## **Function of Windmills Changing**

By Patricia Arrigoni

VREELAND, The Netherlands – A windmill is a romantic structure whisking one back to a period 200 to 300 years ago when life moved at a slower pace. Most windmills are colorfully painted in shades of yellows, whites, reds and greens. Their sails sweep in round flowing circles so the colors of the canvas become a swirl of color.

Historically the windmills here were used for an extensive list of tasks: pumping water, pulverizing dried tobacco for powder for the snuff box, crushing seed for the manufacture of various oils, grinding spices, sawing tree trunks into planks and beams, manufacturing paper from hemp and rags, the production of paints, the thrashing of rice and barley, the milling of mustard seeds and the grinding of tree bark (oak bark) for the processing of skins into leather for shoes.

Windmills are no longer economically feasible, and were replaced by steam and oil long ago. The ones operating today are run by people who volunteer their time to see they are maintained with care. A visitor is most likely to find them operating on weekends when the miller, free of his weekly employment, has the time to devote to their running and to public tours.

The windmill I visited in Vreeland was an eight-sided capped, turning mill called "The Rider" ("The Horse" or "The Knight").

It began as a drainage mill in northern Holland in 1735, burned in 1911, then was floated down a canal to Vreeland, restored and converted to a grain mill.

My visit coincided with a movie being made for the benefit of school children about the celebration of "Windmill Day" in May. This day is set aside to recognize the heritage of the windmill to the Netherlands.

The school children learn that the sails can be set into certain positions to mean special things. There are positions for "working," the "at-rest" position, the "mourning" position, and the "celebration positions," which are the announcements of weddings and births.

The iron shaft on the particular mill I visited was built in the 18<sup>th</sup> century. Before that, oak from France was used for shafts.

I crawled up five straight ladders to the top of this four-story structure. Although the wind was blowing rapidly, the sails turned in almost total silence. Only the vibration of the building identified its purpose. It was a thrill to peek out from the highest windows to see the magnificent sails sweeping around in great arcs and dream of a gentler age.

I learned that the thatched roof must be continually repaired, and that the original grinding stones for the wheat were hand-cut German blue stone, but now are artificial. I saw where the wheat ran down through a silo, was ground up, cleaned and bagged. Beeswax was used on the teeth of the wheels, while pig grease was the only thing that worked well on the king's shaft.

Finally I learned that there are only 950 windmills left in the Netherlands, where there used to be thousands.

A society has been formed to protect these and promote their reclamation and safekeeping.

The type of mill I visited has not changed since the 12<sup>th</sup> century and, although mills in Holland have been converted to produce electricity, the experiment has not been a success. Windmills being built today to supply energy have emerged out of a technology from the aircraft industry.