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PEOPLE

Hendrik Arro 85

On July 25, 2010 a well-known Estonian scientist in chemical and thermal engineering Hendrik Arro celebrated his 85th birthday.

Having graduated from Tallinn II Secondary School (Science School) in 1946, in the autumn of the same year he entered Tallinn Polytechnic Institute (now Tallinn University of Technology, TUT) to study chemical technology of fuels.

Having graduated from the university in 1957, he worked at Department of Thermal Engineering of the institute, first as junior researcher and since 1959 as senior researcher. After foundation of a special problem laboratory at Department of Thermal Engineering in 1960, he was promoted and appointed the head of the laboratory. In addition to the research work, he has been seriously involved in the development and improvement work of the laboratory over a period of more than 30 years.

Working in the research group of Prof. Ilmar Öpik, he began to study contamination and corrosion phenomena occurring on the boiler heating surfaces during burning a fuel of complicated composition of mineral matter. In 1968, being already a recognised Estonian specialist in oil shale power engineering, H. Arro defended the thesis titled "*The role of individual components of the ash from the Nazarov coal and the Estonian oil shale in the heating surfaces' contamination and corrosion processes*" and obtained the degree of candidate of technical sciences (Ph.D.). He is one of the authors (co-authors: Academician I. Öpik, Professor A. Ots, Professor I. Mikk, Docent L. Õispuu) of the series of writings under the joint title "*Development of scientific foundations for oil shale power engineering*" that won the Soviet Estonian Award (a national Estonian award) in 1970.

After the decision to introduce boilers based on the fluidised-bed technology into oil shale power engineering, H. Arro was one of the leading

scientists who participated in the test of firing Estonian oil shale in Finland, Germany and Sweden. The obtained experience served as substantial justification of the need to implement the new technology. After the launch of new circulating fluidised-bed boilers at two power-generating units of the Balti and Eesti Power Plants, H. Arro participated in both the implementation of the new technology and the determination and solution of the problems arisen during the operation of those boilers. The problems concerned boiler work dynamics and altered properties of oil shale ash. He also tackled issues of environmental protection.

H. Arro has published over 125 scientific papers in Estonia and abroad, predominantly dealing with operating conditions of boilers used in power engineering and issues of environmental protection at power plants.

In 2010 50 years passed since the appointment of H. Arro the head of the laboratory at Department of Thermal Engineering of Tallinn University of Technology.

It is hard to find a person worthy of competing with him when it comes to the knowledge of composition and firing of oil shale and properties of oil shale ashes: there is no question he cannot answer.

Member of advisory board
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