Dr. Richard Jaworski

Montgolfier Diploma Nomination
2007 Best Performance – Hot Air

Citation

The basis for this nomination is for Richard Jaworski's World Record performance in the AX-4 category. Not only did his flight greatly exceed the previous world records for duration, Richard Jaworski was also the balloon's system concept designer, engineer, project manager and test pilot.

World Duration Records Prior to Richard Jaworski's AX-4 Flights

AX-4	8 hours, 39 minutes
AX-5	12 hours, 21 minutes
AX-6	23 hours, 55 minutes
AX-7	24 hours, 21 minutes

Richard Jaworski AX-4 23 hours 11 minutes

By any standards, this has to be considered an amazing aeronautical feat. Richard nearly tripled the AX-4 record, nearly doubled the AX-5 record and nearly broke the AX-6 and AX-7 duration records; all in his small AX-4 hot air balloon.

Richard spent several years integrating modern concepts, materials, and technologies to produce a very efficient AX-4 balloon system. He engineered and coordinated the building of the various components, assembled the system, performed system and component testing, and made test flights. In 2006, on one test flight, he broke the AX-4 and AX-5 duration records with a flight of 13 hours and 12 minutes. This flight was simply a "proof-of-concept" test flight which was followed by an all out record attempt flown in 2007.

The Pilot: Richard Jaworski is a nuclear engineer by profession who has been flying hot air balloons for 35 years. In preparation for the flight, Richard not only trained for cold temperatures, but he also promoted a healthy lifestyle as he lost weight and physically prepared for the flight.

The Balloon System: The balloon system is an AX-4 light weight double envelope, which efficiently uses heat from a customized burner controlled by an autopilot, and fueled from carbon fiber tanks. To minimize balloon load, the pilot dressed in a down suit, sat inside a -40° F sleeping bag, and is suspended in a harness system. The harness restriction and lack of balloon rotational capability, required that Richard at times be flying backward, and other times facing sideways to his flight path. Challenging! All aspects of the balloon system are designed for weight conservation and also reliability in very cold temperatures.

The Flight: This flight was flown from Grand Forks, North Dakota, USA on the morning of February 4, 2007 and concluded in rural North Dakota on the morning of February 5, 2007. The temperatures range was from - 25° F to - 30° F during the flight; extremely cold. The balloon system performed well and so did the pilot; imagine the challenge of being restrained by a harness at these extreme temperatures for 23 hours and continuing to fly a hot air balloon through the night. It was so cold that days later, when the balloon was inspected, it was determined that over 100 pounds of ice had accumulated between the two envelopes.

For these reasons, the Balloon Federation of America is pleased to nominate Dr. Richard Jaworski for the Montgolfier Diploma in the category of Best Performance in a Hot Air Balloon.

Respectfully Submitted by the Balloon Federation of America
Andrew Baird – President
Orvin E. Olivier – Awards Chair