

Werner Schmidt Leads the Way

Rediscovering the Kites of Lindenberg

Werner Schmidt's apotheosis came in 1984 when he viewed a strange kite in a technology museum in Munich. It was a Grund Boxkite. "I still remember the moment I first saw it," he says. "That's how impressed I was."

As a dedicated kitemaker, Schmidt grasped its sophistication. "It was much more developed than a Hargrave, or even a Cody." The kite was labeled "self-steering." It had a strange appearance---pyramidal wings in front, a flexible joint in the middle. Schmidt correctly guessed the odd shape made it self-adjustable to the direction of the wind while the hinge allowed it to self-adjust to wind speed.

"I wanted to know more. I wrote the museum. The museum told me Rudolf Grund was the most important German kitemaker ever. I was impressed. Neither my kite friends nor I myself had ever heard the name."

Werner asked around in German kite circles. No luck. In Holland he discovered Nico van den Berg, who was interested in old kites. Berg actually owned a Grund replica he made himself. Schmidt found design details ingenious, but the kite surprisingly heavy.

A resident of Bottrop, near Essen, Schmidt works as a programmer for metal turning machines at a mill in his home town. At some point he visited the Berlin kite club and there met an East German kiteflier. From him Werner learned about the rundown, partially abandoned weather observatory at Lindenberg, where Grund kites had been flown. Lindenberg was 80 kilometers (50 miles) southeast of Berlin, in the state of Brandenburg. Flat, with



Werner Schmidt poses under a street sign honoring a key Lindenberg Observatory figure, Rudolf Grund. Grund kites were flown for many years at the facility.

a small population and few flight obstacles, the area was perfect for kites. For rare windless periods, there was a large lake nearby where kites could be flown from a power boat. The observatory had been moved from Berlin at the turn of the last century to this more suitable location.

Intrigued, Schmidt made a stealthy trip to Lindenberg. It was secretive because Lindenberg was in Communist East Germany and West Germans were forbidden entry except by permission of the secret police. Schmidt learned the weather station had been in continuous operation since 1905, although the kiting portion of the site became moribund in the 1940s when kites were dropped for weather sampling. Helped by a staff member who dared arrest, Schmidt looked into abandoned buildings on the site. Schmidt deduced the facilities had been preserved more by neglect than plan. He found kites and related equipment in all stages of deterioration---rotting sails and frames, odds and ends of parts, material little better than scrap. It was obvious to him kites had once been used very extensively there.

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Ben Rubin

The sprawling weather observatory includes striking buildings such as this balloon barn.

A hostelry near the weather station offers an added attraction: a Panzer tank to take joy riding.



Ali Fujino

Ali Fujino

Far right, an old meteorograph. When carried to altitude aboard a kite, it simultaneously recorded temperature, barometric pressure, and moisture.

Among the buildings was a sophisticated winch house on top of a hill, now a muddle of broken glass and rusty equipment. Mounted on a rotating assembly underneath, the building could be turned in a full circle as the wind shifted, to maintain alignment with a flying kite.

“I was terribly sorry I was not able to bring a camera to document what I found,” recalls Schmidt. “But in the days of the Stasi, anyone with a camera was suspicious and subject to interrogation.”

“When the border finally opened between East and West Germany, in 1989, I was back at Lindenberg the very next day, determined to save the kites and buildings. I took many photos and arranged with staff to take an old broken kite home with me to restore. The sail was rotten but the bamboo frame and wire framing lines were largely intact. I put on a new sail. I made careful measurements and notes on the kite and successfully test-flew it.”

Schmid took this Grund to the international kite festival at Dieppe, France, where it created a sensation. Meanwhile, Lindenberg became a part of the unified German weather bureau and the new director of the observatory restored the kiting portion of the facility. Schmidt and friends helped raise funds for this purpose. Rebuilding the winch house cost \$160,000. Schmidt restored each type of kite flown at the observatory and the examples were placed on display at the facility. Government recognition was thus accorded Schmidt’s work.

Just who was this Rudolf Grund, inventor of the self-steering weather kite? Grund was born in 1886, in a town near the observatory. Educated to only a primary school level, he was hired as an apprentice at the observatory and worked his way upward. Grund combined ideas for his Boxkite from weather kites elsewhere around the world. His own contributions were sophisticated and unique to himself. Grund worked at the observatory most of his life. He died in 1956 and is buried in a nearby cemetery, where his well tended grave can be viewed.

“In our eyes, Grund is a hero,” says Schmidt speaking for kites intrigued by old kites. “The meteorological world, though, viewed him as nothing more than a skilled craftsman.”

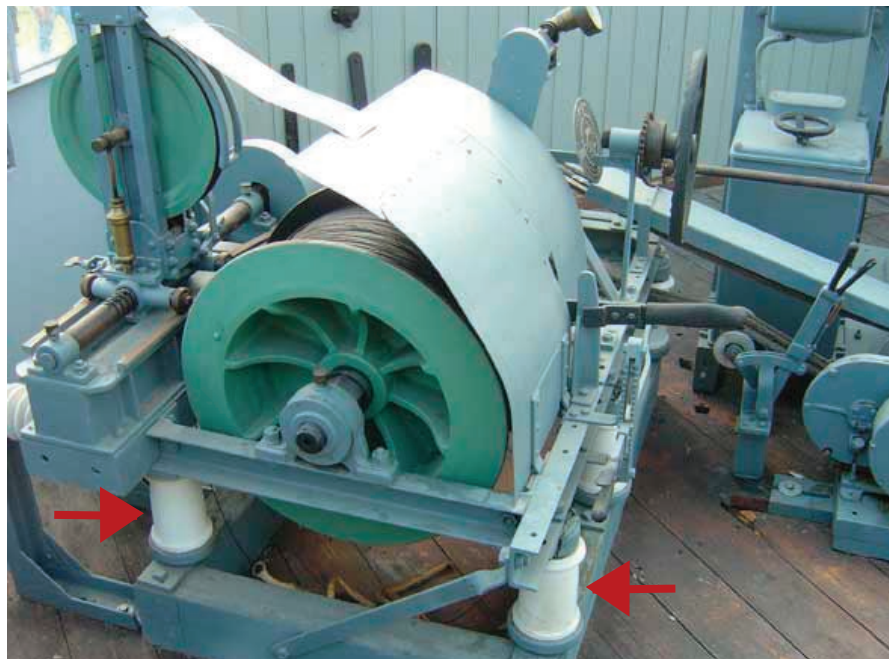
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Historical kite association members pose at Lindenberg Meteorological Observatory in Germany. They were helping celebrate the weather facility’s 100th anniversary of continuous operation.

'A Prime Risk for Lightning Strikes'

Since he once viewed a dramatic lightning strike on a kite train at a kite festival, inventor Peter Lynn was particularly interested to study the winch house at Lindenberg. Kites there were flown typically with a 1 millimeter (.039 inch) steel line---a magnet for trouble. What the New Zealander learned was that kites were flown 4,000 days between 1905, the opening of the weather observatory, and 1938, the apparent close of everyday kite operations there, to altitudes regularly exceeding 3,000 meters, sometimes as high as 7,000 meters. The winch on a hill was "a prime risk site for lightning strikes,"



Peter Lynn

says Lynn. "The staff at Lindenberg was certainly cognizant of the risk---their winch was isolated by substantial porcelain insulators. And of course they kept meticulous daily records. However, from what I've heard of Lindenberg history there were no reported deaths or injuries from lightning strikes there. And a closer look at the winch photo shows that the insulators had been bypassed by steel straps (for added rigidity, I presume) at some time early in the game. (Arrows point to straps.) So, after they'd had some experience they ceased being concerned about this risk. And the only possible conclusion from this is that, in practice, lightning strikes weren't actually a problem." He adds: "The strike I myself observed occurred at a festival in Lunen, Germany, in about 1997. It was spectacular, a giant flash and bang followed by the Cody train separating into individual kites and drifting across the Ruhr Valley. Fortunately, the anchor truck was unattended at that moment, so nobody was electrocuted."

When Schmidt made his find in Munich, he was already committed to kiting. He came to kites as a boy when he flew paper and wood models with his father, who made them, "Wonderful kites," recalls Schmidt. After losing interest in the sport for many years, Schmidt became intrigued again in the '80s after visiting a kite store and discovering the modern materials available---ripstop, carbon fiber, fiberglass. He realized there were wonderful possibilities inherent in these new materials.

His initial flirtation with two-line sport kites ended when he discovered the world of historic kites and Schmidt was soon recreating antique flying machines, a Hargrave, several LeCornus, a three-winged Brogden. Later of course Grunds.

"Schmidt's kites are exactitude," comments Ali Fujino, director of the Drachen Foundation and a great admirer of his work. "He's a painstaking researcher, so he can piece together reconstructions and reproductions. Some of his reconstructions started with almost nothing---shreds. He is keeping alive the memories of great old kites and kitemakers."

Schmidt's old kites stir fascination wherever he travels, as far afield as a festival in New Zealand. Schmidt plans yet more of these memorable kite recreations in the future as his personal contribution toward keeping green the dramatic and important history of early kiting.

The 'Wire Cows' of Lindenberg

When it flew its weather kites, the Lindenberg observatory used wire line. Coiled up on big drums, this line can be viewed today in the winch house.

When kites went down, as they sometimes did in storms and for other reasons, this steel line posed a peril to structures and people in the area. Over the decades, power lines and church towers were snagged and damaged. People in automobiles and on motorbikes and bicycles were assaulted.

But the famous "wire cows" of Lindenberg were victims in a more subtle way. Farmers used mowers to grind up alfalfa and other greenery for cattle feed. When these cutters encountered downed line, they chopped it up along with the feed. Cows eating this fodder might then die of metal poisoning. These were the "wire cows."

Farmers well understood the situation. As shrewd countrymen, they named almost every sick cow that died a "wire cow"----subject then of a financial claim against the observatory.



A closeup (above) of a replica Grunt kite shows its intricate metalwork. The Grunt is a large, powerful lifter.