

Guenter Wendt's 100th Birthday Anniversary

The following case study was created by Jack Liang, B.S. Mechanical Engineering 2022, James Clark School of Engineering/University of Maryland. It summarizes the life and professional dedication of the legend Guenter Wendt in an exemplary manner.

With kind permission of the author Jack Liang, the study is published in the 'Pioneers' section of the Journal of Space Operations & Communicator (<https://opsjournal.org>) in commemoration of Guenter Wendt's 100th birthday.

Guenter Wendt was a German-American engineer and a prominent figure in the early days of space exploration. Often dubbed the "Pad Leader" or "Pad Fuhrer", he worked for NASA's manned spaceflight programs during the Mercury, Gemini, and Apollo missions.

He was responsible for ensuring the spacecraft's readiness and working closely with the astronauts during the final phases before launch. Wendt's meticulous attention to detail and commitment to safety made him a beloved and critical part of the space community.

Guenter's 100th Birthday

No manager was like Guenter Wendt,
On the pad, his will was never bent.
With steady hands and nerves of steel,
He made each mission feel surreal.
Apollo's crew held him in high regard,
To be strapped in by him was never hard.
"Goodbye," he'd say, "now soar the skies,
I guarantee a ship that flies."
"Return to us, not a scratch in sight,
And safely step out into the light."
His legacy shines, a guiding star,
Guenter Wendt, the best by far.
Joachim J. Kehr, Editor



Guenter Wendt Case Study

Guenter Wendt was born in Berlin, Germany on August 28, 1924. His parents divorced early in his childhood, and his father moved to the United States. Wendt gained his education in mechanical engineering from the University of Berlin circa 1942 and eventually fought for Nazi Germany during World War II serving as a navigation flight engineer operating on Luftwaffe night fighters. Shortly after World War II was over and Axis powers lost, finding engineering jobs in Germany became drastically more difficult, so in 1949, Wendt ultimately decided immigrate to the United States in St. Louis, Missouri to search for more job opportunities as well as to reunite with his father. Although McDonnell Aircraft wanted to hire Wendt for his previous extensive engineering experience, since he still retained only a German citizenship at the time, they could not hire Wendt since McDonnell Aircraft was working on United States Navy projects then. Thus, Wendt for the time being instead found work as a truck mechanic and later as a ground instructor for Ozark Air Lines. Wendt finally attained his United States citizenship in 1955 and soon became employed as a design engineer by McDonnell Aircraft working on missile projects. In 1959, Wendt worked his way up to becoming a pad leader at Cape Canaveral / Kennedy Space Center for McDonnell Aircraft, where he was in charge of the spacecraft tests and launch operations for all manned Mercury and Gemini missions. After the Apollo 1 tragedy in 1967, Wendt's experience and judgement were sought after and Wendt transitioned companies from McDonnell Aircraft to North American Rockwell to oversee the rest of the manned missions of the Apollo program, while continuing to work as pad leader for Kennedy Space Center.

Throughout Wendt's time serving as pad leader during the Apollo Project, he oversaw safety and spacecraft launch preparations on all launch pads for all manned Apollo missions. Wendt was in charge of the room surrounding the spacecraft that fed into the command module hatch called the white room. In the white room, Wendt was responsible for everything going on "around and inside the spacecraft and its ground support equipment," (Childs) and "the final checks to spacecraft before take-off, sealing the crew in and making sure they were ready," (Kendall). Adjusting the astronauts' straps and buckling them in, Wendt would often be the last person that they would see before blasting off. During this short interaction before every liftoff, Wendt and the astronauts would always exchange friendly, humorous words as well as sometimes tiny joke gifts to lighten the mood; Wendt grew to become close personal friends with many of the astronauts. Wendt treated his job extremely seriously, and would go as far as to remove staff from the launch area for any slight indication of carelessness. It was described by several astronauts, including Wally Schirra, that Wendt's presence gave them confidence and comfort knowing that the safety of their lives were in good hands.

On January 26, 1967, during a ground systems test routine leading up for the scheduled launch of the first manned Apollo mission, Apollo 1, a fire in the command module took the lives of U.S. astronauts Gus Grissom, Ed White, and Roger Chaffee. This tragedy shocked everyone involved and put the entire Apollo program on pause as an investigation followed the incident by a Review Board.

The Review Board of the incident could not determine for certain the sole cause of the fire, however it was able to identify a list of careless and hazardous conditions that led up to it, including “A sealed cabin, pressurized with an oxygen atmosphere; An extensive distribution of combustible materials in the cabin; Vulnerable wiring carrying spacecraft power; Vulnerable plumbing carrying a combustible and corrosive coolant; Inadequate provisions for the crew to escape; [and] Inadequate provisions for rescue or medical assistance.” The Review Board then concluded that the team managing Apollo 1 neglected small but crucial areas of the crew’s safety, and discovered countless flaws in “design and engineering, manufacture, and quality control,” (NASA).

Wally Schirra, one of the back-up crew for Apollo 1, was thoroughly unimpressed with the incompetence, lack of safety provisions, and lack of attention to detail that the Apollo 1 incident highlighted about the people managing the Apollo missions. As a result, when Schirra was appointed to fly as the Commander of Apollo 7, knowing the risk that he and his crew would have to undertake by going through the same tests that Apollo 1 would have done, Schirra demanded for Guenter Wendt to be reinstated as Pad Leader for the rest of the Apollo manned missions (Kendall). The reason why Schirra wanted Wendt specifically was because Schirra, being an experienced astronaut on Gemini and Mercury, has seen and been extremely impressed by Wendt’s judgment and work as pad leader. Wendt was working for McDonnell Aircraft at the time, who had just finished Gemini, and North American Rockwell was working on Apollo. Schirra eventually convinced Deke Slayton, NASA’s chief astronaut, to get North American Rockwell to hire Wendt.

Before the fire, however, the reason why Wendt did not initially change companies to continue working on manned space exploration missions such as Apollo was because when he talked to the managers at North American, he demanded entire control over the people that work for him and to have hiring and firing authority. Wendt explained that he wanted this because it is how he is used to working, and it has proven successful for him and his team when working on Mercury and Gemini. But North American refused Wendt’s request, so Wendt pursued the issue no further and stayed with McDonnell Aircraft and moved to Titusville, Florida. There he worked on other projects and also even opened a gun range to start testing anti-tank missiles due to the ongoing Vietnam war at the time (Wendt).

When Wendt heard about the Apollo 1 tragedy, he explained in a 1999 interview that “the fire took me very hard because, when you know the individuals, you know you have horsed around with them, and they’re your friends.” When asked if he believes if he could have done anything different or felt that he could have stopped the Apollo 1 incident from happening if he were there, Wendt replied that he liked to think that “...Somebody was looking out for me. Because if I had been there and it happened to me, it would have been very, very devastating...So I was spared that having been in charge of it...it did not fall in my area of responsibility. Because that’s when it really gets to you. If you have no control over it, there’s not much you can do. And...it’s a little easier to take, let’s put it that way. So somebody was looking out for me,” (Wendt).

However, when the Apollo 1 fire happened, Wendt received a call from Deke Slayton telling Wendt that Apollo was in deep trouble and asked for him to transition companies to North American and work on Apollo. Wendt responded,

“Deke, it won't work, because unless I can do it the way I have done it now for all these launches, I can't do it any other way. I can't compromise.”

“I got a guy here who says you can have it your way,” Slayton responds.

The guy Slayton was referencing introduced himself to Wendt as Mr. Bergen. Wendt, however, had no idea who Mr. Bergen was at the time, but Bergen expressed his interest in hiring him for North American and promised Wendt that,

“...whatever you need to have, you can have.”

This statement enough convinced Wendt to set up a meeting with Deke Slayton. Wendt came over and talked to Slayton for two hours and explained to Slayton in detail what he wanted and how he wanted to run things. After finalizing everything, Wendt asked Deke,

“Oh by the way, who in the heck is in Bergen? You know, the guy I talked to a couple of nights ago?” Slayton pointed to one of those corporate hierarchy charts on the wall, and the guy on top of it read “Bergen, president of North American Aviation.” And that is how Wendt knew why he was able to attain the authority that he wanted so easily.

Once Wendt started working as Pad Leader on Apollo, some big changes he made included letting go of some of the employees to clear up the disorganization in his team. Wendt's philosophy on the launch pad was that the team needed a dictator-like figure to and take on the responsibility of all the subteams underneath, rather than each subsection acting on its own will. Wendt also had the new responsibility of “answering the congressional inquiry with the directions to the manufacturer what changes to be made, [and answering] how North American would implement the congressional recommendations,” (Wendt). He spent approximately six months on this issue, and as a result, became extremely knowledgeable with the Apollo 1 accident.

After the Apollo program ended, Wendt was in charge of “flight crew safety during the Shuttle ALT program and during the subsequent operational flights of the Shuttle Transport System” (Still). After a long career in playing a pivotal role in Kennedy Space Center and NASA's Mercury, Gemini, Apollo, and Space Shuttle missions, Wendt retired from the space program in 1989. Wendt still remained involved in the space community after his retirement through being a technical consultant for many television and movie features, including advising movie star actor Tom Hanks in the renowned film *Apollo 13*. Wendt published his autobiography in 2001, titled *The Unbroken Chain*, which documents his experience working on manned space exploration missions during the golden era of the space age. Wendt passed away on May 3, 2010 in his home in Merritt Island, Florida, and is survived by his three daughters and five grandchildren.

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