

1.14.28. REVIEW OF “UKRRINDT” CJSC ACHIEVEMENTS IN THE FIELD OF DEVELOPMENT OF SYSTEMS FOR AUTOMATED TESTING OF PRODUCTS QUALITY

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At present automatic and manual NDT instruments which are used at local industrial enterprises strongly need to be partially modernized or even fully replaced.

As the inner CIS market is saturated with portable native and foreign products it's easier to solve the problem regarding the modernizing of manual NDT instruments. Taking into account the price range of manual NDT instruments, the customer should only chose between the product standard.

Talking about automatic NDT we allowed to notice that modernization has more complicated nature, because of replacing automatic units together with hardware-computer blocks, being created on the elements basis, which was topical tens years ago and at present day they cannot provide the corresponding level of NDT.

Taking into account the critical demand of enterprises in modernization of their own automatic NDT systems or in buying new ones, LLC Prompribor is working continuously in this field.

High prices and a complicated procedure of maintenance service provided by the foreign companies who offer automatic NDT systems define the necessity of local developments.

Application field of automatic NDT systems offered by LLC Prompribor includes main industrial sectors: metallurgy, pipe industry, Railways transport, Engineering. Each automatic NDT system is adopted to customer's requirements and resolves the tasks using different NDT methods. The most developed methods are: UT (piezoelectric and EMAT-method), Magnetic particle testing, ET.

Among automatic NDT systems, researched and introduced by LLC Prompribor at different enterprises the following can be mentioned:

- UT and ET NDT systems of rail axles on the basis of multi-channel ultrasonic flaw detector “Uniscan-Luch” is intended for automatic ultrasonic and eddy-current testing of finished rail axles under RD 32.144-2000. Customers: Joint-Stock Company “Kremenchug Wagon Building plant”, Kremenshug, Ukraine; Joint-Stock Company “Lyublynskiy Casting Mechanical plant” Moscow, Russia;

- UT NDT systems of rail wheels on the basis of multi-channel ultrasonic flaw detector “Uniscan-Luch” is intended for automatic ultrasonic testing of solid-rolled rail wheels under RD 32.144-2000. Customers: Joint-Stock Company “Interpipe NTZ”, Dnepropetrovsk, Ukraine;

- Automatic NDT systems of combined testing of wagon's wheel pairs using UT, EMA and ET methods under RD 07.09-97. Customers: State Enterprise “Ukrzaliznitsya”, Odessa, Debaltsevo, Ukraine;

- Automatic MT system of rail wheels “UMPK-1” is intended for magnetic particle inspection of 55 different rail wheels sizes types with diameter from 650 up to 1300 mm for detection of different surface and subsurface cracks with different orientation on the whole wheel surface under GOST 21105, ISO 6933, PrEN 13262, DIN EN ISO – 9934 – 1, 2, 3, AAR M 107. Customers: Joint-Stock “Interpipe NTZ”, Dnepropetrovsk, Ukraine;

- Automatic NDT ultrasonic systems for large diameter pipes longitudinal welded joints testing with diameter 406–1420 mm and wall thickness 6.3–41 mm under API SPEC 5L and other local and international standards. Customers: Joint-Stock Company “Khartsyzk Tube-rolling plant”, Khartsyzk, Ukraine;
- Automatic NDT ultrasonic system for ultrasonic testing of pipes ends with diameter of 406–1420 mm and wall thickness of 6.3–41 mm according to API SPEC 5L and other local and international standards. Customers: Joint-Stock Company “Khartsyzk Tube-rolling plant”, Khartsyzk, Ukraine;
- Mechanized NDT ultrasonic system for drive gear shaft SKV-01. Customers: HRP “AvtoZaz motors”, Melitopol, Ukraine;
- Mechanized automatic NDT ultrasonic system for steel belt “UKTL” is intended for ultrasonic testing of steel belt with thickness from 0.15 up to 0.6 mm and 1 mm with width from 300 up to 410 mm. Customers: GP “PO UMZ in honor to Makarov”, Dnepropetrovsk, Ukraine.

Having noticed all the most important achievements of LLC Promprybor in the field of development of automatic NDT systems, we would like to emphasize our main advantages, as the manufacture, earned and acquired after 15 years of activity: complex approach, short paper project terms, innovations in technical decisions and loyal price policy.