



RADIATION MONITOR YANTAR-2P3

FIXED-SITE SYSTEM FOR DETECTION OF FISSILE AND RADIOACTIVE MATERIALS CARRIED BY PEDESTRIANS

INTENDED USE

Automatic detection of gamma and neutron radiation sources carried by pedestrians through the search area.

APPLICATION

The Yantar-2P3 radiation monitors are designed to be installed at pedestrian checkpoints in customs areas, at airports, train stations, nuclear power plant checkpoints, enterprises for the production and processing of nuclear materials, offices, banks and other industrial and civil facilities.

FEATURES

- Operating mode – continuous, automatic
- Sound and visual alarms
- Settable thresholds for each detection channel
- Possibilities of expansion and connection of external devices
- Generation of "dry contact" in case of an alarm event
- Automatic registration of events in a non-volatile archive
- Storage and output of archive data to external devices (when connected)
- Embedded automatic selftest system
- Access to the system parameters via RS-485 interface (optional Ethernet)
- Generation of video information on the target object (when video surveillance sets are connected)
- Service life is 12 years

DESIGN

Yantar-2P3 consists of two metal pillars mounted opposite each other at the search area boundaries. The pillars contain electronics units, gamma and neutron detectors. The radiation monitor panels contain light and sound alarm units that are triggered when the set detection threshold is exceeded, as well as indicators to diagnose the performance of the radiation monitor.

Lead shields used for gamma detectors serve to enhance gamma detection efficiency.

A compact microwave radar mounted in the upper part of the pillar is used as an occupancy sensor to detect the presence of the object in the search area.

The radiation monitors transfer data to the control panel or a PC with the application specific software installed.





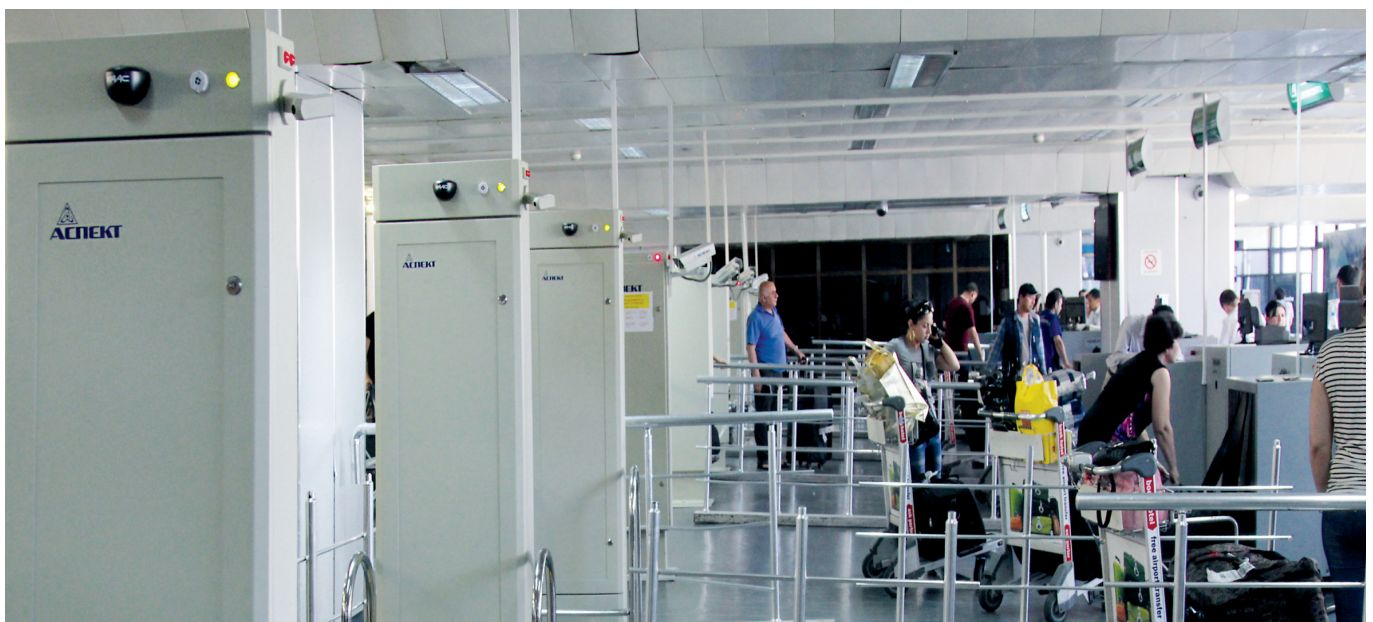
YANTAR-2P3

SPECIFICATIONS

Detection channels	gamma and neutron
Gamma detectors	plastic scintillators
Neutron detectors	^3He counters
Detection thresholds (detection with probability of no less than 0.5 at a confidence level of 0.95) for a search area width of 0.7 m and height of 2 m and object speed of up to 5 km/h	11 kBq (^{133}Ba) 11 kBq (^{137}Cs) 7 kBq (^{60}Co) 3800 neutron/s (^{252}Cf)
False alarm rate	0.001
Ingress protection	IP54
Environmental	-50 to +50 °C, 95 %
Dimensions	(1853×535×234) mm (1 pillar)
Weight, max	144 kg (1 pillar)
Power supply	(85-265) V, (47-63) Hz, max 35 V·A
Run time on the built-in batteries, min	10 hours
Installation place	indoor
Objects	pedestrians, baggage

CERTIFICATION

- Registered in the State Register of Measuring Instruments under No 16756-10
- Complies with the requirements of the Technical Regulations of the Customs Union on safety of low voltage equipment (TR CU 004/2011), Technical Regulations of the Customs Union on electromagnetic compatibility of technical means (TR CU 020/2011)



By 2023, over 8000 Yantar radiation monitors of various modifications have been produced and put into operation.