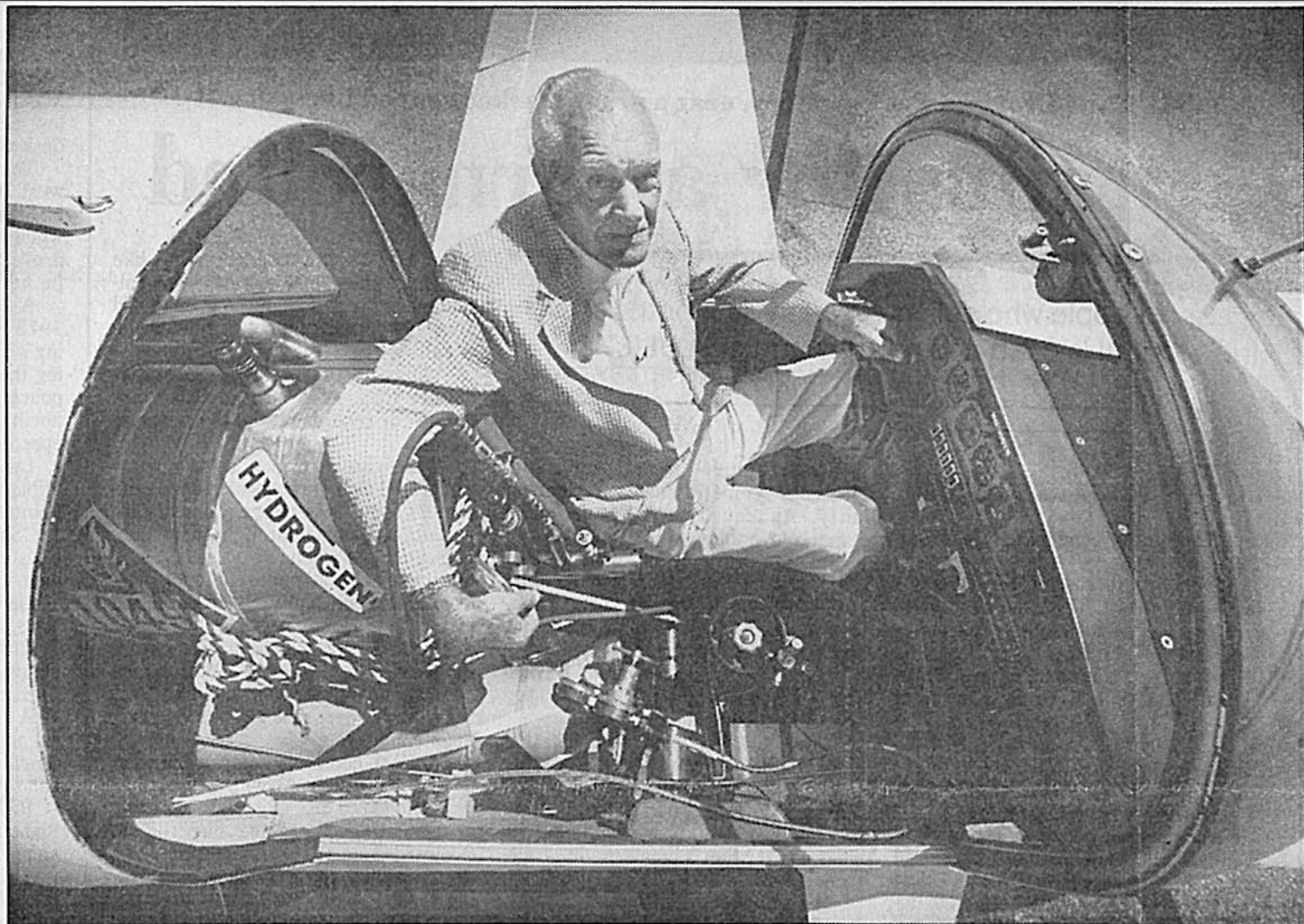


# Broward News

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ALAN FREUND / Miami Herald Staff

With one arm across his fuel source, Bill Conrad has everything he needs to fly, except clearance.

## Flying into history on hydrogen

### 14 years of work pay off in pilot's 36-second flight

By JOHN ARUNDEL  
Herald Writer

For the last 14 years Bill Conrad tinkered with a project aviators said would never fly: a plane powered solely by hydrogen.

Last weekend, Conrad's conviction paid off.

His sleek, single-engine Grumman lifted off the tarmac Sunday at Fort Lauderdale Executive Airport and became the first plane to take off and land powered only by a tank of liquid hydrogen.

Officials at the Smithsonian Institution, U.S. Navy and the National Aviation Association confirmed Conrad's brief flight was the

first of its type in aviation history. They said his efforts topped those of the U.S. and Soviet military, which have failed in similar ventures.

"What he did was set aviation history," said Peter Foster, an NAA recording official who witnessed the event. "Having now crossed into that very special area called world record holder, he now walks in the same league as Lindbergh, Yeager and Orville and Wilbur Wright."

Experts differ on whether hydrogen flight has commercial promise. A Boeing Corp. spokesman said several companies are researching the topic, while a spokesman for

the Lockheed Corp. said his company has concluded that it isn't viable. Currently, hydrogen fuel costs three times as much to produce as an equivalent amount of jet fuel.

The Pompano Beach pilot's flight is nonetheless a milestone, said a University of Miami expert in alternative energy sources.

"It's very historic news," said T. Nejat Veziroglu, director of the university's Clean Energy Research Institute. "It's very important because it demonstrates how we don't have to be tied to jet fuel for plane engines."

Conrad's 36-second flight, which oc-

Turn to HYDROGEN / 4BR



ALAN FREUND / Miami Herald Staff

Roy Parsons, left, and Tom Johnston check out pilot Bill Conrad's hydrogen-powered plane.

# Pilot makes flight history on hydrogen

## HYDROGEN / from 1BR

...curred at 1:30 p.m. Sunday, was not supposed to happen when it did. When Conrad taxied down Runway 8, briefly gunning the engine, he intended only to check the acceleration of the specially equipped plane.

Instead, the plane picked up enough speed to rise 100 feet into the air, astonishing the 40 or so on-lookers.

"I was somewhat shocked when it took off," Conrad said Wednesday, as he stood beside his plane in the searing summer heat. "I guess we were all taken by surprise."

Foster, also a veteran pilot and a six-time world record holder, was watching from the control tower. "I said to the controllers, 'My God, you've just witnessed history.' For a minute there was dead silence in the tower."

Conrad said he could have stayed aloft longer than 36 seconds, but

questions of safety brought him back down.

"He could have stayed up for hours," Foster said. "But the big word was precaution."

Conrad agreed. "You have to learn to crawl before you can walk," he said.

Veziroglu, a proponent of hydrogen fuel, said it could result in vehicles that are lighter, quieter and cleaner than conventional ones.

"If we converted our land, sea and air vehicles to run on hydrogen we [would] be saving our environment from pollution, acid rain and the greenhouse effect," he said.

Since hydrogen is one-third the weight of jet fuel, it could permit smaller engines and lighter nolding tanks and perhaps lead to a reduction in air fares and traveling time, he said.

"I hope that aircraft companies will take notice of this and start building passenger planes to run on

hydrogen," he said. "It's a very exciting occasion."

Conrad, a tall, soft-spoken man who has flown and instructed for 59 years, is modest about his achievement.

The plane "performed marvelously," he said quietly. "It had a good idle and a smooth taxi."

Conrad first began flying in Detroit in 1929. A decade later he moved to Miami to become Pan Am's first director of flight training.

In 1946 he founded Airline Training Inc., a Fort Lauderdale-based company which has since trained about 25,000 transport pilots, flight engineers and dispatchers, according to Tom Johnston, an attorney whom Conrad trained as a pilot 30 years ago and enlisted a year ago on the hydrogen project.

Despite limited formal education, Conrad has written more than 100 flight manuals, been certified to fly 52 different airplanes and holds 51

patents on aircraft parts.

"He is probably the most senior aviator in the world today," Johnston said. "He's a true aviation pioneer."

Conrad began his quest in 1974 with the concept that hydrogen could be used for any kind of internal combustion engine. He began collecting data from professors and other scientific experts, a pursuit that led him as far as Tokyo. Last year he approached Johnston, whose hobby was hot-rod engines.

Working in Johnston's garage after work and on weekends, they retooled an engine to accept hydrogen fuel. Afterward they purchased a plane from Fort Lauderdale electronics engineer Roy Parsons, who helped them modify it to accept the new engine and fuel tank.

While one world record might be enough for most, Conrad said he has already set his next goal: To build the first hydrogen-powered 18-wheeler.