

SMART CONNECTIVITY ALONG THE ASIAN HIGHWAY NETWORK IN THE TIMES OF COVID-19

"Transport and trade connectivity in
the age of pandemics: Contactless,
seamless and collaborative UN
solutions"



11. Smart tachographs

OVERALL DESCRIPTION

In international practice, the activity of crews of vehicles of categories M2, M3, N2 and N3, including those engaged in international transport, is recorded by a special technical control device – a tachograph.

The European agreement concerning the work of crews of vehicles engaged in international road transport of July 01, 1970 (Geneva, AETR agreement) is a world-class document regulating the working and rest modes of drivers.

A number of countries along the Asian road routes have joined the AETR agreement. Therefore, international transport within the territory of these countries is allowed only if the vehicles are equipped with certified tachographs in accordance with the agreement.

The AETR agreement defines specific standards of work and rest for drivers, standards for driving vehicles, as well as conditions of use and requirements for equipment intended for installation on road vehicles for the purpose of recording or recording in automatic or semi-automatic mode data on the movement of these vehicles or on certain periods of work of their drivers during international transport.

Tachographic monitoring data is used by the traffic police and/or transport inspections of States to monitor transport parameters, including drivers' working hours and schedules, and speed limits. To check the tachograph readings, the inspector interrupts the transport, stopping the vehicle to take information from the tachograph using a special inspector card or printout on paper. 2

OVERALL DESCRIPTION

In addition to delaying the movement of the vehicle and unproductive downtime, verification actions to obtain data from the tachograph are carried out when the inspector is in contact with drivers and increase the risk of spreading infectious diseases, including COVID-19.

In this regard, the use of remote online monitoring and obtaining tachographic information through telematics technologies without interrupting the transportation process and physical contact of people is of particular importance. Data transmission from the so-called smart tachograph in online format is automatically transmitted to state regulatory authorities for further analysis and necessary measures.

Based on the European Union regulation of 15 June 2016 (EU 2016/799), a requirement has been introduced for the mandatory installation of smart tachographs on new vehicles registered in the territory of EU member States, starting from 15 June 2019. At the same time, all other previously produced and operating vehicles of certain categories in the EU must be equipped with smart tachographs within 5 years (until mid-2024).

OVERALL DESCRIPTION



The smart tachograph, which is mandatory for installation in EU countries, registers data on drivers ' working and rest conditions, time and locations on foreign territory, vehicle speed and routes, technical condition and functioning of its components and aggregates, axial loads, temperature conditions in cargo compartments, etc. Thus, the smart tachograph introduced in the EU space becomes a single (and only regulated) technical means of control (a type of telematics equipment) for equipping commercial vehicles of certain categories. In automatic mode, the smart tachograph transmits the registered data to the information center of the control and Supervisory authorities every 3 hours.

Expected benefits and linkages to the pandemic response (1)

The introduction of smart tachographs (smart tachograph) in international road transport on Asian roads allows you to get the following effect:

- eliminate discrimination of drivers with excessive loads, which leads to excessive fatigue of drivers, negatively affecting the safety of transportation;
- ensure and harmonize conditions for the development of fair competition in the international road transport market;
- apply remote and automated online monitoring of carriers ' compliance with prescribed transport conditions on Asian road routes, including:
 - drivers ' compliance with work and rest conditions, speed limits, route and schedule, passport and visa requirements, conditions of use of permits, facts and duration of stay in epidemiologically dangerous regions, etc.;
 - technical condition of vehicles, their equipment, weight parameters, cargo safety, etc.;
 - tax discipline;

Expected benefits and linkages to the pandemic response (2)

- reduce the number and duration of contacts between drivers and control personnel, as well as the risk of spreading the COVID-19 pandemic, through remote monitoring;
- reduce the risk of cabotage operations;
- reduce the risk of violations in the calculation and payment of taxes, including evasion of payment or double taxation;
- automate monitoring of international road transport, formation of transport and cargo flows, loading of the road network and infrastructure;
- optimize business processes, coordination and efficiency of interaction between state regulatory authorities on Asian international routes;
- improve the efficiency of control and supervision activities while optimizing administrative and other resources for their implementation;
- eliminate negative manifestations of the human factor that affects the effectiveness and image of control and supervision activities;
- reduce cases of violations of transport discipline by increasing the inevitability of punishment for violations on the route;
- identify on-line bottlenecks in the organization of international transport and transport infrastructure in order to develop timely measures to eliminate them;
- increase the overall capacity of international transport corridors on Asian roads, primarily by speeding up the passage of pre-registered and verified vehicles.

Implementation examples

All countries that have acceded to the AETR agreement use tachographs that meet the requirements of the AETR agreement. Manufacturers of tachographs that meet the requirements of the AETR agreement are:

- VDO (Continental) tachographs of FDO-METTEM LLC, Russian Federation (1) ;
- Tachographs SHTRIKH - Taho RUS of the SHTRIKH-M group of companies, Russian Federation (2) ;
- Tachographs DRIVE company "ATOL Drive", Russian Federation (3) ;
- Tachographs inkoteks, the company "Incotex TC", Russian Federation (trademark "mercury") (4) ;
- Stoneridge Electronics, United Kingdom (Scotland) (5) ;
- EFKON AG, Austria (6) ;
- ACTIA, France (7) .

(1) <https://vdomettem.ru/products/9/>

(2) <https://www.auto.shtrih-m.ru/produkty-i-uslugi/taxografyi/obshhaya-informacziya.html>

(3) <https://atoldrive.ru/produkty/>

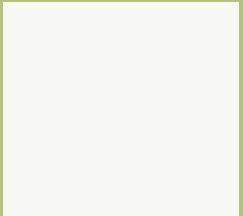
(4) <https://www.incotextaho.ru/catalogue>

(5) <https://www.stoneridgeelectronics.com/products/se5000-exakt-duo-digital-tachograph>

(6) https://www.efkon.com/databases/internet/_public/content30.nsf/web30?Openagent&id=EN-EFKON.COM_VTS.html&men1=3&sid=300

(7) <https://tachograph.actia.com/en/>

Initial recommendations for launching/strengthening similar initiative in an interested country/sector



Despite the widespread use of tachographs in countries that have joined the AETR agreement, which has had a positive impact on the safety of road transport and transport discipline, the use of tachographs is not yet regulated in States located along the international road routes of Asian roads, and the working and rest modes of drivers are not harmonized or controlled.

Due to the fact that the absence of tachographs in the vehicle that meet the requirements of the AETR agreement may negatively affect the development of international road transport, it is recommended that discussions be held at the ESCAP site on the feasibility and feasibility, including a step-by-step approach to joining the AETR agreement for the introduction of intelligent tachographs (smart tachographs) in the Asian road space.