pipeline in Slovenia.

In the last year, based on our project, reconstruction works and repairs were carried out on the international ethylene pipeline Böhlen–Litvínov. The aim was to implement necessary measures for further safe and reliable operation of this almost 40 years old pipeline DN 250 DP 63 in long-time perspective. CEPS took part in this important project by providing pipeline integrity revalidation using the pressure reparation, pipeline calibration and subsequent pipeline drying.

In addition to field works, CEPS also carried out many tests checking technical condition and resistance against cyclic fatigue of pipe samples removed from the pipeline after a long period of operation. These tests were run in our own high-pressure testing laboratory equipped both for carrying out fatigue tests by cyclic changes in pressure load up to 600 bar and for conduction of destructive tests.

Under the grant of Czech transmission company Net4Gas, CEPS also performed the technological part of slow creep measuring on a sample of DN 500 pipeline, run at isothermal conditions. The aim of these works is besides other things even more accurate equations on leakage tests within TPG 702 04.

Other very interesting actions are the experiments which precise our knowledge of the drying process under different conditions, both by the technology of extra-dry air and by vacuum. Gained results of measurement will be used for the preparation of an amendment to the national regulation TPG 702 11 Cleaning and Drying of Pipelines before Commissioning, where CEPS significantly participates as well.

The company CEPS provides its services not only throughout the Czech Republic, but also abroad.

In previous year, we completed an important abroad operation—the large-scale project of displacement, decontamination and conservation of 250 km long crude oil pipeline DN 700 in Latvia. This crude pipeline had not been used for transportation for almost ten years and therefore its operator decided to empty, to clean and to conserve the pipeline, so it would not become the source of any safety or environmental risks and would be ready for possible future transportation of any other media. More than 100 thousand tons of oil were pushed out; later the pipeline was cleaned by the technology using a special detergent PetroSol. Residual waste products were disposed on the site by bacterial biodegradation. The cleaned pipeline was later conserved by a phosphate method and subsequently filled with nitrogen of a purity of 95% and pressure of 3 bars.

In view of exceptionally positive results of this action, the operators decided to perform displacement, decontamination and inertization of a parallel branch of DN 700 crude oil pipeline in the length of 501 km, which goes through both Latvia and Lithuania, from Belarus–Latvian border to Mažeikai refinery. This oil pipeline is operated by Latvian LatRosTrans and Lithuanian Orlen together. CEPS applied to an international tender and won. First phase of this large action, which will be completed by 2016, has been carried out this year.

A completely new territory where CEPS started to deliver services concerning cleaning, calibration and pressure tests, is Macedonia. Works on 50 km long DN 500 pipeline have been run in close cooperation with a local company, we plan to cooperate in area of former Yugoslavia in future.

In Poland we have implemented inertization of a newly built high-pressure gas pipeline DN 700 before it was put in operation. There we have also carried out cleaning and calibration with the use of inerting mixture on a DN 150 pipeline.

Another important project was deparaffinization of an oil pipeline DN 700 Jaroslavl-Kirishi in Russia. This oil pipeline will be converted for diesel transportation. Because the paraffinic residues contain significant amount of sulphur compounds, which would later in contact with diesel dissolve, this was necessary to prevent the transported media from becoming valueless. To remove the residues, CEPS developed and manufactured several hundred of tons of a special cleaning agent PetroVic.

Based on this action, we prepared another extensive project of PetroVic delivery. In three-years-time it should have reached the amount of 4 mil EUR. Unfortunately, this export project was stopped due to Russian Government anti-import measures, caused by EU embargo on export of modern oil technologies and products to Russia. Whilst in 2014 CEPS exported to Russia such commodity in the amount of 1.2 mil EUR, in 2015 products in the estimated amount of 1.5 mil EUR could not be exported at all.

TECHNICAL SERVICES OVERVIEW

Stress-tests on newly constructed pipelines

CEPS executes hydraulic pressure test of pipelines in accordance with all common international and national standards. Our company has at the disposal complete equipment for carrying out all tests, as well as pigs and pressure heads, filling and pressure pumps satisfying the requirements for works on pipelines up to DN 1400 (56 in.) and very accurate measuring equipment based on most modern electronic systems.

To enhance reliability of newly constructed steel pipelines during their future operation, CEPS carries out, in accordance with the latest European technical standards, stress-tests on pipelines ranging from DN 50 to DN 1400. That helps to stabilise the pipes thanks to the effects of pressure overloading of pipe walls.

The construction of pipelines from material featuring the high quality parameters in combination with stress-tests is also one of the ways to reduce the minimum distance between the gas pipelines and other constructions, company CEPS therefore carries out more than ten of stress-tests every year.

Pipeline cleaning prior to commissioning

One of CEPS's standard services is also mechanical cleaning and pipelines calibration after their construction (made by any third-party building organization) and before their commissioning. In doing so, CEPS provides the future operator with a letter of guarantee warranting both perfect cleaning and a "clean" connection to the system, because after the pipeline cleaning CEPS performs personal supervision until the final completion of the connection.

CEPS is hired to provide these services by assembly companies, which are given the request directly from gas companies (future operators), who apply the condition of cleaning and supervision also to third-party investors.

Pipelines cleaning is also provided to operators of other types of high-pressure steel pipelines, such as oil and other pipelines.

Drying of gas pipelines and process equipments

CEPS is the only Czech company that owns and operates extremely dry air generators, as many as three at present, which help to dry pipes or other technological installations after construction or repair not only to the level of general European standards, i. e., temperature of the dew point of water in the air −20 °C, but also, upon the operator's request (typically in the case of chemical and petrochemical industry), even to a level of −80 °C. This method can be employed for both drying pipes and apparatus, and for example high-voltage electrical installations, which are prior to commissioning sensitive to humidity.

For more complicated pipeline junctions drying CEPS operates several high-performance vacuum pumps for drying by deep vacuum technology. This technology is particularly suitable for pipeline knots and other uncleanable parts of pipeline where drying by extremely dry air would take excessively long time.

CEPS helped to dry almost all high-pressure gas pipelines that were constructed or rehabilitated throughout the Czech Republic.

Displacement of flammable gases and liquids by means of inerting mixture

CEPS provides safe displacement of flammable liquids and gases of the pipelines by means of inerting nitrogen based mixture. This mixture is made at the place by mobile nitrogen generators, which work on the principle of membrane separation of nitrogen from the atmospheric air. Due to maximum operational pressure of 25 bars, we are able to empty the oil or product pipeline also in a rather mountainous terrain. CEPS has at disposal three inerting units, each of them of power 1100 m³ per hour. Nitrogen concentration in the composite ranges from 90% to 95%. Our experiments made in cooperation with University of Chemistry and Technology proved that this concentration of inertizing mixture guarantees the fire-safe and explosion-safe condition for all common hydrocarbon gases and fluids up to the pressure 25 bar.

Inspection tools alternative driving in the case of low media flow

On-line inspection is performed with the use of smart pigs drifted by the flow of media. In many cases such inspection is not possible, as the flow is not fast enough, or the media does not flow at all. That is why CEPS offers the operators inspection tools alternative driving, which is performed either with

water by pumps of very high efficiency or by a combined hydro-pneumatic method, when the tool is inside a several kilometres long water plug and is pushed by a cleaning pig by means of compressed air. Such arrangement, due to the momentum of water plug, makes unlike the compressed air drive the speed of inspection tool stable and eliminates un-uniformity of its motion. Our equipment enables alternative driving of MFL inspection tools up to the dimension DN 800.

Crude oil/oil products pipelines chemical cleaning after shutdown or before tests and extensive repairs

CEPS performs chemical cleaning and decontamination of pipelines that transport hydrocarbon substances hazardous for the environment, such as oil pipelines, oil product pipelines and petrochemical pipelines, with a view to prevent possible future environmental damage. For this purpose, CEPS uses special biodegradable solvent, Petro-Sol; CEPS was involved in the development of its application for these purposes.

Since 2007, when we used the technology for the first time while changing 32 pipes of the oil pipeline Druzba (performed in less than 90 hours), chemical cleaning has become a standard method for assuring safe and secure environment for working with open flame (cutting, grinding and welding) along the entire length of the repaired pipeline, which significantly increases both the speed and safety of these works.

Chemical cleaning of pipelines and technical equipment (cleaning of asphaltic, paraffinic and resinous residues)

In cooperation with The Department of Gas Technology, Coke Chemistry and Air Protection in University of Chemistry and Technology Prague, CEPS has designed

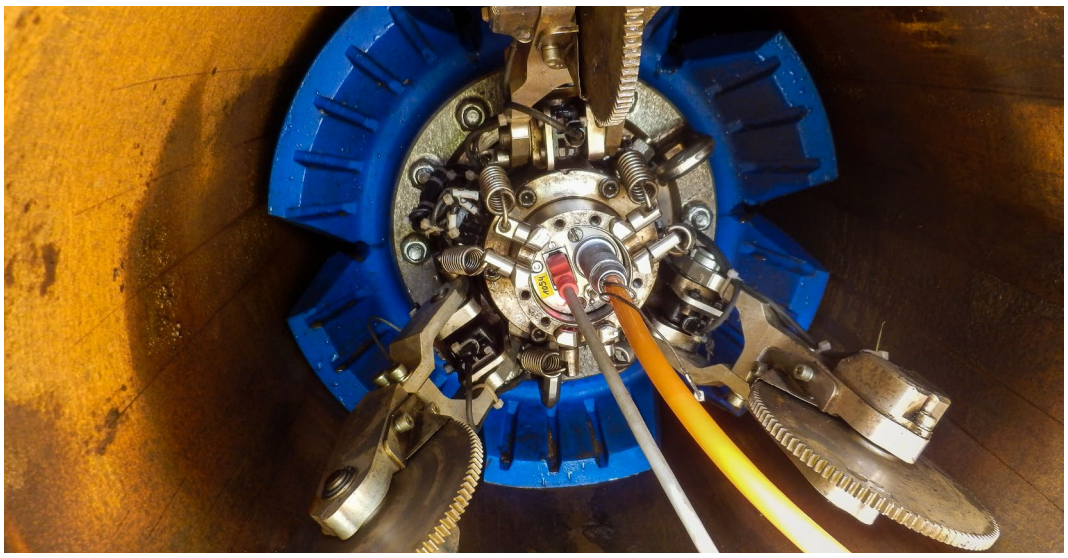
and optimalized very efficient chemical cleaning solution for removal of asphaltic, paraffin and resinous deposits from pipelines. The PetroVic deparaffination agent has one more advantage, because it allows the operator to inject the used agent back into the same or the other crude oil pipeline, where it continuous to remove the deposits. In the end, the crude oil including the agent can be normally processed in refinery. CEPS is both manufacturer and supplier of PetroVic.

Nitrogen services – inertization of pipeline before commissioning, before its repairs or at the occasion of prolonged interruptions

CEPS provides the new service of pipe inertization by nitrogen with the purity of 90%, 93% or 95%. Inertization is done as a safety precaution before filling in the flammable media or before the pipeline is to be repaired, when it is necessary to secure the environment against ignition of flammable gases or vapours. Moreover, the pipes are also inertized during the prolonged shutdown, when its drying and subsequent filling by inert atmosphere reliably prevents the internal corrosion of the pipe that is not in operation. These services are provided to all operators of steel pipes, especially those that are intended for the transportation of flammable liquids or gases.

Off-line inspection

Several years ago, CEPS started to use the technology of the off-line inspection of steel pipelines. Under normal conditions, smart pigs are drifted by the flow of the transported media. In many cases, such inspection is not possible, as the flow in the pipeline is not fast enough due to low offtake, or to the fact, that the flow is dicontinuous. The alternative which CEPS offers is so called off-line inspection, when the pipeline is shut down for a short time (several days). It is cleaned; and the inspection tool is later pushed through the pipeline by water flow. While performing the inspection on pipelines for liquid hydrocarbon transportation, such pipeline must be also decontamined, so it does not pollute the water, used for the inspection tool drive. Off-line inspection can be performed by all commonly used types of inspection tools. CEPS has already used MFL, TFI and UT (ultrasonic) tools. The use of water for



off-line inspection brings in the case of gas pipelines an essential advantage – it is possible to use ultrasound tools, which also enable the detection of cracks and laminations. Physical laws do not allow that during online inspection in gaseous environment. CEPS performed its first off-line inspection in 2007 on a DN 150 pipeline in Belgium, two more projects took place in Poland on DN 200 and 300 pipelines, one on DN 700 in 2014 in Latvia, one in 2015 in Slovenia and now we are about to finally introduce the technology in the Czech Republic.

Repairs of pipelines defects detected by on-line inspection

Works on pipelines and oil product pipelines focus on assessing and repairing damages caused during the operation and detected by on-line inspection. Cold steel sleeves, with the annulus filled by glass grit–epoxy resin based composite, are mainly used for repairs. Hundreds of these sleeves from DN 150 to DN 700 have been installed by CEPS; several dozen pieces are mounted on pipelines every year. CEPS frequently supplies the sleeves even to extremely distant localities. In such cases, we also train local service companies.

Gas and oil product pipelines rehabilitation after long-term operation and assessment of the pipelines remaining lifetime

High-pressure gas pipeline rehabilitation and pipeline overload tests of oil product pipelines involve a comprehensive examination of their condition, and subsequent repairs. This includes elimination of defects caused by long operation using a highly specialised method of pressure overloading (pressure-induced defects stabilization), repair of the pipeline coating and cathodic protection systems, valves replacement or overhauls of, for example, pipeline crossings over water streams and other obstacles, etc.

Pipe material tests

CEPS has been for a number of years cooperating with Arcelor Mittal (Nová huť, NH) Ostrava, the major Czech manufacturer of steel pipes for the construction of high-pressure pipelines. In the period 2001–2003 CEPS through a grant from the Ministry of Industry and Trade participated in the research programme of NH Ostrava, which aim was to significantly increase the resistance of their manufactured pipes to the Stress Corrosion Cracking (SCC). CEPS also conducted long-term tests of newly developed type of hot bends made from helically (spiral) welded pipes as a part of the development programme run by the manufacturer of pipe bends JINPO Plus Ostrava. Later CEPS took a part through a grant from the Ministry of Industry and Trade in research works dealing with the manufacture of High Strength Steel (HSS) pipes. These research works were successfully completed and their results are being put into practice in the production

of modern tubes for high-pressure pipelines. Apart from these researches a development works, CEPS also provides testing of pipeline elements and device from operating pipelines, mainly to prove their remaining service life and fatigue resistance.

Measuring of hydraulic parameters of natural gas pipelines without service interruption

Knowledge of exact values of pipeline hydraulic properties is basic information for the proper design of the operating parameters of the high-pressure gas pipeline at the designing stage, and for setting the working regimes in the control of pipelines operation. In years 1996–1998, CEPS measured hydraulic parameters of a newly constructed DN 1000 pipeline in more than 400 km long section of the Czech gas transmission system.

The measurements proved positive benefits of the internal coatings on the transport capacity of the gas pipeline. In late 2004 measurements on the same pipeline were repeated to check whether the favourable effect of internal pipe coating remained unchanged, and at the same time were carried out measurements on an older pipeline of the same diameter, but without inner coating, to compare the operating parameters of the two types of pipes. In the following years measurements of lines DN 1000, DN 1400 and DN 800 were gradually conducted.

Providing conditions for local welding on gas, oil and other product pipelines

For the purpose of armature replacement (for example, in repairs of high-pressure gas, oil and other pipelines), CEPS ensures the conditions for welding using TDW STOPPLE technology; as well as flushing pipes with nitrogen and remove crude oil from the working area, including environmental assistance.

Pipe branches joining without service interruption

CEPS is able to join the branches to pipes under the full operating pressure (for example on gas and oil pipelines and other pipelines operated under pressure, i.e., water pipes at nuclear installations) using TDW Hot Tap technology (drilling under pressure up to 100 bar). This Hot Tap technology can be used for joining branch pipes and also for installing metering taps and similar purposes.

COMPANY STRUCTURE

The company is headquartered in the eastern industrial zone of Jesenice near Prague. The CEPS's management and its technical-technological centre are located in the service building. There is, a special testing laboratory allowing, as the only one in the Czech Republic, to conduct the long-term testing of pipes under high pressure, in this building, too.

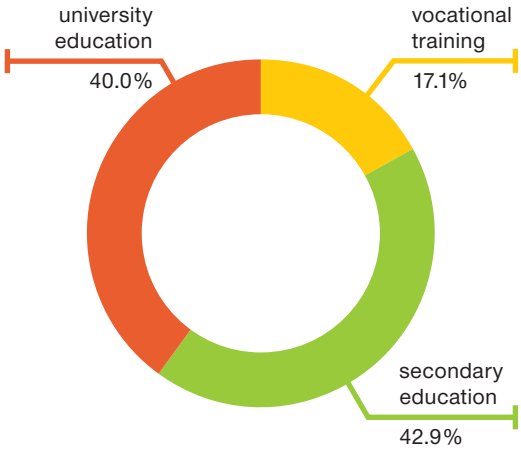
Construction of this test facility and its commissioning is one of the major goals that the company has achieved in its technological development. Some tests of steel fracture properties are also carried out in this test lab. Main focus of the test facility are tests of pipe bodies of "full dimension", i.e. specimen length of 10D and more, which allows to evaluate the behaviour of pipes and their defects without any restrictive effects (reinforcing effect of the welds etc.).

The cyclic pressure load tests simulate the pipe life in the conditions of pressure variations for 20 to 50 years of operation. Results of tests allow evaluating the suitability of the pipe material for use in high-pressure systems, behaviour (development in time) of pipe defects, their effect on the operational reliability of the pipe and the reliability and stability of various systems for the repairs of defects in the pipeline. The tests also verify the possibility of carrying out the pressure overloading (pressure reparation) on pipe samples taken from the real, operated pipeline.

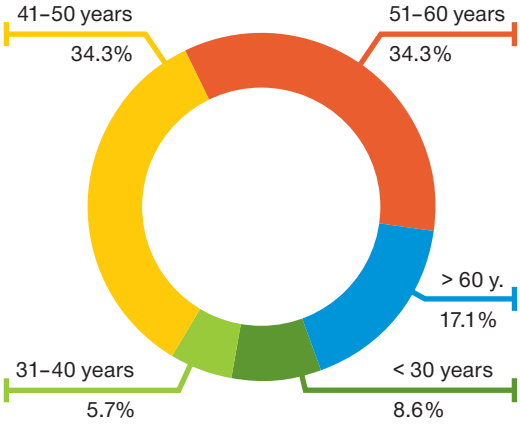
Technical background of the company is represented the base in Cítoliby near the town Louny in the Ústí nad Labem region (Northern Bohemia) and a small detached workplace of CEPS is located in Tábor (Southern Bohemia). At the Cítoliby base there is technological equipment for pipeline works stored. It involves tens of tons of material and equipment for providing pressure test, pipeline cleaning and drying – for example over three hundred pressure and cleaning heads, from DN 50 to DN 1000. Several hundreds of cleaning pigs, filling and high-pressure pumps, nitrogen generators, extreme-dry air generators, compressors, heavy-duty vehicles, and other machinery.

THE DEVELOPMENT OF EMPLOYEES' SKILLS

Employee structure by education



Employee structure by age



The company management puts significant emphasis on the development of professional qualities of the personnel. This goals' achieving is supported by continuous training of employees, by means of internal training schemes, as well as by the participation of our employees in top training courses and in postgraduate education system.

Professional qualification is also being increased by participation of our employees in a number of conferences, not only as participants but also as speakers. Our staff regularly participates in international colloquia on the reliability of pipelines, organized annually by the Czech Gas Association. Furthermore, our specialists attended lectures at major events organized by the British Clarion Technical Conferences, American Tiratsoo Technical, German Euro Institute for Information and Technology Transfer, company Gas Ltd. and the Association of Pipeline Producers (ASPP). In 2012–2014, CEPS took part in the project The maintenance and professional growth of employees, whose companies are the ASPP's members, financed by the European Social Fund and the Czech State Budget. CEPS has used this project not only to complement the conventional skills of its employees, but also it mainly focussed on the broadening of certified high-skilled expertise, the acquisition of which is otherwise financially extremely demanding. In this project many our employees gained international qualification according to EN 9712 for the area of defectoscopy methods ranging from Visual Testing (VT), Magnetic Testing (MT) to Penetration Testing (PT) and Radiogram Testing of Welds (RTW).

The company's management puts emphasis also on the gradual transfer of experience from the older employees to younger ones. University students regularly attend professional practice at CEPS, and the best of them then get the opportunity to use the experience and technical background of the company CEPS when writing their diploma theses, which our company gave the specific technical or economic inputs for. The results of these thesis (in the field of mechanical engineering, chemistry–gas industry and the economy) the company uses in its other activities.

TECHNOLOGICAL CAPACITIES DEVELOPMENT, RESEARCH AND DEVELOPMENT ACTIVITIES

The resources produced in previous years, were also this year invested to the large extent into the modernization and development of machinery and technological equipment of the company. The aim of this strategy is to increase company's flexibility, especially when offering future works abroad.

This process will continue and a significant improvement of the company's equipment will take place in the following fiscal year.

Investment possibilities were supported by a grant, which CEPS gained from the Operation program of Business and Innovation – Program of Innovation – Innovation project in 2011. Under this grant CEPS was able to get technological chain for high-pressure inerting mixture production. Technology of this system was based on a prototype unit, invented and manufactured by CEPS at its own expenses in 2010. Within the grant, we acquired equipment with significantly higher power parameters. Only one company, Acstroje, s. r. o., from Jablonec nad Nisou, Czech Republic, was successful in meeting the conditions of the international public tender. In the following two years, all parts of the chain were manufactured, delivered and successfully tested. The equipment was put into commercial operation in October 2013. Total costs on inerting technology implementation were over 1.5 mil EUR, while half of the expenses were covered by the grant and remaining half from CEPS's own funds.

For this project of Technological chain for the preparation of pressurized gas inerting mixture, CEPS was awarded the first prize in the competition Business Project of the Year 2013 in the category of Innovation.

In the last year, CEPS has realized a second grant from the same Operation Program. The grant allowed a purchase of high-pressure pumps, enabling primarily smart pigs alternative driving during off-line inspection in pipeline sections, where the flow of media is not strong enough to move the tool in a sufficient speed. This technology of alternative driving had been checked by CEPS in previous years during actions in Belgium, Poland and Latvia. Desired parameters of pumps should enable alternative driving

of MFL smart pigs in DN 700 pipelines, also in hard mountain conditions.

The winner of an international public tender for pumping units, a Moravian company AQ PUMPY, s. r. o., from Hranice in Moravia, successfully designed, manufactured and supplied all the machinery in an exceptionally short time. Acceptance tests proved, that the device fulfilled our requirements and reached the maximal parameters – 60 bar pressure and 420 m³/h flow. The grant covered half the expenses of the pumps purchase, remaining 200 ths EUR CEPS paid itself.

CEPS company was also active in Research and Development activities. In cooperation with The Department of Gas Technology, Coke Chemistry and Air Protection in UCT Prague, we designed and optimized a chemical cleaning solution for removal of paraffin deposits from oil pipelines.

PetroVic, the final product, was then immediately used during deparaffination in Russian Tjumeni oil pipeline. Another modification of PetroVic was later developed for works on another oil pipeline, where the deposits were of different character.

It is necessary to have deeper knowledge of relation between explosion limits of different flammable media and high operating pressure, to be able to set more precise parameters of inerting mixture for flammable gases and liquids displacement out of pipelines. These relations had not been published in any available resources yet, so CEPS has, together with the Department of Gas Technology, Coke Chemistry and Air Protection at UCT Prague, decided to handle an expert study, including all necessary measurements.

Our long-term cooperating partner company RCP Praha, s. r. o., constructed and manufactured according to our design a measuring device, which is able work with the pressure up to 30 bar, so the results cover the operating scale of our nitrogen generators with a reserve.

This research programme will give CEPS reliable data concerning different technical flammables explosivity, at different pressures and concentrations of residual oxygen in inerting mixture. First phase of the works concentrates on limits of methan explosivity and, apart form CEPS's personnel, one master student from UCT Prague has participated on the measurements. The next phase will cover higher hydrocarbons up to diesel. In this second phase, fully focused on the explosivness of higher hydrocarbon vapours, CEPS cooperates with the Institute of the Technolofy of Oil and Alternative Fuels at UCT Prague.

ENVIRONMENTAL PROFILE

CEPS is aware that its operations have an impact on the quality of the environment. The company's development is based on aligning its economic growth with environmental protection.

In carrying on its business, CEPS is aware of its responsibility to the future generations. The path to the application of this responsibility is set out in its Quality, safety and environmental protection policy, which also declares the company's endeavour to continuously pursue environmentally-friendly business and to create the conditions for environmental improvements. The company's management has set the following profile of the presentation, monitoring and evaluation of the indicators that are environmentally important in connection with the company's business:

(1) Monitor levels of hazardous substances in water when disposing of used water after overload tests, pressure-induced repair, and pipeline repair, and always proceed so as to prevent soil, groundwater and surface water contamination.

Not to allow, at any of our sites where we work with water in a pipeline after a longer time of its operation, concentration of pollutants (with the exception of iron) in released water higher than 90% of the permissible level required by the Government Order that sets out continuous emission loads on surface water. Always document the meeting of this requirement by a wastewater analysis carried out by a certified laboratory.

(2) In excavation work, provide for careful treatment of stripped topsoil and deposit it on a site separate from other soil.

(3) Monitor and meter the quantity of the fuels used in our work with a view to controlling the exploitation of natural resources and mitigating the load on the environment.

(4) Provide for periodical maintenance of vehicles and other mechanisms in authorised service shops to minimise air pollution by emissions from transport vehicles and machinery and to prevent spillage of operating fluids, in particular oil products.

(5) Monitor, and have periodically checked by an authorised person, pollutant release into the air from fixed sources of heat in our buildings.

(6) Monitor and measure the consumption of organic dyes and solvents; maximise the use of water soluble dyes.

(7) Reduce the production of wastes and environmental pollution. Provide for safe waste disposal, including disposal by authorised companies.

(8) In all lines of business and operations, work to the requirements of ISO 14001. Provide for environmental protection and keep the required procedures to prevent complaints against the company's environmental behaviour and penalisation of the company.

(9) Reduce energy consumption in operations with the help of energy saving appliances and systems. Monitor and evaluate energy consumption in operations (water, gas, electricity).

(10) Provide for regular training and education of employees as one of the ways helping to minimise the risks of damage to the environment.

(11) Preferentially select subcontractors who are certified under ISO 14001 and environmentally-minded. Select suppliers of equipment and services that have an impact on the environment against the criteria that have been put in place, and continuously review their competences and qualifications.

The company's management fully subscribe to the principles set out in this Environmental profile and undertake to create the conditions and provide the resources for the profile to be consistently and continuously pursued. CEPS hereby undertakes to execute each of the elements of its environmental profile. The results of internal audits and analyses, and findings from certification audits, shall be discussed by the company's management on an ongoing basis with a view to continuous improvements in the company's environmental practices.

THE BUSINESS DATA

Share capital and ownership structure of the company

Company was established with a registered capital of CZK 1 million, in which both parent companies were equally involved. The financial results of the company for the year 2000 made possible to increase its share capital using the company's funds to CZK 3 million in mid-2001 and in 2002 to CZK 5 million. In accordance with the project of domestic merger of companies in the Group, which is accessible in collections of company documents published in Commercial Register in Prague, since 2012 the shares have been split within five shareholders, Czech natural persons.

Structural simplification of the group

As on April 1, 2012, all four financial holding companies were merged by fusion, namely CEPS a.s., its parent companies Český plynárenský servis, spol. s r.o. (ČPS), and SEPS, a.s., and the subsidiary company Energy Prague Holding (EPH), a.s. CEPS is a successor of ČPS, SEPS and EPH. The entire project of intra-national merger according to Act 125/2008 Coll. is accessible in collections of documents of all four companies, published in the Commercial Register. The reason for the merger was the simplification of the organizational structure, establishment of a more efficient management system and an overall reduction in the administrative burden, including financial and billing relations.

Liability

CEPS is insured with a German insurance company HDI Versicherung AG for damages to items taken over for performing contracted operations and for damages caused to the third parties, including contamination of water resources; the insured amount is CZK 25 million (1 million EUR).

Number of employees

The company had 35 permanent employees towards 31 March 2016. Apart from full-time employees, we employ four university students for part-time. Our aim is more than just give them chance to get really professional experience. We hope, they will write their diploma thesis here and after their successful defence they will join our staff permanently.

Statutory bodies

The Board of directors consists of

Dr. Ing. Petr Crha
Chairman

Dr. Ing. Pavel Jakoubek
Vice-Chairman

Ing. Jano Zvada
Member of the Board

Ing. Petr Pařízek
Member of the Board

The Supervisory board of the company consists of

Ing. Daniela Jakoubková
Chairperson

Mgr. Michaela Pařízková
Vice-Chairperson

Ing. Kateřina Zikánová
Member of the Supervisory board

Annual turnover

Company CEPS keeps books for the fiscal year commencing on April 1 of the current year and ending on March 31 of the following year. Turnover of the fiscal year 2015/2016 amounted to 3.597 mil EUR (CZK 97.325 ths).

In the last years, company turnover has been having an increasing tendency. At the same time, the share of the added value on the turnover has been rising, too.

The added value growth is a consequence of a fundamental change in the concept of contracts. Whilst in the first three years of CEPS existence, the company continued in activities of its parental companies, mainly in pipelines rehabilitation, in the following three years CEPS started to concentrate on the delivery of services from the field of its main specialization. This change in the nature of contracts led, naturally, to the decline of turnover (to less than a half of previous level), but it was positively reflected in a considerable growth of added value and its share in the total turnover. In recent years the share of value added in the annual turnover stands has grown from 14% to almost treble. In this initial period, with the exception of the business year 2007/2008 (when the typical level of turnover significantly exceeded thanks to one-time increase in exports of services, mainly to Israel), the annual turnover ranged from EUR 2.4 million to EUR 2.8 million, and the share of added value reached 50%.

Starting with year 2010/2011, substantial contribution of new technologies and services, which are results of CEPS own research and development, started to significant. 2011/2012 annual turnover reached almost 4 mil EUR. In the following year, it was overcome, mainly thanks to large projects, both within the Czech Republic and abroad. This projects preparation, mainly on technical equipment side, took place in the previous years. In the fiscal year 2014/2015, the level of turnover slightly decreased, whilst the added value share reached 74%.

In 2015–2016 the turnover level significantly decreased, due to unrealised supplies of PetroVic to Russia. The added value remained over 2 million EUR, which means its share was over 60%.

Bank references

Československá obchodní banka (ČSOB), Tábor
Raiffeisenbank, Tábor

KEY PROFESSIONAL REFERENCES

CZECH REPUBLIC

ČEPRO, a.s., Praha, fuel storage and pipelines operator
MERO ČR, a.s., Kralupy nad Vltavou, oil pipeline company
NET4GAS, s.r.o., Praha, gas transmission system operator (former RWE Transgas Net)
RWE Východočeská plynárenská, a.s., Hradec Králové, gas distribution company
RWE Severomoravská plynárenská, a.s., Ostrava, gas distribution company
RWE Západočeská plynárenská, a.s., Plzeň, gas distribution company
RWE Jihomoravská plynárenská, a.s., Brno, gas distribution company
RWE Středočeská plynárenská, a.s., Praha, gas distribution company
RWE GasNet, s.r.o., Ústí nad Labem, gas distribution company
Pražská plynárenská Distribuce, a.s., Praha, gas distribution company
E.ON Jihočeská plynárenská, a.s., České Budějovice, gas distribution company
MND Gas Storage, a.s., Hodonín, gas storage operator
Moravia Gas Storage, a.s., Hodonín, gas storage operator

Glumbík, s.r.o., Ostrava, pipeline contractor
HOMOLA, a.s., Ostrava, pipeline contractor
Moravský Plynostav, a.s., Rosice u Brna, pipeline contractor
Gascontrol, s.r.o., Havířov, pipeline contractor
Kosogass, s.r.o., Říčany u Prahy, pipeline contractor
Plynostav Pardubice Holding, a.s., Pardubice, pipeline contractor
Plynostav – Regulace plynu, a.s., Pardubice, pipeline contractor
Výstavba plynovodů, s.r.o., Olomouc, pipeline contractor
Stavby KÜHN, s.r.o., Praha, pipeline contractor
Streicher, s.r.o., Štěnovice, pipeline contractor
UNIPETROL RPA, s.r.o., Záluží, refining and petrochemical company

ČEZ, a.s., Dukovany, nuclear power station
ČEZ, a.s., Temelín, nuclear power station
Ústav jaderného výzkumu Řež, a.s., Divize Energoprojekt,
nuclear research institute, its designing division

Ředitelství silnic a dálnic, Praha (Road and Motorway Directorate of the Czech Republic)
Dálniční stavby, a.s., Praha, construction of motorways
Metrostav, a.s., Praha, construction company
Strabag, a.s., Praha, construction company

EUROPEAN UNION

Avoin osakeyhtio Stroitransgaz sivuliike Suomessa, Kouvola, Finland, pipeline contractor
Fasek Engineering and Production, GmbH, Brunn am Gebirge, Austria,
engineering, planning and products for oil, gas and chemical industries
IMP PROMONT, d. o. o., Ljubljana, Slovenia, pipeline contractor
LatRosTrans OAO, Riga, Latvia, oil pipeline company
Nafta Gbely, a. s., Gbely, Slovakia, natural gas storage operator
Orlen Lietuva, Mazeikai, Lithuania, oil pipeline company
PSJ Hydrotranzit, a. s., Bratislava, Slovakia, pipeline contractor
SEPS, s. r. o., Bratislava, Slovakia, special services – pipelines and pressure vessels
Slovenský plynárenský priemysel, a. s., Bratislava, Slovakia, national gas company
Slovnaft, a. s., Bratislava, Slovakia, refining and petrochemical company
T. D. Williamson S. A., Nivelles, Belgium, pipeline services
T. D. Williamson Polska Sp. z o. o., Warszawa, Poland, pipeline services

OTHER REGIONS

Chemo Aharon Ltd., Tel Aviv, Israel, construction company
Israel Electric Corporation Ltd., Tel Aviv, Israel, national power company
Israel Natural Gas Lines Company Ltd., Tel Aviv, Israel, national gas company
Novyje Technologii, ZAO, Moscow, Russia, pipeline services
Petroliam Nasional Berhad (PETRONAS), Kuala Lumpur, Malaysia,
oil and gas transmission system operator
TMM Engineering Services Sdn Bhd, Paka Dungan, Malaysia, pipeline services

PROFIT AND LOSS ACCOUNTS

EUR '000	2015/2016	2014/2015	2013/2014	2012/2013	2011/2012
Sales revenue	**3,360**	**4,680**	**5,504**	**6,262**	**3,805**
Change in inventory	232	−51	189	43	−15
Cost of goods sold	1,439	1,199	1,844	1,970	1,881
Operating expenses	6	107	607	162	90
Salary expense	1,387	1,523	1,370	1,401	1,323
Other expense	97	79	1,406	0	0
EBITDA	**663**	**1,722**	**467**	**2,772**	**497**
EBITDA %	**20%**	**37%**	**8%**	**44%**	**13%**
Depreciation	423	357	280	228	211
Operating profit	**241**	**1,364**	**188**	**2,544**	**285**
EBIT margin	**7%**	**29%**	**3%**	**41%**	**7%**
Financial expenses	−46	−15	81	13	−16
Profit before tax	**194**	**1,349**	**269**	**2,557**	**269**
Income tax	34	150	180	478	52
Minority interests	0	0	0	0	0
Net profit	**161**	**1,199**	**89**	**2,079**	**217**
Net margin	**4%**	**26%**	**2%**	**33%**	**6%**
CZK/EUR	27.055	27.53	27.44	25.735	24.73

BALANCE SHEET

EUR '000	2015/2016	2014/2015	2013/2014	2012/2013	2011/2012
Current assets	**2,585**	**2,567**	**2,351**	**3,659**	**881**
Inventories	292	79	366	257	148
Other receivables	0	0	0	0	0
Debtors	137	485	416	2,343	339
– Trade AR	18	331	391	2,315	319
– Other AR	112	148	25	27	21
Cash	2,156	2,003	1,569	1,059	393
Fixed assets	**1,905**	**1,923**	**1,710**	**1,874**	**1,855**
Fixed intangible assets and goodwill	14	12	18	24	33
Fixed tangible assets	1,888	1,908	1,692	1,850	1,337
Long-term financial investments	3	3	0	0	485
Deferrals	**13**	**12**	**33**	**13**	**17**
Total assets	**4,504**	**4,502**	**4,094**	**5,546**	**2,752**
CZK/EUR	27.055	27.53	27.44	25.735	24.73

EUR '000	2015/2016	2014/2015	2013/2014	2012/2013	2011/2012
Short-term liabilities	**824**	**603**	**859**	**2,217**	**1,009**
Loans	302	142	336	187	21
Advance payments	120	0	12	411	289
Trade AP	63	40	87	762	184
Taxes, social security and employees	327	401	365	716	285
Other	12	19	58	142	231
Long-term liabilities	**91**	**98**	**80**	**68**	**53**
Total liabilities	915	700	939	2,285	1,062
Minority interest	0	0	0	0	0
Total equity	**3,578**	**3,795**	**3,141**	**3,255**	**1,687**
– Registred capital	185	182	182	194	202
Reserves	**0**	**0**	**0**	**0**	**0**
Accruals	**10**	**7**	**14**	**6**	**3**
Shareholders' equity and liabilities	**4,504**	**4,502**	**4,094**	**5,546**	**2,752**
CZK/EUR	27.055	27.53	27.44	25.735	24.73

SUMMARY FINANCIALS

EUR '000	2015/2016	2014/2015	2013/2014	2012/2013	2011/2012
Sales revenue	**3,360**	**4,680**	**5,504**	**6,262**	**3,805**
EBITDA	**663**	**1,722**	**467**	**2,772**	**497**
EBITDA %	20%	37%	8%	44%	13%
Operating profit	**241**	**1,364**	**188**	**2,544**	**285**
EBIT margin	7%	29%	3%	41%	7%
Financial expenses	−46	−15	81	13	-16
Net profit	**161**	**1,199**	**89**	**2,079**	**217**
Net margin	4%	26%	2%	33%	6%
CZK/EUR	27.055	27.53	27.44	25.735	24.73

EUR '000	2015/2016	2014/2015	2013/2014	2012/2013	2011/2012
Sales revenue	**3,705**	**5,250**	**6,155**	**6,567**	**3,835**
EBITDA	**731**	**1,931**	**523**	**2,907**	**500**
EBITDA %	20%	37%	8%	44%	13%
Operating profit	**265**	**1,531**	**210**	**2,668**	**287**
EBIT margin	7%	29%	3%	41%	7%
Financial expenses	−51	−17	91	14	−16
Net profit	**177**	**1,345**	**99**	**2,181**	**219**
Net margin	4%	26%	2%	33%	6%
CZK/EUR	24.54	24.54	24.54	24.54	24.54

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