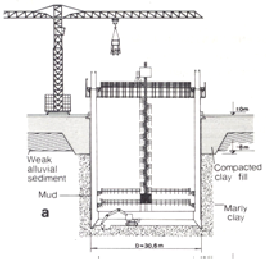
Professor Nonveiller has graduated Civil Engineering at the Vienna Technical University in 1932. He was student of professor Karl Terzaghi and completed the diploma thesis under his supervision. Nonveiller's notes written in stenography from Professor Terzaghi's lectures are now available in the Library of the Norwegian Geotechnical Institute. Until 1951 he worked with contractors on roads, bridges and hydropower plants and by the end of this period he turned to geotechnical engineering problems during the construction of the hydropower plant *Lokvarka* and *Vinodol*, when he organized measurements of deformation characteristics of the rock mass for the design of supports for the hydrotechnical tunnel. He also introduced the methodology of grouting of the porous rock for the foundations of the *Bajer* dam.

Ervin Nonveiller

Inovations, based on Terzaghi's foundations

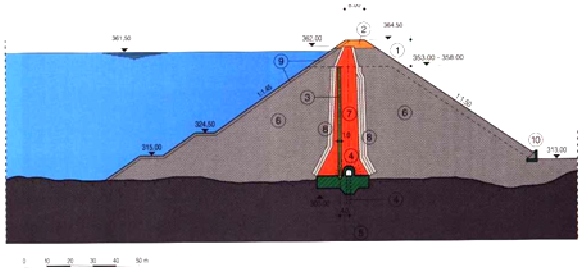


Controlled sinking of a caisson in a weak rock

Near small Croatian town Obrovac, for the hydroelectric power plant, in 1981, a shaft 60 m in height and 30 m in diameter was designed, The soil was overconsolidated stiff marly clay. After a detailed considerations of various options it was sunk by excavating the bottom and simultaneous concreting the shaft lining wall above ground level was chosen, as it offered the lowest cost and the shortest construction time. The construction started with installing the concrete ring with a steel cutting edge on the ground surface. After removal of formwork, pouring the concrete lining was continued with a slipform. A 20 cm gap, filled with a bentonite suspension was provided between the shaft lining and soil in order to eliminate side friction. The controlled sinking of the shaft cutting required plastic soil failure to be achieved by adequate excavation along the perimeter of its cutting edge.

The Peruća dam in karst region

He designed the earth dam *Peruća* in the karst valley of the river *Cetina*, with the first large reservoir in Croatia, as well as numerous large earth dams in Croatia and abroad. He also worked on the reconstruction of the *Peruča* dam in 1993 after it was demolished during the war.



Peruća dam

Legacy of professor Nonveiller

Professor Nonveiller has gained a remarkable international reputation by his dedicated professional and research work. Even after retirement he worked abroad as an expert on large earth dams. His whole career, almost until his passing away in year 2000, was devoted to the promotion and advancement of geotechnical engineering. He introduced new methods, both theoretical and practical, for solving geotechnical problems with the use of numerical analysis since the early days of the development of electronic computers. He always emphasized the importance of quality field investigations and laboratory testing. By all this, he has indebted the Croatian and the international geotechnical community. Most of all, he has educated numerous generations of civil engineers in geotechnical engineering and has helped many coworkers to start their independent careers in practical work and research.

Lecture in Nicosia in 1971