

Obituaries

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MARIO PESANDO, 89 » FLIGHT TEST SPECIALIST

He never got over the demise of the Avro Arrow

Engineer presided as the planes were chopped into pieces with saws and the production line was cut up with acetylene torches

BY RON CSILLAG

Canadians tend to have long memories and touchy sensitivities, which is why the words "Avro Arrow" 50 years on still conjure images of something grand that would have propelled Canada forward, but was torpedoed by pencil-necked bean-counters in Ottawa.

For Mario Pesando, the term "Black Friday," assigned to Feb.

20, 1959, was apt. At 11 a.m. on that day, prime minister John Diefenbaker rose in the House of Commons to announce, completely unexpectedly, that the Avro Arrow, Canada's first supersonic fighter plane and the fastest aircraft in the world, was scrapped. MPs were stunned. The order would take effect immediately, Mr. Diefenbaker added grimly; in fact, no expenditures by the Malton, Ont., company after noon that day would be honoured.

Mr. Pesando, the doomed jet's chief flight test engineer, likened what followed to the Roman sack of Carthage.

"Drawings were being ripped off their boards, torn or thrown out (some were classified), accompanied by the uproar of many voices," Mr. Pesando wrote in his memoirs, *The Restless Engineer*. "The company and staff had no previous knowledge or warning of this impending disaster and resulting actions. We were [so] completely at a loss with the discharge of this news in such an unprofessional manner that we were utterly speechless and thus unable to instruct the employees on what to do."

The government's official explanation was that the Arrow, designed to engage Soviet fighters, was too expensive and that interceptor planes would be useless in a new world of ballistic missiles. Mr. Pesando and the other engineers lamented, as many do still, that Canada had scrapped the most advanced jet fighter in existence and, with it, any chance his country had of being a world leader in aviation.

Then just 39, Mr. Pesando avoided becoming one of the roughly 14,000 Avro employees to be laid off, with an average severance of one week's salary, but he did have to take a pay cut and try to make sense of what followed. Things moved quickly and



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brutally. All traces of the sleek, white Avro Arrow (officially the CF-105), including blueprints, pictures and film, were destroyed. Complete planes and those in production were chopped into pieces with saws, as were all models and tools. The entire production line was cut up with acetylene torches. Metal from the mangled aircraft was sold: A \$400-million Avro Arrow went for a little more than \$4,000, or about 14 cents a kilogram. Some pieces survived and can be found today in museums.

However, the cancellation did spawn a veritable cottage

industry of books, websites, articles and sepia-hued movies that tapped into the plane's enduring mystique and the public's fascination with it. It also prompted a telling line from Mr. Pesando's boss, James C. Floyd, former vice-president of engineering at Avro Aircraft Ltd., who summed up the episode by saying, archly, that "any intelligent person just has to look at the history to see that Canada has a tremendous inferiority complex."

Mr. Pesando and other engineers scattered and he spent the next dozen years in the United States, working on

hush-hush missile and rocket programs.

He was born in what is now Ontario's cottage country to Italian immigrants. His father, who arrived alone at the age of 15, toiled in a tannery, handling hundreds of stinking cattle hides daily. Self-educated, he became adept at all things mechanical, electrical and technical. The words of young Mario's mother, *non fatto bruta figura* (roughly, don't make a fool of yourself), made a lasting impression.

Mr. Pesando graduated in 1942 from the University of Toronto with an engineering de-

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Mario Pesando

gree, specializing in aeronautics, and landed a job as an engineer at National Steel Car Co. in Malton. He longed to design planes, but little actual design was going on in Canada at the time, save for a few bush aircraft.

Before starting work, he spent two weeks at the Royal Canadian Air Force's Camp Borden in the Canadian Officers' Training Corps and flew a Harvard aircraft trainer. An assessment board pressed him to become a navigator, but he chose to put his expertise in aeronautical engineering to use. "I never regretted my decision," he wrote.

Back at work at the renamed Victory Aircraft (Avro Canada's predecessor), he was assigned to the Lancaster bomber production program to ensure that the plane met British specifications, and he did a considerable amount of flying in the famed Lancaster X (the X, he believed, meant 10, not "unknown").

In late 1945, he moved to the new A.V. Roe Canada design office as an aerodynamicist, then was posted to an intensive flight-test program at the Avro test facility in England, which gave him the opportunity to become familiar with the prop jet and pure jet-powered aircraft prototypes then being tested in Britain, according to avroarrow.org.

After returning to Malton, Mr. Pesando was put in charge of flight testing for Avro's CF-100 "Canuck," the first production straight-winged jet to go supersonic, and the C-102 civilian passenger jetliner, which interested U.S. industrialist Howard Hughes until he developed financial problems. The jet would be Mr. Pesando's favourite plane, but it was cancelled by the government, presaging the plight of the Arrow.

The Arrow's cancellation "changed our lives," recalled Mr. Pesando's son, James, an economics professor at the

University of Toronto. "We were Canadians destined to live in Canada and my father's sons were to go to U of T." Instead, two of Mr. Pesando's sons, James and John, graduated magna cum laude from Harvard University.

James Pesando remembers his father sketching flying saucers, then tossing the drawings into the fireplace. These weren't mere whimsy; Avro was, in fact, working on a saucer-looking hovercraft. "There was always a lot of excitement about the company," James Pesando said. But after the Arrow's demise, "the whole ambience changed. It was interpreted as the end of the game."

So Mr. Pesando moved his family to Lexington, Mass., where he went to work for RCA's aerospace arm. He eventually became the company's senior engineering scientist and he worked on the Lance and Minuteman missiles and the Saturn V booster rocket that launched Apollo 11 to the moon.

On his return to Canada in 1971, he bought a marina near Peterborough but soon became restless. In his early 50s, he was hired at Dominion Aluminum Fabricating (later INDAL Technologies) as a project leader. There, he was instrumental in developing and marketing the Helicopter Hauldown and Rapid Securing Device (HHRSD), a unique system for landing large helicopters on small ships. Using cables and winches, the bear-trap-like device effectively and safely captured choppers on the sterns of these vessels. It proved so successful that it was purchased by the Canadian, Japanese, Indian and U.S. navies, and is still in operation today.

Not normally a melodramatic man, he remained haunted by the Arrow debacle. "If I live to be 100," he wrote, "I doubt I ever could come to terms with this destruction."

MARIO PESANDO

Mario Armand Pesando was born in Huntsville, Ont., on Dec. 9, 1919, and died in Victoria on March 30, 2009. He was 89. He leaves his wife of 65 years, Dorothy, his children John, James, Frank and Marie, three grandchildren and two great-grandchildren.

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