

Editorial

SAFETY FIRST

In this issue of *Aircraft* as in many issues over the past year or so, there is a report on a new development in the DoT's airport terminal construction program. It is rapidly becoming obvious that when this program is completed in the next few years, Canadian airport terminal buildings will be among the most modern on the continent, and as advanced in conception as any to be found anywhere else in the world. While it is true that this state of affairs has been a long time in arriving it should be remembered that first things must come first. Fancy terminal buildings are of little use until the airports on which they are located are fully equipped with runways of suitable length and all the most modern approach and runway lighting systems and electronic landing aids. Safety comes first.

ONLY THE BEGINNING

The first flight of the Avro Arrow is now Canadian aeronautical history.

Even the most blasé will have to admit that the maiden flight of a new aircraft is an exciting event, especially to those most intimately associated with the project. The atmosphere crackled with tension throughout the large crowd that gathered at Malton early in the morning of March 26, as news of the impending take-off spread swiftly.

Indeed, as Avro President & General Manager John Plant said of Jan Zurakowski, the central character in this tense little drama . . . "he was the only one who wasn't nervous."

The First Step: The successful completion of the first flight of any new airplane is undoubtedly a significant event, but just as a first solo really marks the completion of only a very tiny step in the training of a pilot, so a first flight is just the beginning of a long program of development testing.

In the case of the Arrow, this first flight proved that the airplane was able to fly, an ability that was a foregone conclusion anyway. Now Avro's test pilots must begin exploring every corner of the Arrow's performance envelope. Will it do everything it was designed to do? How well will it do all these things? Will this airplane, though shaped in the now familiar delta mold, but with its own unique features of design, run into hitherto unknown aerodynamic shoals?

These and other questions must be answered.

And while the limits of the performance envelope, and the areas of danger therein are being charted, the CF-105 airplane must also show that it dovetails accurately with the many other components of the Arrow Weapon System, and vice versa.

Can the Arrow reach the target area soon enough to be effective? Having got there, how efficiently can it deliver its weapon? What will happen when the weapons bay is opened at supersonic speed? What will happen when its missiles are launched?

Completing the Mission: And what about the missile? However efficiently the Arrow does its job, the Weapon System is a failure if there is not a high probability of successful completion of the mission by the missile.

Obviously there are still a staggering number of questions to be answered before the Arrow Weapon System reaches operational status. Only some of these questions can be answered in the wind tunnels and with computers.

This is the real significance of the first flight: now Avro can begin to find the answers to all the previously unanswered questions.