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Author: Mr. Thomas Breit  
Germany

Mr. Frank H. Winter  
National Air and Space Museum, United States

MORITZ PÖHLMANN (1881-1964): AN ENIGMATIC INVENTOR AND HIS KEY ROLE IN THE  
DEVELOPMENT OF THE A-4 (V-2) ROCKET

**Abstract**

The development of the V-2 rocket, originally designated the A-4, was started by the German Army Ordnance Office (Heereswaffenamt, HWA) at Kummersdorf in 1932, and was later continued in Peenemünde. On October 3rd 1942, test model No.4 was first successfully launched. It flew 190 km at a top speed of 4824 km/h and reached a height of 84.5 km. A large number of highly talented engineers had worked on the success of that historic flight, including graduate engineer Moritz Pöhlmann in the engine development department under Dr. Walter Thiel.

Earlier, by the summer of 1939, when Pöhlmann joined the HWA, the rocket engine was already well advanced although there were then serious cooling difficulties. Walter Dornberger's memoir, V-2, and other sources name Pöhlmann as the inventor of film cooling that was a major breakthrough in both cooling and engine stability. Yet recent archival finds show that Pöhlmann was also involved in many other pioneering rocket developments. In 1940, he worked independently in Kummersdorf on the development of high-pressure rocket engines and took out several patents. After moving to Peenemünde in 1941, he worked on pumps and steam generators although while these were not used in the A-4 they were also groundbreaking and had implications in later space rocket developments.

Yet, in mid-1943, Pöhlmann was "removed" from Peenemünde and "relocated" to Bavaria under orders from the HWA. Here he was arrested and convicted in 1944 by a Wehrmacht court. This paper thus also explores these very difficult and complex other sides of this remarkable man.

In fact, after the war he became one of the most ardent opponents of Wernher von Braun while Hermann Oberth regarded him as "the inventor" of the V-2. For certain, he did not see his own great achievements appreciated in his lifetime.

In his later years, Pöhlmann initially worked again on improvements in refrigeration systems, his specialty, on which he had been active prior to World War I and had acquired several patents. He also continued as an inventor and tried to commercialize his ideas industrially. His biggest project, that he worked on until shortly before his death, was a "Strahler-Antriebe" ("Reaction Motor") for ships. The paper concludes on the turmoil of the final months of the war that caught up with him again and again. (On the one hand he fought for compensation for his conviction; but there were civil proceedings against him for years.)