

*railway traffic control,
Central Inspectorate of Railways,
certification system*

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THE PRINCIPLES OF OPERATIONAL ACCEPTANCE OF TELECOM AND COMPUTER EQUIPMENT IN RAILWAY TRANSPORTATION

The principal objective of actions related with operational acceptance in the transportation is protection of railway customer against receiving a low quality product that does not comply with the requirements and thus is unreliable and unnecessary.

Technical conditions and evaluation criteria for systems and products are used by the Central Inspectorate of Railways in the procedure of acceptance for operation applied to the railway structures, equipment and vehicles.

Based on the documents described above, the Department for Operational Acceptance Certificates at GIK has developed a procedure to be observed with realization of each application for certificate, among others also in tele-informatics.

ZASADY DOPUSZCZANIA DO EKSPLOATACJI W TRANSPORCIE KOLEJOWYM URZĄDZEŃ TELEINFORMATYCZNYCH

Zasadniczym celem działalności związanej z dopuszczaniem do eksploatacji w transporcie jest zabezpieczenie odbiorcy kolejowego przed otrzymaniem wyrobów o niskiej jakości, nie spełniających wymagań, a tym samym nieodpowiedzialnych i nieprzydatnych.

Wymagania techniczne oraz kryteria oceny dla systemów i wyrobów są wykorzystywane przez Główny Inspektorat Kolejnictwa w procedurze dopuszczania do eksploatacji budowli, urządzeń i pojazdów kolejowych.

Departament ds. Świadczeń Dopuszczenia do Eksploatacji opracował procedurę, według której realizowany jest każdy wniosek o wydanie świadectwa m.in. w teleinformatyce.

The principal objective of actions related with operational acceptance in the transportation is protection of railway customer against receiving a low quality product that does not comply with the requirements and thus is unreliable and unnecessary.

The basic requirements to be verified are as follows:

- Requirements concerning safety and environment protection as set forth in the documents implemented for common reference and application;
- Requirements stated in Polish Standards for products to be used in railway and rail transport;
- Requirements stated in the international standards, UIC sheets and other international documents referring to the products for railways,

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- Requirements contained in the technical conditions, applicable to the products used in Polish railways.

Technical conditions and evaluation criteria for systems and products are used by the Central Inspectorate of Railways (Główny Inspektorat Kolejnictwa) in the procedure of acceptance for operation applied to the railway structures, equipment and vehicles.

In accordance with the *Law on Railway Transport* of 27 June 1997, a central body of governmental administration that is authorized to perform technical supervision over operation of the railway lines, railway vehicles and railway traffic safety is Main Inspector of Railways, acting with a support of Central Inspectorate of Railways (GIK).

Establishing of Central Inspectorate of Railways is a result of actions aimed at fulfillment of EU requirements by Poland in the aspect of organization and operation of railways as well as securing safety of passengers and cargo.

The function of GIK as described in the a.m. act (art. 36 act 1) includes in particular:

- issuing of operational acceptance certificates for types of railway vehicles, equipment and structures;
- keeping records of these certificates;
- inspections of fulfillment of technical conditions and requirements securing safety of traffic and environment protection;
- inspections of railway vehicles;
- participation in investigations concerning railway accidents in order to clarify their causes;
- undertaking measures for increase of safety in the railway transport;
- presentation of periodical assessment of safety conditions in the railway transport to the Minister of Transportation and Sea Economy (MTiGM).

Among the above-mentioned tasks of Central Inspectorate of Railways one of the most important tasks are those related with acceptance (article 13 of the law) of products to be used in Polish railways. These tasks are performed in the Operational Acceptance Certificate Department, with its main objectives consisting in:

- cooperation with the managements of railways, carriers and manufacturers in the area of establishing a program and test contractors for tests necessary to issue an Operational Acceptance Certificate,
- cooperation with the research units and experts in the area of testing and issue of technical opinions as well as analysis of documents submitted,
- performance of inspections for compliance of characteristics of particular structures, devices and railway vehicles with the types already certified or with certificate pending,
- issuance of acceptance certificates for the structures and equipment for railway traffic control,
- issuance of acceptance certificates for the railway vehicle types,
- keeping a record of issued and withdrawn operational acceptance certificates for structures and equipment for the railway traffic control and particular types of railway vehicles,
- cooperation with other organization units in safety assessments in the railway transportation related with operated structures, equipment and vehicles,
- supervision over the regional railway inspectorates in the aspect of functional scope of operation of these departments.

The department includes:

- Section for Permanent Equipment Testing and Inspection
- Section for Railway Vehicles Testing and Inspection
- Section for Product Compliance Assessment with Certificates issued
- Officer for Certificate Register

This department operates based on the following legal acts:

- Law on Railway Transportation (No 96 item 591 of 1997 with subsequent revisions) art. 13,41,
- An Ordinance of MTiGM of 22 April 1999 on certificates of operational acceptance for structures and equipment to be used for railway traffic management and types of railway vehicles (dated 27 May 1999),

This Ordinance determines:

** conditions and procedures for issuing and withdrawal of operational acceptance certificates for structures and equipment to be used for the railway traffic management and types of railway vehicles,

** organization units authorized to carry out tests necessary for obtaining operational acceptance certificates,

** samples of documents related with operational acceptance certificates.

- An Ordinance of MTiGM dated on 16 September 1999 on GIK actions being charged with a price, as well as amounts of these charges and procedures for their collection (No 78 item. 833 of 1999) and an Ordinance of MTiGM dated on 21 July 2000 constituting a revision of the Ordinance of 1999. These two documents govern the issues related with charges for realization of acceptance procedures.
- An Ordinance of MTiGM dated on 20 July 2000 on the scope of tests necessary for obtaining an operational acceptance certificate for structures and equipment to be used for the railway traffic management and operational acceptance certificate for each type of railway vehicles (No 69 item. 813 August 2000).
- The Ordinance describes the scope of tests to be performed in order to be granted an operational acceptance certificate for structure and equipment and type of railway vehicles to be used on Polish railways. It determines the structures, equipment and types of railway vehicles that are mandatory to have an operational acceptance certificate if they are to be used in railways.

Based on the documents described above, the Department for Operational Acceptance Certificates at GIK (GDE – symbol of organization cell) has developed a procedure to be observed with realization of each application for certificate, among others also in tele-informatics (Fig.2).

As mentioned above, the certificate of acceptance is granted to the products for use in Polish railways.

The term „Polish railways” shall be understood as:

- Railway infrastructure,
- Railway forwarders,
- Subway System in Warsaw ,
- Railway sidings of industrial plants as separate units performing railway transport.

According to the requirements of European Union, a unit performing operational acceptance of products for railways takes an active part in the process of product manufacturing process. This guarantees adequate assessment and verification of correctness

of assumed technical solutions at each stage of production process. Fig.1 shows the procedure of acceptance proceedings for the railway tele-informatics systems and devices and railway traffic control systems that is in accordance with the guidelines contained in the European standards and that will be realized upon its adaptation to Polish conditions.

The contemporary industry should be safe for people and environment, reliable and functional. However, it is not able to fulfill these requirements without the application of adequate systems, devices and materials.

Over the last years, the product certification system has become an important factor in the trade relations. More and more countries introduce new standards and regulations as a response for increased international requirements concerning protection of health, environment and safety in general understanding of this word. The increased number of standards is accompanied by the growing requirements to show the compliance with these standards through a certification system i.e. an independent compliance control, tests and inspections. Compliance assessment procedures cause additional costs and are time-consuming, thus creating potential technical barriers in the economical cooperation.

The certification system enables a third party (independent) supervision of stability of product manufacturing and is widely used for product where the safety characteristics are of utmost importance. In the case when the product is manufactured in accordance with the highly subjective technical conditions, opinion of an independent expert is very useful.

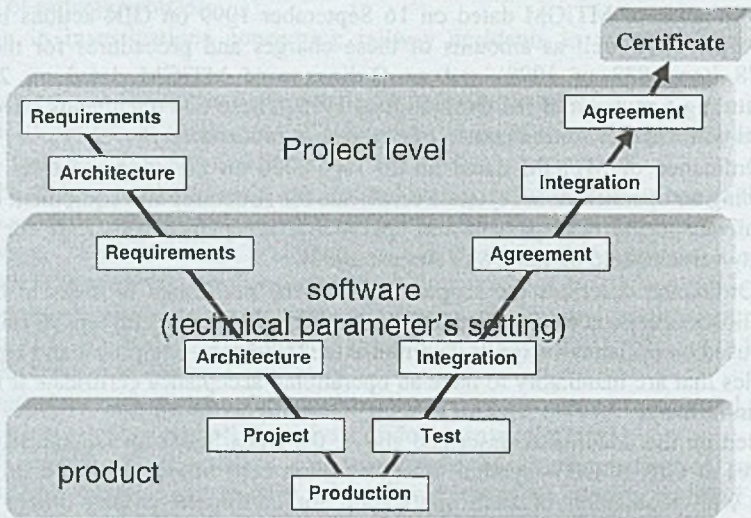


Fig.1. Participation of the unit admitting products to operation on the railways according to the EU standards

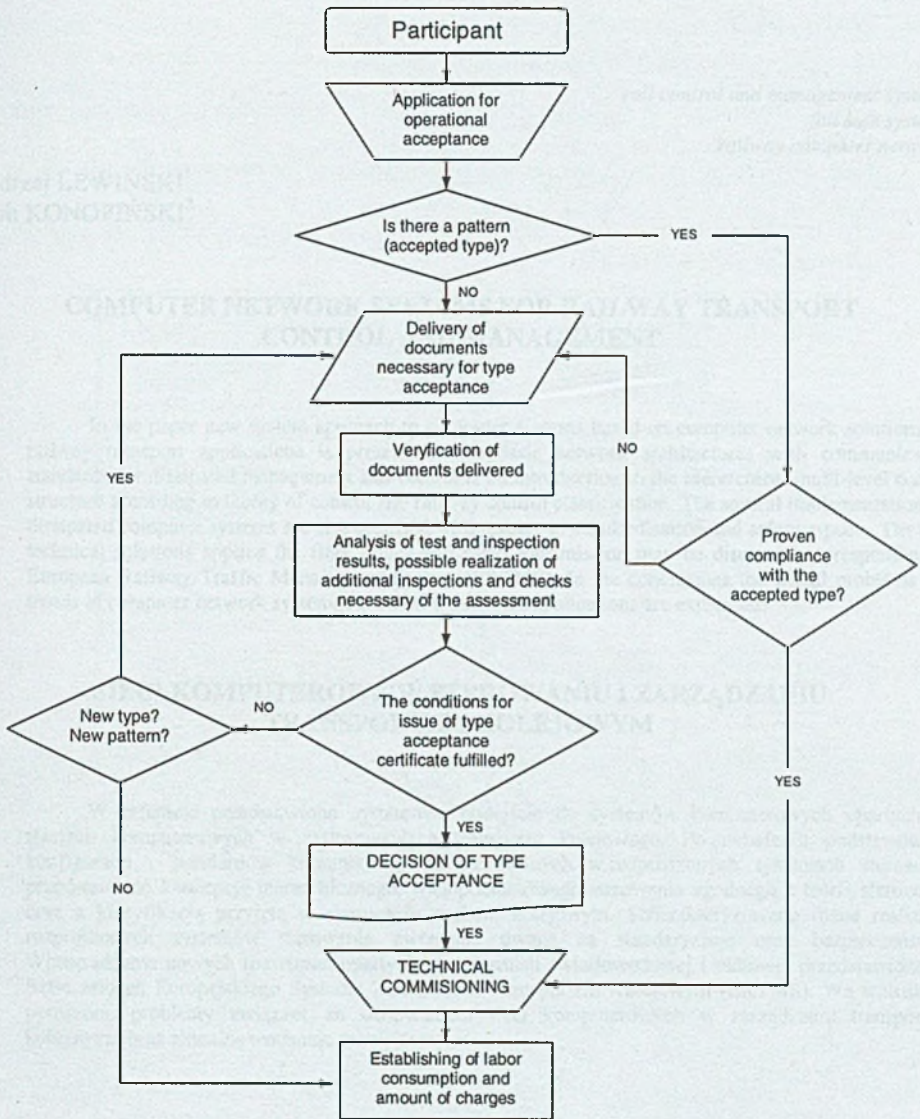


Fig.2. Procedure of product acceptance for the railways