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INSTITUTE STUDIES SCIENCE OF 'INTROSCOPY'

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["A Window Into the Invisible," by TASS correspondent A Presnyakov]

[Excerpts] On the facade of one of Moscow's buildings stands the inscription "NIIIN". This is the abbreviation of Scientific-Research Institute of Introsopy..... a term introduced by the enthusiastic proponent of this new field of science Professor P.K. Oshchepkov, who is also the founder of the science center. In the laboratories of this young and unique institute the research is following hitherto untrodden paths. A search is being made for new methods of seeing into things, and original apparatus and instruments are being devised.... A special apparatus has been built for "viewing" refractory furnace linings during their performance at extremely high temperatures.

TV techniques aid the transillumination of metals. I was shown two metals sheets that had been welded together with a seam that looked absolutely sound. Chief of the Sector for Television Methods of Introsopy, B. I. Leonov manipulated some knobs and I saw the seam enlarged on the screen.

In another building...an X-ray beam is directed toward a moving part and, after penetrating it, is fed to a special converter screen, the visible image of which is picked up by a television camera and transmitted to the laboratory.

At present the institute is working on other methods of viewing transilluminated objects directly, particularly with the use of the EOP (electron-optical converter), which is sensitive to both X-ray and visible radiation and makes it possible to view images of transilluminated objects without the use of television.

A method of X-ray strobo-introsopy has been developed for monitoring high-speed rotating parts in operation. A parallel development involves stereo-X-ray introsopy.

The head of the institute, P. K. Oshchepkov, said "Our scientists are using gamma rays and radio waves, ultraviolet and infrared radiation, and ultrasound."

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