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### PHILIPS LAUNCH TWO NEW X-RAY SPECTROMETERS

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## Information

### PHILIPS LAUNCH TWO NEW X-RAY SPECTROMETERS

The Analytical Equipment Department of Philips, Eindhoven, the Netherlands, announces two important new X-ray spectrometer systems. These have been designed to cope with the heavy analytical work loads found in basic manufacturing industries and for materials research applications. The new instruments are the PW 1450/20 sequential X-ray spectrometer and the PW 1600 simultaneous X-ray spectrometer. Operator instructions for both instruments are made in a simple language via a teleprinter which also prints out the analytical results.

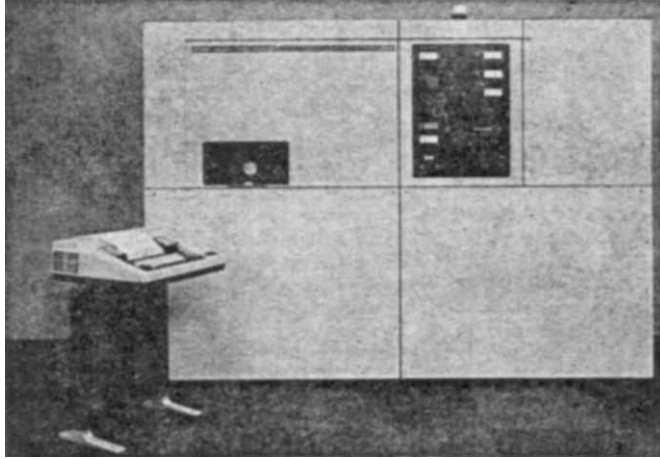
The PW 1600 is a completely new X-ray spectrometer for the simultaneous analysis of up to 28 elements in less than 1 minute. This is claimed as the largest number of channels currently available with this type of instrument. Double channels will become available in the future to increase the number of elements to 48 for special applications. An optional energy dispersive system can give a simultaneous analysis of all elements having atomic numbers greater than ten. This accessory is essential for the determination of unknown elements which may be present in a sample.

The combination of curved and flat crystals together with a new ground-cathode end window X-ray tube and advanced measuring electronics gives the PW 1600 extremely short analysis times and high spectral resolution.

The PW 1450/20 is a fully automatic X-ray spectrometer with three options; automatic hardware programmed (AHP), automatic software programmed (ASP) and automatic dual-programmed systems (ADP).

Each system can be programmed for over 150 analytical measurements, grouped to a maximum of 98 programs. Results from the AHP system are in intensities, the concentrations being calculated off-line. The ASP and ADP systems each include a dedicated minicomputer to control all parameters, calculate element concentrations and correct them for spectral interference and matrix effects.

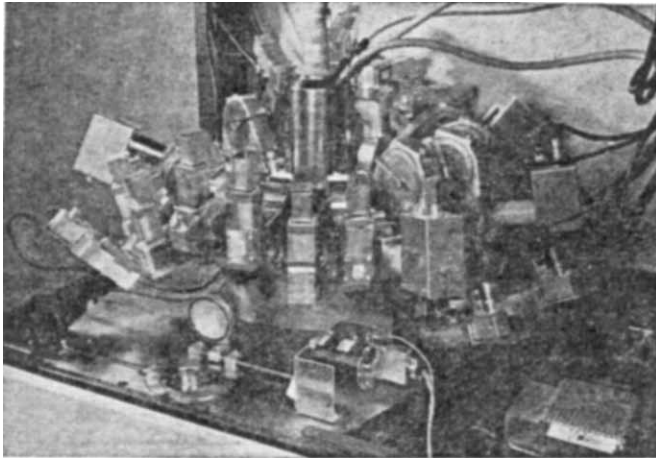
Both instruments including the X-ray tubes, integrated minicomputers and associated software are designed and manufactured by Philips ensuring maximum compatibility, reliability and ease of servicing.



**PHOTO 1** Philips new simultaneous X-ray spectrometer system PW 1600.

This instrument has been developed to meet the demand from process industries for the accurate elemental analysis of a greater range of products in the shortest possible time.

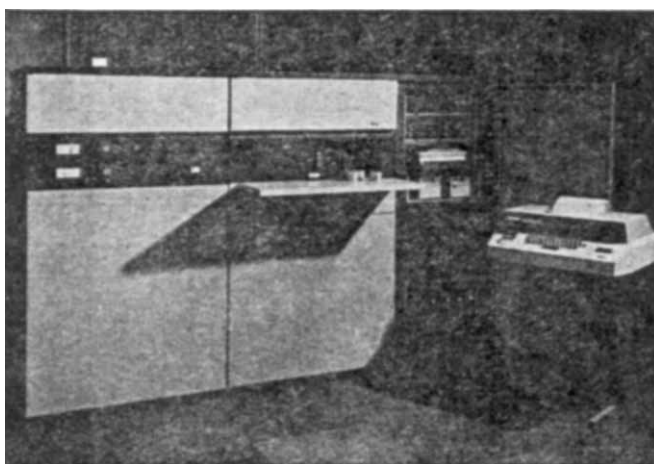
Up to 28 elements can be measured simultaneously, and the concentrations displayed on the high-speed typewriter in less than one minute. Operator command dialogue is also made through the typewriter to the integral minicomputer which controls all functions.



**PHOTO 2** The heart of the Philips new simultaneous X-ray spectrometer system PW 1600. Up to 28 element measuring channels can be positioned around the vertically mounted end-window X-ray tube. The detector of an optional energy dispersive measuring system (EDAX) can be fitted instead of one (wavelength) channel to provide instantaneous display of all elements from atomic number 10 and greater.



**PHOTO 3** Loading a sample into the Philips new simultaneous X-ray spectrometer system PW 1600. Up to 28 elements can be measured in less than one minute and displayed on the high-speed typewriter, which also receives the operator's instructions.



**PHOTO 4** Philips new sequential X-ray spectrometer system PW 1450/20, shown here is the dual programmed version. The most sophisticated of three versions featuring hardware programming by a micro-processor, and software programming using a teleprinter and integral minicomputer. The instrument's memory capacity of 98 measurement programs and the facility to add new programs in FORTRAN make the PW 1450/20 very suitable for a wide variety of industrial analytical work, or as a powerful research tool.



**PHOTO 5** Junior staff can be quickly trained for routine analysis work on the Philips new sequential X-ray spectrometer system PW 1450/20.

The main control panel of the dual-programmed version includes hardware programming nodules, high speed recorder, dual station cassette recorder and integral minicomputer. Analytical results are displayed on the teleprinter which also relays the operator's commands for all standard measurements.