




# YEARBOOK 2008

OF THE ESTONIAN TECHNICAL SURVEILLANCE AUTHORITY

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Dear reader,

For the Estonian Technical Surveillance Authority year 2008 was remarkable and unique in every aspect - it was our first year of activity. With the amendment of the Act of the Government of the Republic of Estonia from 1 January 2008, the former Communications Board, Technical Surveillance Inspectorate and Railway Inspectorate were merged into the Technical Surveillance Authority. The first practical challenge for the new institution was to start fast and faultless operation of the work in a situation where the direct work environment changed remarkably for the employees as well as the customers within a very short period. Afterwards we may contently say that the Technical Surveillance Authority managed the situation very well.

Although the fields of responsibility and the range of competence of the Technical Surveillance Authority remained on the similar basis compared to its predecessors, year 2008 was primarily the year of studying for all of us. We analysed thoroughly our activities and took a fresh look at our habitual routines in order to change ourselves, if needed and retain only the best. In addition to starting a new state agency, the last year was eventful in all our fields of activity which will be handled more elaborately in the subsequent pages of this annual.

Tasks entrusted to the Technical Surveillance Authority by legislation are weighty and their range is extensive. The aim of our activity is the improvement of safety, organising the expedient use of limited resources and increasing the reliability of the products in the field of manufacturing environments, industrial equipment, railway and electronic communication. We wish to be an effectively operating, competent and reliable regulatory and surveillance authority with high reputation in Europe and meet the expectations put on us.

Our first year of activity has now passed and it is time to look forward. The keywords of the Technical Surveillance Authority for 2009 are improving the procedural quality and more coordinated cooperation between surveillance areas both in-house and externally. The state surveillance which values consultation and preventive action requires that the services should be quickly and conveniently available for relevant institutions. Therefore, we have started several projects which help to standardize and develop our surveillance information systems and enable the initiation of various proceedings in future using the homepage of the Technical Surveillance Authority.

I would like to thank all employees, customers and partners of the Technical Surveillance Authority for an effective and pleasant cooperation in our first year of activity and I expect its continuation in future.

Yours sincerely,

Raigo Uukkivi  
Director General



Electronic communication



# Electronic communication

## Policies and tasks

Five departments of the Technical Surveillance Authority dealt with electronic communication in 2008 - Communication Services Department, Numbering Management Department, Radio Frequency Surveillance Department, Radio Frequency Management Department and Apparatus Department.

*In the field of communications services* the Technical Surveillance Authority checks the registration of the providers of communications services in the Register of Economic Activities to guarantee relevant information to the general public. The number of providers of the communications services has been relatively stable, staying within the limits of 200. As a rule, one company provides several communications services. The recent trend comprises complex solutions with three to four different services in one price package.

The Technical Surveillance Authority inspects the performance of requirements set for the provision of the communications services and the operation in the protection zone of the line facilities and handles the damages of line facilities, mainly those of the copper and optical underground cables. Cable damages cause communication failures to the consumers, which in the case of damages to copper cables affect relatively small areas (residential building, microdistrict and village). In the case of damages to the optical cables, significantly larger areas are affected (rural municipality, town, and county). Cable damages may also cause failures of international connections.

Within the framework of numbering management, the Technical Surveillance Authority deals with giving the right of use for fixed phone and mobile phone numbers, service numbers, short numbers and identification codes used in communications network and supervision of using the numbering.

Numbering is a limited technical resource and the task of the Technical Surveillance Authority is to guarantee a numeration reserve sufficient for technological development by all number types. Use of numbering is designated with Estonian numbering plan determining the total volume of numbering (at the end of 2008 - 15.9 million numbers) and the possibilities of the use of

numbering areas are provided. As of the end of 2008, the total of 603 number licences to 176 users had been issued.

The task of the Technical Surveillance Authority is to guarantee the number portability so that the customer has the right to preserve his/her mobile or fixed phone number also when he/she changes the operator or changes his/her geographical location. Both allocating the number and its transfer from one provider of communication services to another are conducted through the numbering management database managed by the Technical Surveillance Authority. According to the statistical data, the portability of numbers is not very popular among the population of Estonia. Only 1.4 % of the numbers of the total of reserved numbers have participated in the number portability process and the numbers are ported in approximately 60,000 cases per year.

The Technical Surveillance Authority also supervises access to numbers in view of securing the possibility of dialling all numbers from all networks. Special attention is paid to ported numbers.

*Radio frequencies* are a limited resource and the ongoing development of technology calls for the allocation of ever more frequencies for new applications. The Technical Surveillance Authority monitors together both the possibilities and the needs in planning the use of frequency spectrum which depend on



the physical properties of the radio frequencies, existing and planned technologies, interests of the users of the radio frequencies and international regulations.

The radio frequencies do not recognize state borders; therefore, it is highly important to co-operate internationally in order to guarantee the interference free use of radio communication systems of different countries. On the world-wide scale, the field of radio communications is supervised by Radio Communication Sector (ITU-R) of the International Telecommunication Union (ITU). European Electronic Communications Committee (ECC) was established to the European Conference of Postal and Telecommunications Administrations (CEPT) in Europe. Within the EU framework, the Radio Spectrum Policy Group (RSPG) and Radio Spectrum Committee (RSC) coordinate the use of radio frequencies; for NATO, the same task is performed by the NATO Policy Working Group (NATO PWG) and Frequency Management



Subcommittee (NATO FMSC). The main emphasis in 2008 was participation in the work of ECC and its frequency management working group WGFM as well as in RSC. The activities of other organisations and their working groups are also observed constantly.

Domestically, cooperation with Defence Forces in the respective bilateral commission is very important. In cooperation with the Health Protection Inspectorate the terms and conditions of the issued frequency authorisations were agreed according to the requirements of radio-frequency radiation in the human environment. There is also cooperation with the Ministry of Culture in issuing the broadcasting licenses and with Estonian Air Navigation Service in coordinating the aeronautical communication frequencies. The basis for using radio frequencies is the Estonian radio frequency allocation plan which provides general basis for the use of radio frequencies both by civilian users and the Defence Force. To update the radio frequency allocation plan according to the needs of Estonia and development of

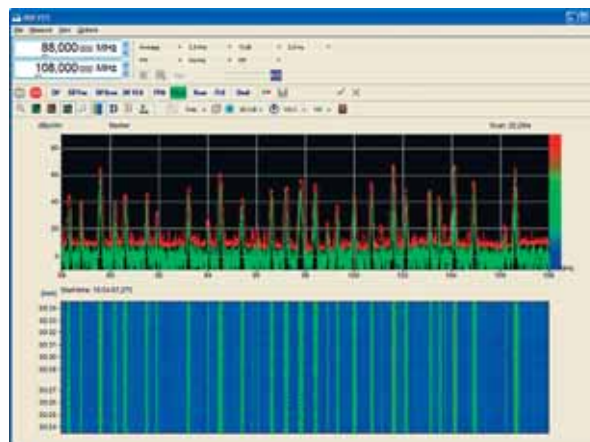
technology and international regulations, the Technical Surveillance Authority regularly submits proposals to the Ministry of Economic Affairs and Communications.

Frequency authorisations are issued for using the radio frequencies which give the owner of the frequency authorisation the right to use the radio frequency channel under specific conditions and ensure an interference-free and effective use of radio frequencies. The terms and conditions of the frequency authorisation depend on the used frequency band, geographical location of the antenna and aim of using the frequencies. The conditions of the frequency authorisation are also affected by the frequency use of neighbouring countries. There were total of ca 4600 valid frequency authorisations in 2008 which had been issued to 1220 users (of which 550 were radio amateurs).

*The aim of radio frequency surveillance* is to guarantee the 24 hour interference-free radio communication in radio frequency channels used for emergencies and state security, as well as processing the messages of radio frequency interference and inspecting the legitimate use of radio frequencies.

Through years the messages connected to the reception of TV signal have formed majority of the radio interference messages. 23 % of all submitted radio interference messages have been justified. In case of the rest of the messages the poor TV image or the radio communication has been caused mostly by the failure of the reception device or antenna or insufficient signal strength.

In addition to processing the radio interferences, also the radio communication is monitored to find out the illegal use of radio frequencies and check adherence to the authorisation conditions. For the monitoring purpose, the Technical Surveillance Authority uses Rohde & Schwarz software ARGUS and nationwide network of stationary radio monitoring stations. In addition to stationary monitoring also the mobile stations are used.



*Radio broadcasting spectrum image from Tallinn monitoring centre*

*Apparatus regulation and supervision* focuses on updating the requirements for the use of radio equipment according to the development of technology and guaranteeing the compliance with the requirements. Due to operating in a common European market, cooperation with other European countries is very important. The Technical Surveillance Authority cooperates with other European countries mainly through the Telecommunications Conformity Assessment and Market Surveillance Committee (TCAM) of the European Commission. It also participates in the work of ECC Regulatory Affairs Working Group (WG RA).

Situation in the equipment market in Estonia is relatively similar with the rest of Europe. Importing of equipment not complying with the requirements, ordered from online stores has lately emerged as a new problem. This problem is dealt together with the Estonian Tax and Customs Board.

The Technical Surveillance Authority is a full member of European Telecommunications Standards Institute (ETSI) in duties of national standardisation organisation.

The most important tasks at that have been participation in developing of ETSI standards and organising their adoption in Estonia, as well as ensuring cooperation with the Estonian Centre for Standardisation.

Participation in the work of ETSI has enabled to have a say in developing the harmonised standards and regulations in Europe. Knowledge obtained from international cooperation and experience is used in developing the standardisation of telecommunications area and making proposals for harmonising the regulations which are valid in Europe.

## Communication services

As of the end of 2008, there were 55 phone service, 212 data communications service, 22 mobile phone service, 39 leased line service, 28 cable television service and 37 network service providers active in the *Estonian communications service market*.

135 communications service supervision actions were performed in 2008 where the inspections of fulfilling the requirements of providing cable television service formed the main part. 14 precepts for bringing the network and service requirements into conformance were prepared and on three occasions penalty payments were determined for the failure to perform the precepts on time.

In 2008 several new TV channels such as ETV2, Kanal 11, TV 6, Kalev Sport appeared in the digital terrestrial television broadcast, which had to be visible also over cable television networks. There were problems with the transmission of ETV 2 programme in one major analogue cable network and in one IPTV network, but prompt actions of the Technical Surveillance Authority solved the problem. Some other similar problems occurred also with smaller cable television networks.



Second TV-channel of ERR (Estonian Public Broadcasting) shown in digital broadcasting and cable television networks

As many consumers were confused by advertisements of mobile operators claiming the best coverage, the Technical Surveillance Authority performed *comparative measuring of the quality of GSM mobile phone services* in Tallinn and later disclosed the results. The purpose of the measuring was to show the absence of any big difference in the quality of the communications services among the service providers.

The Technical Surveillance Authority helped the Consumer Protection Board in solving the complaints about the communications service on 28 occasions. Majority of the claims concerned image quality of IPTV and slow speed of M-Internet and trouble with exceeding the downloaded data volumes. Many disputes were due to the fact that people had not read carefully the communications service agreement before signing it.

In cooperation with the Ministry of Justice, on six occasions inspections were carried out over the influence of the *mobile phone communication jamming system of Murru prison* in the territory of the prison and in Rummu small town with the aim of guaranteeing the functioning of mobile communication outside the prison, incl. emergency calls, without major interferences. However, the installers of the system did not reach the desired result and the use of the system was abandoned.

In respect of damaging of or causing emergency situations to the line facilities, the Technical Surveillance Authority solved 41 misdemeanour procedures in 2008.



Communications cables damaged during the excavation works

Quality of mobile phone services in Tallinn, June 2008

Quality indicator		EMT	Elisa	Tele2
Test calls (pcs)	Successful	85	89	85
	Network busy	5	5	6
	Interrupted	0	0	2
	Out of range	2	0	0
	<b>% of success</b>	<b>92,4</b>	<b>94,7</b>	<b>91,4</b>

The misdemeanour notifications received in 2008 show that most of the damages to the line facilities took place when the companies which performed excavation work in the protection zone of the line facilities had respective licenses and the damage to line facilities occurred because of carelessness or human error. The number of misdemeanour notifications received about damaging the optical communications cables increased.

In the second half of 2008 the Technical Surveillance Authority inspected the implementation of the requirement of communications data retention by major phone and mobile phone service providers. The stored data are necessary for security authorities for preventing and solving the crime. During the inspection more than 100 phone calls were made from different communications networks in different regions, checking later whether the communications provider had duly recorded the data. The results of the inspection showed that there were no remarkable cases of neglecting the requirements.

## Numbering

In the first half of 2008 it appeared that the *free resource of mobile phone numbers* is on the decrease. Mobile phone numbers necessary for the prepaid phone service provided by the communications service providers all over the world and guaranteeing the existence of 50 % free numeration resource, as applied in international practice, caused the need to open additional mobile phone numbers. To increase the volume of mobile phone numbers the new numbering ranges 81 and 82 were taken into use in the Estonian numbering plan, which resulted in an increase of volume of free numbers used in mobile phone networks by 2 million numbers. At the same time the ranges 83...85 were reserved for the mobile phone services in the future. Concerning the rest of the numbers, there was enough resource as of the end of 2008.

*Number portability statistics* made by the Technical Surveillance Authority showed that during 2008 altogether 57 951 fixed and mobile phone numbers were ported from one communications network to the other. An average of 4800 numbers per month was ported. There were 45,526 mobile phone numbers and 12,425 fixed phone numbers ported. Total of 15,024 number port applications were cancelled.

700 procedural acts connected with numbering authorisations were performed in 2008 - 162 new authorisations were issued, 487 were extended, 49 changed and there were two refusals. An authorisation for Europe- wide children's helpline service short number 116111 operating 24 hrs as a free service in Estonian, Russian and English was issued.

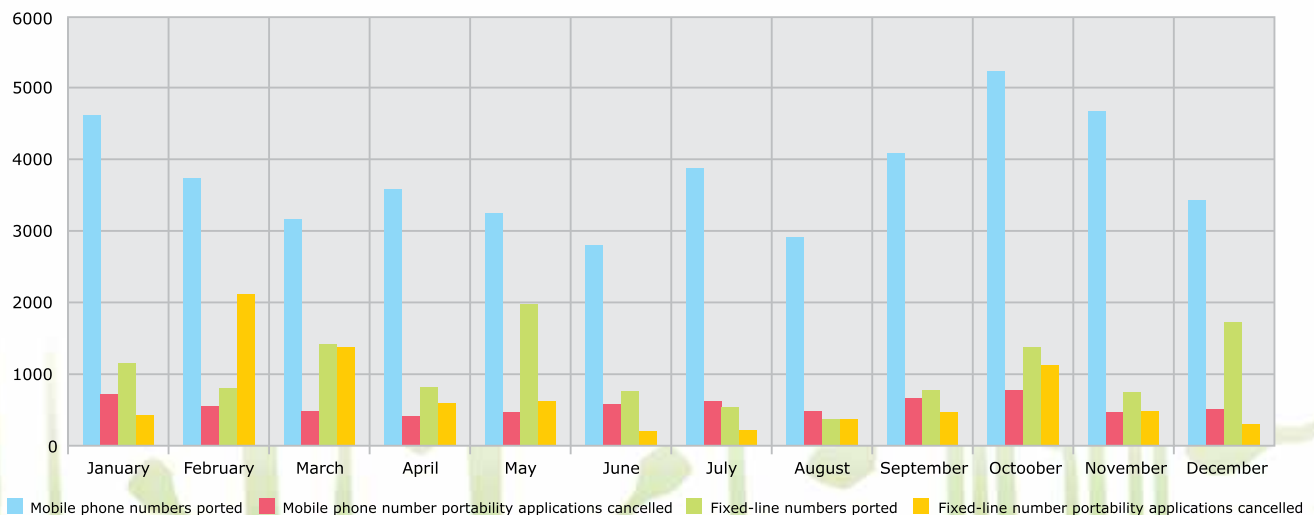
The access to total of 6419 of ported fixed and mobile phone numbers was checked and the Authority informed the communications companies about detected deficiencies. The access indicators in different communications networks were good (99.5... 99.75 %). Additionally, the Authority checked possible illegal use of 5000 free numbers and detected illegal use of 5 numbers by one communication service provider. In addition, 6 complaints on the use of numbering were processed and solved.

The Technical Surveillance Authority consistently checked the conformance of the use of numbering to the terms and conditions of numbering authorisations and prepared a total of 26 inspection reports. Nine misdemeanour procedures were initiated as a result of inspections.

The Authority helped the Consumer Protection Board to solve 8 claims of the consumers connected with number portability, the reception of unwanted text messages from strange numbers and the sending of unfounded invoices to consumers by the communications providers.



*The rates of mobile phone and fixed phone number portability in 2008 by months*





## Planning the use of radio frequencies

*The Broadcasting Act established 1 July 2010 as the date of transition to digital television.* The task of the Technical Surveillance Authority in performing this was to guarantee necessary frequency resource for covering Estonia with digital television networks. By the end of 2008, AS Levira had built three nation-wide digital television networks of which the first, primarily meant for public service broadcasting, covered 97 % of the population. The other two networks had smaller coverage. Building the networks continues in 2009.

*AS Elisa started testing the third generation 3G mobile communications network* in GSM frequency band in 2008. Compared to GSM system, the 3G mobile communication network enables much faster data communication.

In cooperation with Estonian Association of Information Technology and Telecommunications the *preparations for taking the frequency band 2500-2690 MHz into use for broadband mobile communication* started in 2008. The public competition will be carried out in 2009.

Proceeding from the final acts of World Radio Conference of 2007 (WRC-07) the procedure for designating the call signs in



respect of the maritime communication was changed in 2008 and the Estonian Radio Frequency Allocation Plan was supplemented. The last supplements according to the decisions of Electronic Communications Committee of the European Conference of Postal and Telecommunications Administrations (CEPT) were introduced in the Frequency Allocation Plan.

Participation in the development project of pan-European frequency management database (EFIS, <http://www.efis.dk>) continued. The aim of the project is to facilitate harmonisation of the use of radio frequencies and give possibly exact information about the frequency use of different countries to the communication administrators as well as radio equipment suppliers, manufacturers and users of radio equipment.

The Technical Surveillance Authority participated in preparing six decisions on harmonising the frequency use within the framework of Radio Spectrum Committee (RSC) of the European Commission in 2008. Inter alia, the decisions handled the broadband services, mobile communication and complimentary

ground component of satellite networks as well as use of short range devices.

The main problems in 2008 for Estonia were connected with the external border of the EU. As the frequency use of Russia differs remarkably from that of the European Union, essential limits are set on the introduction of new technologies in its neighbouring states (incl. Estonia). For these problems, an appropriate solution for Estonia was found largely through cooperation with Finland and Lithuania.

## Using the radio frequencies

Technical Surveillance Authority issued 4598 authorisations for terrestrial stations and networks in 2008, of which 269 to broadcasting, 506 to ships and aircraft and 145 to radio amateurs. In connection with the development of mobile communication networks, 424 new fixed radio links were added. The number of stations in other services has not changed much.

From June 2008 the applicant of the frequency authorisation does not need to coordinate the conditions of the frequency authorisation with the Health Protection Inspectorate, but it is performed by the Technical Surveillance Authority before issuing the authorisation. The establishment of the new procedure excludes the situation where due to the mistake of the owner of the frequency authorisation, the conditions of the frequency authorisation are not coordinated with the Health Protection Inspectorate and there will be a danger to the health of people. The new procedure is more customer-friendly since the coordination is performed during issuing the authorisation.

In cooperation with the Estonian Radio Amateurs Union and according to the international tradition, at the beginning of 2008, 26 special call signs ES90A - ES90Z were issued to the Estonian Radio Amateurs Union in connection with the 90th anniversary of the Republic of Estonia.



*Mobile measuring station for detecting radio interferences and monitoring*

## Radio Frequency Surveillance

According to the statistics of 2008 the highest number of radio interference notifications was received from private persons - 53. Private companies submitted 43 notifications and state administrative agencies 14 notifications. By regions, Tallinn and Harjumaa submitted most radio interference notifications. Nine first-priority radio interferences (by maritime communication and aviation emergency channels) and 101 other radio interferences were received. All problems were solved.

In addition to routine inspection of broadcasting transmitters, the use of RDS identification codes was also checked. RDS enables to forward messages to the radio receiver screen and the receiver can automatically retune to another frequency of the same program or automatically choose the stations with similar profiles in leaving the coverage. Deficiencies in the use of RDS identification code were eliminated and brought to conformance with the terms and conditions of the frequency authorisation and requirements of RDS standard. Inspection of the compatibility of RDS identification codes will be carried on also during the following years.

Technical Surveillance Authority initiated 22 proceedings in respect of violation of the terms and conditions of the frequency authorisations in 2008 of which 1 resulted in a precept. In 12 cases the RDS code was wrong, in one case it was a radio broadcasting radiation parameter, in 9 cases unauthorised use of frequency (in 8 cases expired authorisations).



## Apparatus

On the proposal of the Technical Surveillance Authority, the regulation of the Minister of Economic Affairs and Communications "Terms and conditions and technical requirements of use for radio equipment exempt from frequency authorisation" was supplemented in respect of regulation in 2008 on the basis of six new decisions of the European Commission. The decisions, inter alia, included the conditions of use of broadband wireless access systems, mobile communication devices, complimentary ground component of satellite systems and short range devices.

In autumn 2008, the European Commission initiated updating the current regulation for telecommunications and radio equipment in which also the Technical Surveillance Authority contributed. The aim is to develop a simpler mechanism for guaranteeing the conformity of the equipment with the requirements by year 2010.

The inspection of stores continued in 2008 to guarantee the conformity of the apparatus on sale to the requirements. Altogether 765 inspection reports were prepared. 287 deficiencies were found. In 18 cases there was no CE-marking, in 151 cases the declaration of conformity was missing and 164 apparatuses lacked information about their use in Estonia.

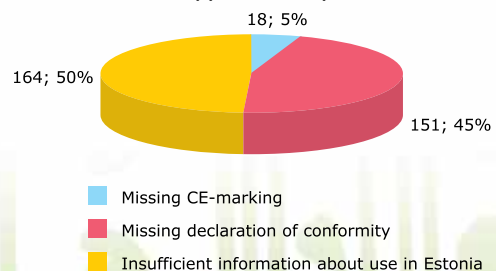
Majority of the inspected apparatuses were toys, mainly the



Altogether 10,245 different measuring procedures were performed in 2008 of which one third from mobile monitoring centres. The radiation parameters of broadcasting transmitters were measured in 3775 times. Majority of the violations were connected with the non-conformance of the engaged bandwidth to the requirements. The deficiencies were eliminated after the first reminder.

As usual, the Technical Surveillance Authority participated in the Defence Forces training exercise Spring Storm 2008 where they carried out radio communication monitoring with the aim to check adherence to the frequency plan. Participation in such trainings has enabled to find out the monitoring capability during an intensive use of radio communication on the one side and on the other side the deficiencies which may occur during a simultaneous use of big number of equipment.

*The results of apparatus inspection in 2008*



radio controllable cars. In addition, the checks were made on alarm devices, baby phones, cordless audio devices, cordless telephones, remote control devices, radio telephones, cordless doorbells, wireless computer devices (mice, keyboards and wireless network devices) and other devices using radio frequencies.

In 2008 the attempts to import equipment not conforming to the requirements outside European Union increased. Very popular articles were different electronic goods such as mobile phones, radiotelephones, cordless video and audio systems, cordless alarm devices, etc ordered from online stores. People are mainly attracted by favourable prices, at the same time failing to notice that some of the goods offered on the Internet do not meet the European quality and safety standards. Generally the goods ordered over the Internet are received in postal packages which pass through customs inspection. One part of the customs examination is checking the conformity of the goods to the requirements performed by the Tax and Customs Board in cooperation with the Technical Surveillance Authority. Non-conforming goods are returned from the customs. In 2008, the Tax and Customs Board submitted 468 inquiries about conformity of the electronic communication equipment to the requirements; 90 % of the goods did not meet the requirements and were returned to the sender.

A wide variety of radio equipment is manufactured all over the world and the use of frequency differs by countries. To guarantee interference-free operation of the equipment, the procedure of the obligation to inform the member states before placing radio equipment to the market has been introduced in the European Union. In order to facilitate the procedure, a One Stop Notification (OSN) system was started by the European Commission at the beginning of 2008. Estonia was one of the first Member States to join this system. 1629 notifications arrived in 2008 of which 1388 were submitted through OSN and 241 were directly sent to the Technical Surveillance Authority. In the course of processing the notifications, it was established that the use of 26 of the notified radio equipment was prohibited in Estonia and the use of 34 of equipment was permitted on certain conditions. Respective information was forwarded to the notifiers.

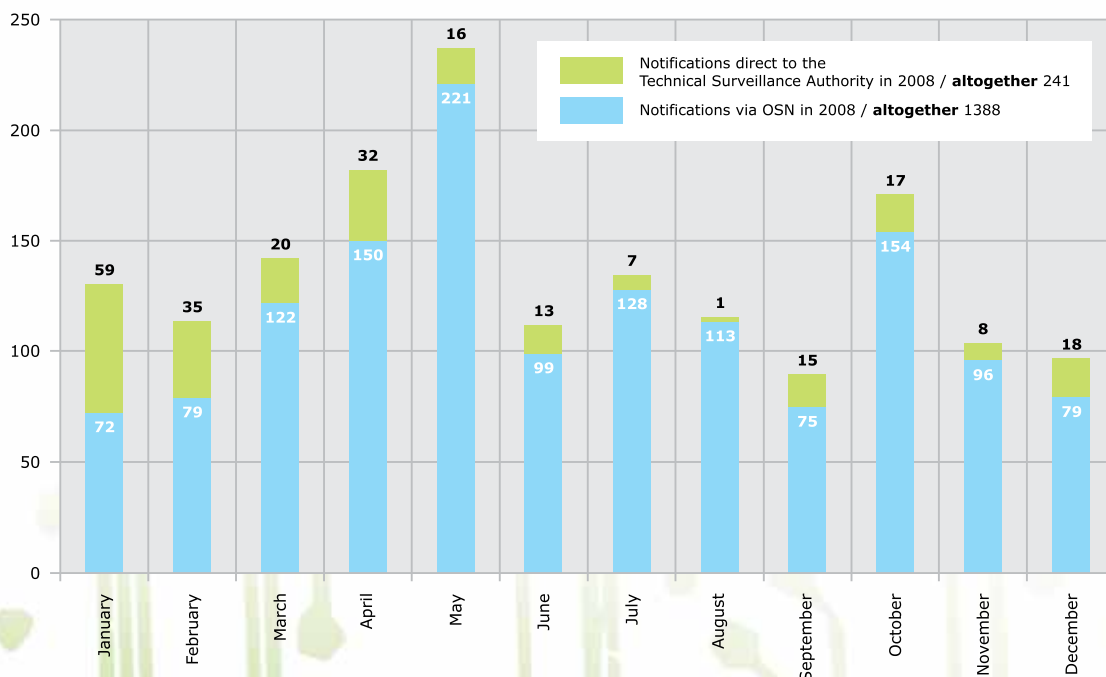


## Standardisation

In respect of standardisation, votes were taken on harmonised standard EN drafts of the European Telecommunications Standards Institute (ETSI) in 2008 and 70 new ETSI standards were adopted as Estonian standards. Original Estonian standards in the field of telecommunications were not submitted for procedure. In the Public Enquiry process of harmonised standards the translation of the standard's title is added to the Estonian opinion sent to ETSI, which is necessary for publishing the list of harmonised standards in the Official Journal of the European Union.

The requirements of the apparatuses are mainly based on harmonised standards. Participation in their development has given an opportunity to keep abreast of developments in technology and at the same time also contribute to developing the requirements for new equipment. Proceeding from that, the Technical Surveillance Authority actively participates in the activities of the ETSI Technical Committee Electromagnetic Compatibility and Radio Spectrum Matters (ETSI TC ERM). *A representative of Technical Surveillance Authority was elected as the secretary of ETSI TC ERM in 2008.*

*Notifications about the intention to place radio equipment to the market*





## Railway



# Railway

## Policies and tasks

In the field of the railway, the Technical Surveillance Authority had two departments in 2008 - Railway Management Department and Railway Safety Department.

In 2008 there were total of 140 companies having railway infrastructure in Estonia, including 2 railway Infrastructure Managers which manage the railway infrastructure of public railways and 6 Railway Undertakings (including 3 Railway Undertakings which provide passenger transport services) operating on public railway.

Technical Surveillance Authority issues safety certificates, locomotive drivers' licenses, building permits and authorisations for use and written consents for constructing railway facilities. The Technical Surveillance Authority also enters railways and rolling stock to the Estonian railway traffic register and performs state supervision on maintenance of railway traffic, railway infrastructure and railway rolling stock and building the railway facilities. The Technical Surveillance Authority delivers to the Ministry of Economic Affairs and Communications information about railway accidents, failures, incidents and collisions and, if needed, participates in the work of investigation committees set up at the Ministry of Economic Affairs and Communications for identifying the causes of railway accidents.

The task of the Technical Surveillance Authority is to proceed the misdemeanour in cases prescribed by the Railways Act. Fire safety supervision about compliance with the fire safety requirements of railway transport is performed according to the Rescue Act. The organisation of railway traffic, rolling stock and carriage of dangerous goods is also inspected.

Supervision of railway traffic takes place in the traffic control centre of the Infrastructure Manager and in railway stations. The inspections are carried out once a quarter and once a year accordingly in the traffic control centres of AS Eesti Raudtee and AS Edelaraudtee which are companies managing the public railway infrastructure. Supervision involves checks on the performance of traffic schedule, employees' competence, validity of professional certificates, use of signalisation and communica-

tion devices of railway traffic in the admission and departure of trains and in shunting.

During the inspection of safety of passenger transport, the Technical Surveillance Authority checks the technical condition of the rolling stock, employees' competence, knowledge of the train crews and customer support officers of the trains about safety instructions and procedures. This inspection is generally performed 6 to 7 times a year.

Regularity and sample of the railway stations' supervision depends mainly on the range of activity and intensity of the Infrastructure Manager. Annually approx. 20-30 railway stations are supervised. During supervision, the technical condition of the rolling stock as well as shunting in the station is checked as well as the relevant qualification of the locomotive drivers and the train shunters. There is approx. 1500 km of public railway lines in Estonia with approx. 1000 railway facilities. Additionally, there is railway infrastructure in the length of approx. 500 km adjoined to the public railway; the inspection of conformity with the requirements of this infrastructure is also the task of the Technical Surveillance Authority.

In respect of structural aid granted by the European Commission, the Technical Surveillance Authority has the first-level supervisory role which includes inspection over the beneficiaries and reporting to the Ministry of Economic Affairs and Communications (Implementing Authority) and the Ministry of Finance (Managing Authority). Within the framework of the project the Technical Surveillance Authority assesses the conformity of the incurred expenses to the funding decision, participates in the procedure of public procurements and performs on-the-spot visits. In case of detecting irregularities, the Technical Surveillance Authority's responsibility is to inform immediately the Implementing Authority and the Auditing Authority (Ministry of Finance). The Implementing Authority decides whether and to what extent the beneficiary must repay the funds.

In addition to the role of an Implementing Agency of the structural aid, in 2008 the Technical Surveillance Authority received grant in the framework of the Rail Baltica studies project

funded from the programme of Trans-European Transport Network (TEN-T) of the EU. The aim of the project is to find out the feasibility of building a separate 1435 mm gauge railway track from Tallinn to the border between Lithuania and Poland. This is the gauge used in Europe which is 85 mm narrower than the one used in Estonia.

*Public railway infrastructure* belonged to two companies in 2008 - AS Eesti Raudtee and Edelaraudtee Infrastruktuuri AS. All Railway Undertakings are entitled to use public railway infrastructure on equal basis and are obliged to pay respective fee for it. To guarantee that, the railway capacity is distributed among the applicants and the infrastructure fee is established. *Capacity of the railway infrastructure* is a potential to use the railway infrastructure during a certain period which is annually distributed among the Railway Undertakings that want to use it. The infrastructure fee is a fee which the Railway Undertaking pays to the Infrastructure Manager for using its infrastructure. The allocation of capacity of the railway infrastructure and determining the infrastructure fee are the tasks of the Technical Surveillance Authority as both Infrastructure Managers managing public railway infrastructure also act as Railway Undertakings.

## Licenses and permits

From 2008, valid safety management system and safety certificate are needed in addition to the valid license for managing the public railway infrastructure or providing transport services for passengers and freight.

In Estonia, in 2008 there were 20 valid safety certificates of which 15 belonged to Railway Undertakings, 3 to Railway Undertakings which provide passenger transport services and 2 to Infrastructure Managers. In respect of passenger transport, domestic passenger transport services were provided by AS Edelaraudtee, international passenger transport services by AS GoRail and passenger transport services on electrified railway by Elektriraudtee AS.

In 2008 the licence to drive an Electric Multiple Unit, Diesel Multiple Unit, steam locomotive or diesel locomotive was owned by 564 men in Estonia. Women can also apply for the licence to drive a locomotive from 2008, although currently there are no female locomotive drivers in Estonia. The Technical Surveillance Authority conducts theory exams for locomotive drivers that are followed by practical tests in one's own company. Successfully passed practical test gives the right to drive a locomotive.

## Facilities and rolling stock

In 2008 the Technical Surveillance Authority issued a total of 100 building permits and authorisations for the use of railway facilities, 8 of them for demolishing the railways. In addition, there were 36 approvals of territorial layouts and terms and conditions which were served as the basis for building blueprint



*New railways in the Coal Terminal of Muuga*

of railway facilities. There were no applications for approval of operations in the railway protection zone.

Altogether seven ad hoc requests for allocation of capacity were approved in 2008, incl. for a Christmas Train from Tallinn to Moscow, summer-time Viljandi Folk Music Festival Train and Tartu Students Days' train.

Inspections carried out in 2008 in the traffic control centres of Infrastructure Managers pointed to some deficiencies, e.g. problems with observing the traffic schedule and in some cases insufficient knowledge of official language.

In the course of inspections of passenger trains the activities of train crews and customer support officers in driving the train and servicing the passengers were checked in 7 cases. The results were satisfactory.



*High-Rail vehicle - the control device of the railway infrastructure of the Technical Surveillance Authority*

In 2008, nine railway Infrastructure Managers were checked. The focus was mainly on two Infrastructure Managers who were granted safety certificates for managing the public railway infrastructure.

## Railway accidents

In 2008 there were 25 railway accidents with 9 deceased and 10 injured people. There were 12 collisions on the railway crossings caused by the carelessness of motor vehicle drivers. There were 13 accidents to persons caused by rolling stock in motion, of which 8 were lethal.

In 2008 the Technical Surveillance Authority proceeded 4 misdemeanours due to violations of signalisation, train traffic and shunting requirements. No misdemeanour proceedings were initiated for violating the requirements of the maintenance of railway infrastructure, illegal building and use of the railway facilities in 2008.

## Railway projects

Building of five new passenger platforms funded by the European Reconstruction and Development Fund (ERDF) was completed in Tallinn and in its immediate vicinity in 2008. Within the framework of the project, AS Elektriraudtee built a stop with two 30 m long platforms to Kitseküla (immediate vicinity of A. LeCoq Arena) and 2 stops with three 30 m long platforms to Laagri (Urda and Padula stops). The total cost of the project was 10 million kroons.



*Urda stop in Laagri*

The Technical Surveillance Authority dealt with two projects funded from the Cohesion Fund budget of period 2004-2006, which were preparations for future activities. The first of these projects deals with eliminating risks at level crossings. Within the frames of this project 6 same grade level crossings designed as separated grade level crossings in Tallinn, Tartu, Tapa and Rakvere. Keila municipality, which at first participated in the project, resigned from further participation in connection with the decrease in railway traffic and reorganisation of the traffic arrangement. Because of that the majority of the problems that existed at the beginning of the project were solved. The second project was about forming a central railway rescue unit. In the frames of that project different analyses were composed and action plans were prepared for establishing the unit within the Rescue Board.

In 2008 three projects financed from the structural aid of the European Union started - railway reconstruction on Rail Baltica track (Tallinn-Tartu section), renovating the passenger platforms to the standard European height and guaranteeing the safety of the passengers in the operating area of the trains. Within the framework of the first project the railway will be reconstructed in view of ensuring the speed of 120 km/h for passenger trains on the entire railway section. The tasks are expected to be completed by the end of 2011 and the speed of 120 km/h should be guaranteed on the whole Estonian section of Rail Baltica track (Tallinn-Tartu-Valga). The rest of the projects concerned renovation of passenger platforms in 2009-2010. Within these projects the passenger platforms situated on the trans-European transport network (TEN-T) will be reconstructed according to the EU standards and needs of new passenger trains.

Preparations for obtaining new rolling stock and renovating the existing overhead contact lines started in 2008. Within these projects all existing electric trains will be gradually replaced and the overhead contact lines used by them will be reconstructed.

In 2008, the Technical Surveillance Authority cooperated with Operation Lifesaver Estonia (OLE) in the yearly Christmas-time railway safety campaign "Let the train pass! You are expected home for Christmas". The Technical Surveillance Authority incurred almost 80 % of the campaign costs. The aim of the campaign was to remind everyone of the essential features of rail safety. The message of the campaign was communicated on the Internet, print media and all radio and TV channels that are members of the Association of Estonian Broadcasters, as well as on posters in the urban environment, passenger trains and train stations.



*Christmas campaign poster "Let the train pass! You are expected home for Christmas"*

In cooperation with JASPERS - organisation formed by the European Commission, European Investment Bank and European Reconstruction and Development Bank for consulting granting the structural aid, the Technical Surveillance Authority prepared the preliminary terms of reference within the framework of Rail Baltica studies in 2008. In 2009 the project continues with preparing the cooperation agreement of the ministries of the three countries responsible for the transport infrastructure. The cooperation agreement will be the bases on which the public procurement will be conducted for finding the consultant to carry out the studies. The representative of the Technical Surveillance Authority will also participate in the work of the procurement committee.



## Industrial safety





# Industrial safety

## Policies and tasks

Five departments of the Technical Surveillance Authority - Construction Safety Department, Electrical Safety Department, Legal Metrology Department, Mining Safety Department and Technical Safety Department dealt with industrial safety in 2008.

The Technical Surveillance Authority plans supervision activities for inspecting the compliance with safety requirements according to certain priorities comprising the districts, companies, the hazard level of the objects, statistics of claims and accidents. The task of the Technical Surveillance Authority is to identify the causes of the accidents which occurred in certain fields and, if needed, plan and take measures for preventing accidents.

Domestically, the main cooperation partners in the field of industrial safety connected with products are Tax and Customs Board, Consumer Protection Board and in case of accidents the Labour Inspectorate, Rescue Board and the Police Board. An essential role belongs to international cooperation during which the activities in the European internal market are coordinated and experience concerning supervision is shared. Information is exchanged through ICSMS and RAPEX systems. In addition to the administrative cooperation groups of the European Commission, the main cooperation partners of the Technical Surveillance Authority are the respective institutions of the Nordic countries, especially of Finland.

There are many potential inspection objects in the *field of construction*. According to the register of economic activities there were more than 5000 active building contractors at the end of 2008. . The problems included aged houses the building safety of which is not guaranteed. The priorities of the Technical Surveillance Authority in 2008 were publicly used and aging buildings.

Market supervision of the *construction products* in Estonia is a relatively new supervision area which started in 2003 and the aim of which is to guarantee the compliance of the construction products on sale and in use to the established requirements. Specific requirements for different product groups are estab-

lished through harmonised product standards. By the end of 2008 there were more than 300 harmonised standards of which  $\frac{3}{4}$  were enforced in 2008.

The legislation has caused problems with construction products and materials, e.g. plant-mixed concrete and the fire doors. In respect of such items there are no harmonised EU standards, they are outside the limits of regulation and consequently supervision, which increases the likelihood of accidents.

During the supervision of *electrical installation and works*, the Technical Surveillance Authority inspects the compliance of electrical installations which are in use and will be put into service, electrical works, electrical contractors and managers of electrical work, technical inspection bodies and certification of persons with the requirements.

The supervision of electrical works in 2008 included more than 1300 electrical work undertakings registered in the register of economic activities, more than 3500 managers with certificate of competency of electrical works and persons in control of electrical installations, as well as 25 technical inspection bodies of electrical installations. It is not possible to determine exactly the number of electrical installations due to their definition; depending on the location of the point of supply their number is between 200 000 and 500 000.

In respect of *electrical equipment*, the Technical Surveillance Authority inspects the compliance of the electrical equipment to be placed on the market with the requirements in order to guarantee their safety, electromagnetic compatibility and environmental friendliness. There are different commodity groups of electrical and electronic equipment with more than 3000 product standards.

In case of machinery, including safety components, e.g. emergency stop buttons, optical curtains, etc, the Technical Surveillance Authority inspects the conformity of the necessary documentation (declaration of conformity, instructions in Estonian) and marking of the machinery (warning signs in Estonian) with the requirements. In respect of cranes, goods lifts and hoists that require registration, checks are made on the conformity of

the persons responsible and the operators, the technical inspection report and the conformity of installation, rebuilding and repairs. Checks are also made on the conformity of the person performing the technical inspection and the official examiner of responsible persons, on the relevance of determining the potentially explosive atmosphere as well as on the conformity of equipment and protection systems used there.

There were 30 registrations of machine works (installation, rebuilding and repair) in the register of economic activities in 2008 and one registration for personnel certifier. In the database of the Technical Surveillance Authority there were 2340 active equipment registered including 1778 cranes, 338 cage lifts and 93 jiggers, 15 construction hoists with cabin, 10 attractions, 65 goods lifts and 41 platform hoists. *In respect of lifts and cableway installations*, the Technical Surveillance Authority checks conformity of their installation to the safety requirements. It is also checked whether the lift has been certified as conforming by a competent authority and whether a technical inspection of the lift has been performed, persons responsible appointed and regular maintenance guaranteed. In addition, the conformity to the requirements of the performers, installers, maintainers and persons responsible for the technical inspection of lifts is checked.

In 2008 there were 5 registrations of the installers of lift, 10 registrations of lifting equipment works (rebuilding, repair and technical maintenance) and one registration of personnel certifier in the register of economic activities. In the database of the Technical Surveillance Authority there were 4265 active registrations of lifts and 12 active registrations of cableway installations (in Estonia mainly the drag lifts). In respect of the *pressure equipment*, e.g. steam boilers, pressure pipelines, aerosol bottles, etc., the Technical Surveillance Authority checks their conformity to the requirements as well as

installations and performance of the gas works. Checks are performed on the compliance of the gas installation with the safety requirements, on the execution of the technical inspection and the appointment, if necessary, of the supervisor over the use of the gas installation. In the case of the performers of gas works and the builders of gas installations, checks are made on the personnel competence and conformity of their activity, as well as their registration in the register of economic activities. In the case of the gas equipment on sale in Estonia (gas stoves, gas-fired boilers, etc) the conformity of the equipment and its marking is checked, as well as the existence of installation, user and maintenance manuals in Estonian.

In 2008 there were 269 registrations of gas works (repair and maintenance of gas equipment or gas installation and storing of the gaseous fuel, as well as installation or dismantling of gas equipment or filling the liquid gas container), 213 registrations of building the gas installation and 2 registrations of personnel certifiers in the register of economic activities. In the database of the Technical Surveillance Authority there were 1673 active registrations of gaseous fuel installations.

To guarantee the safe handling of *dangerous chemicals*, the Technical Surveillance Authority inspects in dangerous enterprises and in enterprises liable to be affected by major accident the safety of handling and the accuracy of determining the categories of hazard, as well as compliance with the requirements of preparing information sheets, safety reports, the registration of chemicals and delivering information on them.

In 2008 there were 50 enterprises liable to be affected by major accident and 96 dangerous enterprises in the database of the Technical Surveillance Authority.

In respect of *explosive substances and pyrotechnic articles*, the Technical Surveillance Authority checks the conformity of manufacturing, storing and use to the requirements and performance of blasting and conformity of the persons responsible to the requirements. In 2008 there were 10 companies dealing with explosive substances in Estonia and they were inspected at least once a year. Special attention was paid to major warehouses, mines and quarries. Enterprises dealing with pyrotechnics and having a registration in the register of economic activities had altogether ca 150 sales facilities. The Technical Surveillance Authority inspects the pyrotechnics all the year round. The accidents with handling the explosive substances are relatively rare, mainly with pyrotechnics due to careless handling on New Year's Eve.

In respect of the *mining works* (underground mines, quarries and peat fields), the Technical Surveillance Authority inspects the mining works as well as the design documentation, enrichment and processing of the mineral resources as well as the conformity of the persons responsible. In addition, inspection is carried out over the safety of geological operations, drilling works in the subsurface and building the underground workings and their use after finishing excavations. There were over 300 supervised objects in 2008, most of them were quarries. Accidents occur mainly in the mines due to essentially more complicated manufacturing technology.



*Cableway installation or drag lift*

the conformity of their installation, use, repair, rebuilding and manufacturing of the vessel for dangerous liquid. The Authority also checks compliance with the requirements concerning the technical inspection performer and the company and the conformity of operations in the protection zone of the pressure pipeline.

In 2008 there were 138 registrations of pressure equipment works (installation, repair, rebuilding and manufacturing of class 5 pressure equipment) and 2 registrations of personnel certifier in the register of economic activities. In the database of the Technical Surveillance Authority there were 7423 active registrations of pressure equipment, including 1375 boilers, 3560 vessels for dangerous liquid, 2270 pressure equipments and 212 piping systems.

To guarantee the safety of the *use of the gaseous fuel* (natural gas, liquefied gas, biogas and derived gas), the Technical Surveillance Authority checks the use and building of the gas



**Legal metrology** is an area guaranteeing the reliability of measurements and measuring instruments primarily in transactions related to money (weighing instruments in the stores, petrol stations, also measuring necessary for determining excise and customs duties). The Technical Surveillance Authority inspects accuracy of the measuring procedure, compliance of the instrument with the established requirements and verifies that it has passed metrological inspection. The national type approval certificates are issued to the measuring instruments not regulated in Europe.

There are relatively many supervised objects. There are more than 500 petrol stations with 3-8 petrol pumps, in addition to the water, gas, electricity and heat meters of the apartment buildings. In respect of these measuring instruments, supervision is performed before commissioning the instrument or launching it to the market when their conformity is checked based on the documentation of the measuring instrument. The task of the Technical Surveillance Authority is to check the existence of marking and documentation of articles of precious metal and authenticity of the marking to prevent fraud. The latter covers the conformity of the sample label of the product to the composition, homogeneity of the product and lack of prohibited impurities, e.g. nickel which is hazardous to health.

## Construction safety

In the area of construction safety, the Technical Surveillance Authority performed 91 supervision proceedings in 2008 which ended with precepts in 40 cases of which 17 resulted in deleting the registration of the company from the register of economic activities. The Authority participated in investigating two accidents with the buildings. The main problems in building are the non-conformances of the buildings to the design documentation, omissions in documentation and unsatisfactory level of sound damping of the facilities. Some problems were connected with specialists in charge whose data in the register of economic activities were often outdated or inexact.

In the second half of 2008, the very fast increase in the construction activities started to recede. This increase had caused the rise of the prices of building and construction products, lack of qualified labour force and decline in the quality of construction works. The recession enabled to pay more attention to the buildings the service life of which is about to finish and which may be in a very dangerous state due to insufficient maintenance. Preparations for supervision of energy efficiency minimum requirements applied to the facilities in 2009 were started in 2008. To identify the causes of some accidents in 2008, the Technical Surveillance Authority cooperated with the Labour Inspectorate and the Police Board.

## Construction products

The sector of construction products including construction materials was characterised in 2008 by ignorance of the entrepreneurs about valid requirements and by supervision with short traditions. For improving the situation, the Technical Surveillance Authority carried out a cooperation project with the Austrian Standards Institute. The aim of the project was to develop administrative capacity and raise the knowledge of the entrepreneurs operating in that field about valid requirements. Within the project, three seminars on CE-marking were organised in Jõhvi, Tartu and Tallinn and informative materials (in Estonian and Russian) were issued, explaining the requirements for construction materials and certification of the conformity to requirements. By the end of 2008 there were more than 300 harmonised standards about construction products of which ¾ were enforced in 2008. 16 proceedings in respect of the construction products were performed in 2008 of which 5 ended with the precept.

## Electrical installations and works

The Technical Surveillance Authority performed supervision of electrical installations and works all over Estonia. The state of electrical installations in major shopping centres was inspected

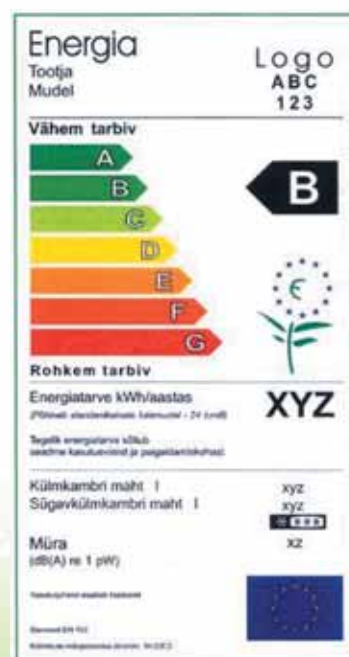
more thoroughly. 228 proceedings were performed during which 102 precepts were made and penalty payments were applied in 4 cases. Misdemeanour proceedings were initiated 16 times. Nine of these were finished and the rest are continuing in 2009. The main shortcomings were the deficiency of technical inspection which had been performed either partly or its validity had expired. There were also violations of requirements of performing electrical works and problems in the activities of technical inspection bodies.

## Electrical equipment

The Technical Surveillance Authority performed the market supervision of electrical equipment all over Estonia in 2008. 206 proceedings were carried out during which 83 precepts were made. The main detected deficiencies concerned the lack of conformity mark, lack of necessary marking and information on equipment or a package and technical safety deficiencies, e.g. too narrow power cord, non-conformance of a plug or safety class. 8 expert opinions were ordered for assessing the conformity of the products at the end of 2008. There was a close cooperation with the Tax and Customs Board in 2008 which submitted to the Authority over 300 notifications about potentially non-conforming electrical equipment detected on the border. Thorough work was going on with the conformity issues of installation cables and lightings; also the content of dangerous substances in electrical and electronic devices was inspected during the proceedings. Violations of requirements were not detected. To enhance the inspection of the requirements on dangerous substance content and the relevant cooperation, the Technical Surveillance Authority participated in an international environmental project with the Environmental Inspectorate, the Consumer Protection Board and the Tax and Customs Board. *tatud. Ohtlike ainete sisalduse nõuete kontrollimise ja koostöö tõhustamiseks osaleti koos Keskkonnainspektsiooni, Tarbijakaitsesameti ning Maksu- ja Tolliametiga rahvusvahelises keskkonnohualases projektis.*

## Energy efficiency

The Technical Surveillance Authority performed the market supervision of energy efficiency all over Estonia in 2008. 177 proceedings were performed during which 43 precepts were made. There were 14 cases of violating the energy efficiency of light bulbs and 29 cases of violating the energy efficiency of household appliances. The supervisory procedures showed that the situation regarding energy efficiency is good in Estonia. The number of violations has steadily decreased.



*The sample of energy performance label of a refrigerator*

## Electricity-related accidents

In 2008, the Technical Surveillance Authority investigated 6 electricity-related accidents in case of which electricity caused 5 serious injuries and one light injury.

The number of accidents decreased in 2008, remaining on the level of years 2001-2002. For the first time in this century there were no deaths caused by electricity. Through the years the main reason for the accidents has been wrong operations or non-compliance with electrical safety requirements. Every year some accidents occur because of non-compliance with the requirements of operating in the protection zone.



## Machinery

In 2008, the Technical Surveillance Authority performed 78 machinery-related proceedings, inspected 105 machines and prepared 75 reports of which 27 were the precepts. More common violations in the case of registered machinery were the lack of technical inspection and supervisor for using the proper machine. The "issue" in 2008 was, as before, the machinery used on the construction sites (tower cranes, mobile jib cranes, cage hoists).

During the market supervision, nail plate truss presses were profoundly inspected in 5 different plants. No remarkable problems were detected. At the end of 2008, an accident with a mobile jib crane was proceeded. The crane dropped to one side when lifting a hollow panel. Additionally 5 industrial accidents were investigated in cooperation with the Labour Inspectorate.

## Lifts and cableway installations

In 2008, the Technical Surveillance authority initiated 56 lift- and cableway-related proceedings and prepared 34 precepts. The proceedings were performed towards 57 owners of lifts, 3 owners of cableway installations and 2 persons dealing with lifting equipment. Altogether the use of 159 lifts and 7 cableway installations was inspected.

In the second half of 2008 one precept concerning the prohibition to use lifting equipment was challenged. Proceeding of the claim continues in 2009 in Tallinn Administrative Court. 59 % of lifts passing the technical inspection in 2008 did not conform to the requirements. The main problem was the lack of supervisors with certificate of competency.

## Pressure equipment

In 2008 the Technical Surveillance Authority prepared 98 inspection reports related to the pressure equipment of which 32 were precepts. Of the inspection reports 80 concerned the supervision of use, 13 the supervision of activities and 5 supervision of the market. 228 units of pressure equipment were inspected during the supervision on use.

The main shortcoming was the failure to perform technical inspection on time and to appoint the person in charge.

## Gaseous fuel equipment and installations

2008. In 2008, the Technical Surveillance Authority performed 97 proceedings related to gaseous fuel equipment and installations, of which 77 were related to supervision of use, 6 to market supervision, 11 to supervision of activities and 8 to investigation of accidents. 51 precepts were prepared.

In 2008 cooperation continued with AS Eesti Gaas, the representatives of which participated in the joint inspection of the conformity of the use of gas installations and equipment in apartment associations and apartment buildings. The problems were connected with utility gas equipment (water heaters and stoves) the 15 year service life of which has expired and which have not passed technical inspection. After a liquid gas explosion took place in the catering company in Viljandi due to the neglect of safety requirements, more profound inspection followed in catering companies which use liquid gas.

Market supervision in 2008 was mainly performed over the seasonal gas equipment (grills, camp stoves, etc). The main

shortcomings concerned marking and user manuals. Supervision of activities over the performers of gas works and builders of gas installations was mainly performed in companies which had not confirmed the authenticity of their data on time. The registration will be stopped without confirming the authenticity of the data and performing the gas works will be prohibited. The analysis of accidents at gas conduits (gas leaks) indicated that they were caused by third parties, i.e. companies which performed work in the protection zone of gas installations without the permission and approval of the network operator.

## Dangerous chemicals

In 2008 the Technical Surveillance Authority inspected 48 companies including 18 enterprises liable to be affected by major accident, made 32 precepts and prepared 16 supervision reports. The first-time inspection was performed in 10 companies. The companies had ongoing problems with preparing the risk analyses; the main reasons being the lack of relevant specialists in the company as well as shortcomings of regulation and methodology.

## Explosives and pyrotechnics

In 2008 the Technical Surveillance Authority issued 80 import and export licenses for explosives and pyrotechnic articles and 35 transit licenses. Licenses for more dangerous blasting were issued to 20 blasting work entrepreneurs who were registered in the register of economic activities. Authorisations for use of pyrotechnic articles were given to 50 registered pyrotechnics entrepreneurs. In addition, some licenses were issued for the operation of explosive substances stores and for keeping explosives outside the store. Checks were made on 20 sales facilities of pyrotechnic articles and 5 explosive substances stores. Storage conditions met the requirements.



## Mining works

The biggest accident in 2008 was fire in Estonia mine in October. A committee for investigating the causes of the accident was formed, including also a representative of the Technical Surveillance Authority. The accident had a technical cause similarly to most large-scale accidents. The belt conveyor caught fire and to some extent the spread of the accident was facilitated by the combined effect of various occasional circumstances. From the planned supervision works, the most essential ones were the inspection of the underground conveyor transport, dewatering and mine survey operations of Estonia mine, and in the case of Viru mine, checking the documentation of mine survey operations, oil shale enrichment and disposal sites for residues.

The situation of mine survey operations was good. There were deficiencies in the method of constructing the dewatering lines

which were eliminated after precepts. To guarantee the qualification of people working with mining and explosives, the Technical Surveillance Authority arranged competence exams for persons responsible and issued 30 certificates of competency. There were three deaths in connection with mining works in 2008, two in Estonia mine and one in Viru mine. The deaths were caused by violations of safety requirements by employees. Kvalifikatsiooni tagamiseks viis Tehnilise Järelevalve Amet läbi vastutavate isikute pädevuseksamid ja väljastas 30 pädevustunnistust. 2008. aastal oli mäetöödega seoses kolm surmajuhtumit, neist kaks Estonia kaevanduses ja üks Viru kaevanduses. Põhjuseks oli ohutusnõuete rikkumine töötajate poolt.

## Legal metrology

During the 2008, the Technical Surveillance Authority performed 140 proceedings in respect of the market surveillance of measuring instruments, use of measuring instruments, verification activities and handling of pre-packaged goods. 21 national type approval certificates for measuring instruments and 4 type-approval certificates for single specimen were issued. The 52 specimens of measuring, which had passed calibration in other countries, were deemed on the basis of legal metrological expertise to have passed verification for use in Estonia. The main problem was the exceeding of the period of validity of the verification and the failure to submit measuring instru-



ments to initial verification after the repair. Also, verification labs sometimes registered positive results for the measuring instruments which did not meet the valid standards or did not have mandatory type approval of the measuring instrument. No deliberate measuring frauds were detected.

## Precious metal products

In the field of precious metal products, the Technical Surveillance Authority performed 81 proceedings, including 15 precious metal expert assessments. During the inspections 20 non-conforming products were detected and 7 precepts were issued for eliminating the deficiencies or limiting the sale of products not conforming to the requirements.

The main deficiencies in 2008 were the use of unregistered sponsor's marks or products with no sponsor's mark. Jewellery from India often included products with insufficient fineness.



## Organisation



## Organisation

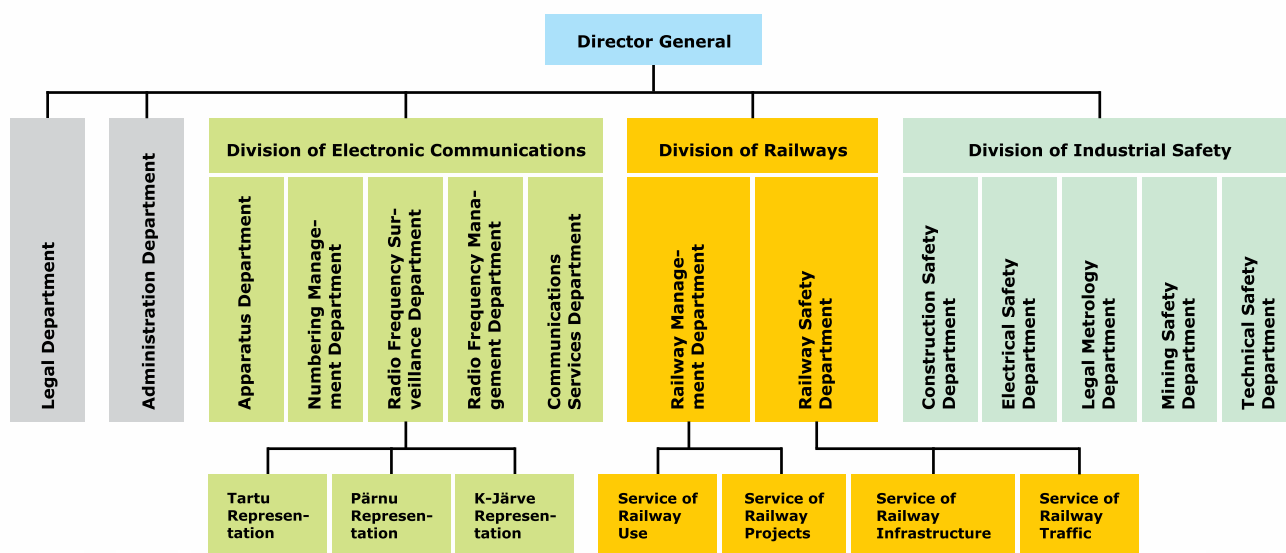
Year 2008 was the year of merger for the Technical Surveillance Authority. The aim was to join the officials who previously worked in three different institutions and their fields of activity into a single integrally operating institution.

The new internal structure was formed on the basis of the services of three merged institutions - Technical Inspecto-

common features of different services supplementing each other. The management made an especially high contribution to designing and developing the organisation during the first year of activity.

The training cycle for middle managers should be mentioned where different aspects of managing the organisation and

Organisation structure



rate, Railway Inspectorate and Communications Board. Officials dealing with different fields brought along a wide range of work methods, practices and habits to their new place of work - the Estonian Technical Surveillance Authority. First it created a relatively mixed and divided community. On the other hand, very soon one could find out certain

solving problem situations were discussed. In 2008 the evaluation of posts was carried out.

Due to difference in evaluation methods and wage systems the equivalent posts in different divisions received different remuneration.

As a result of the evaluation of posts, a unified wage system was created which was as objective and transparent as possible.

At the evaluation of posts the methodology worked out by the Ministry of Finance, State Chancellery and AS Fontes PMP was used. In order to evaluate the posts, a 10-member committee was formed and an outside expert participated in the evaluation.

In 2008 the preparation of the development plan started, in the course of which the mission, vision and targets of the Technical Surveillance Authority were defined. When preparing the development plan, a thorough analysis was made of the tasks of the departments and three policies were determined - the increase of safety, improvement of the reliability of services and products, and organising the use of limited resources.

In 2008 Technical Surveillance Authority introduced and started to use the new documentation management system GoPro - the common system with the Ministry of Economic

Affairs and Communications. The purpose of the new system is to ensure a uniform and comprehensive digital management of documentation. Upgrading the system will continue in 2009.

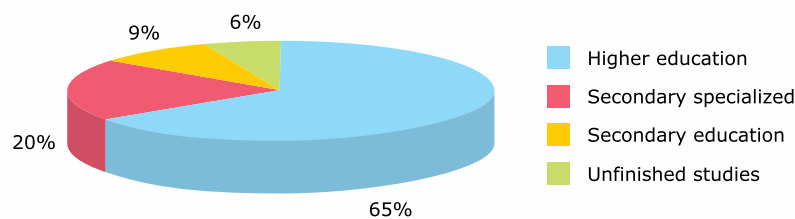
## Officials

At the end of 2008, the Technical Surveillance Authority employed 95 officials. 11 officials left and 6 new officials came to work in 2008. The figures below give an overview of the distribution of the officials by education, length of public service and by age and sex.

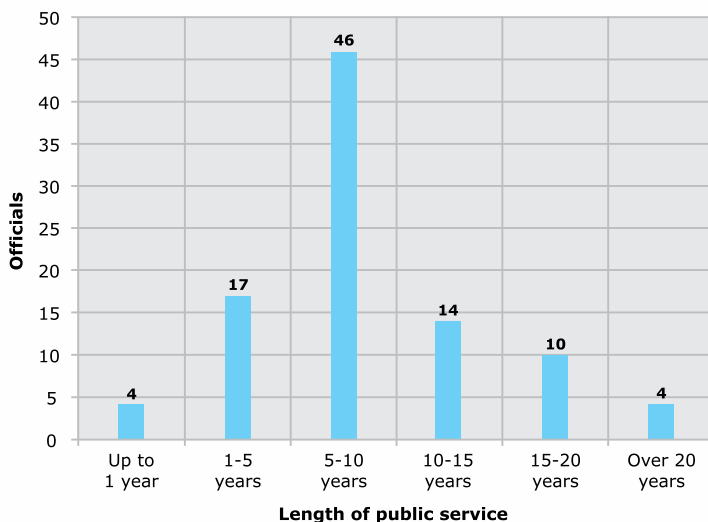
The training costs of the Technical Surveillance Authority in 2008 amounted to 604 429 kroons. The main emphasis of training was set on forming the corporate culture and designing the management style of middle managers.

The highest proportion in the field of training was taken up by training courses aimed at raising the administrative capacity. The study costs of English and French language courses were partly compensated to officials.

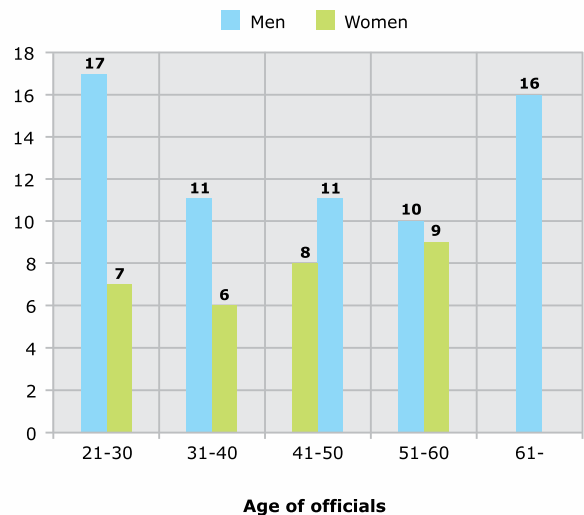
*Educational level of the officials of the Technical Surveillance Authority*



*Length of public service of the officials of the Technical Surveillance Authority*



*Distribution of officials by sex and age*





## Investments

To perform its tasks and objectives effectively, the Technical Surveillance Authority made some important investments in 2008. Within the framework of the development project of radio frequency monitoring, investment was made into the third generation mobile communications measuring system.

The plans to obtain the measuring instruments for WiMAX and CDMA450 technology were not fulfilled because there were no suitable technical solutions in the market. Within the framework of the same project, other state-of-the-art monitoring and measuring equipment was obtained, incl. one direction finder

station. Additionally, the new version of ARGUS management software for the national radio monitoring system was obtained and implemented.

By way of software development, the special software used for planning the radio frequencies and for interference calculation in broadcasting, mobile communication and stationary communication was updated.

The updates improved the quality of planning considerably and brought the software calculation methods into conformance with the technological development and modern regulation.

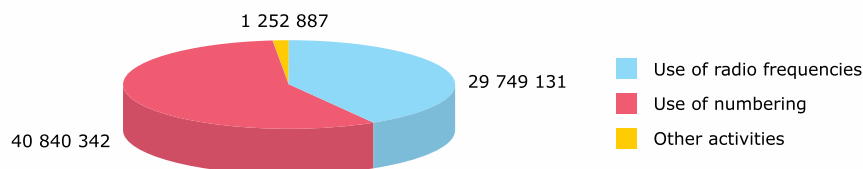
### *Investments of the Technical Surveillance Authority in 2008*

Cost description	Description of the object	Budget amount
Acquisition and renovation of facilities and buildings	Renovation of the building of the Technical Surveillance Authority	900 000,00
Acquisition and renovation of machines and equipment incl. transport vehicles	Development of the technical basis of radio frequency surveillance	12 819 440,00
Acquisition of intangible fixed assets	Development of the technical basis of radio frequency surveillance	4 180 560,00
Acquisition of intangible fixed assets	Frequency planning software of the Technical Surveillance Authority	2 200 000,00

## Budget

The state fees in the amount of 71 842 360 kroons were received from the activities of the Technical Surveillance Authority in 2008. Overview of receiving the state fees by fields of activity and of the costs of 2008 is specified below.

### *Distribution of state fee incomes*



### *Budget of the Technical Surveillance Authority in 2008*

Cost description	Budget amount
Membership fees	93 880,00
Staff costs	31 448 448,00
Wages	23 228 640,00
Fringe benefits	207 000,00
Taxes related to staff costs	8 012 808,00
Management costs	10 350 415,00
Administration costs	3 071 000,00
Research and development costs	128 000,00
Travel costs	1 255 000,00
Training costs	834 000,00
Management costs of registered immovables, buildings and rooms	2 346 000,00
Management costs of facilities	303 000,00
Vehicle operation and maintenance costs	1 600 915,00
Information and communications technology costs	183 000,00
Management costs of inventory	270 000,00
Management costs of work machinery and equipment	260 000,00
Medicine and hygiene costs	49 000,00
Special clothing and uniforms	50 500,00
Tax, state fee and penalty costs	52 580,00
Capital lease charges	200 000,00



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