

巴西客机失事的教训 (ABCNews) PDF转换可能丢失图片或格式, 建议阅读原文

https://www.100test.com/kao_ti2020/273/2021_2022__E5_B7_B4_E8_A5_BF_E5_AE_A2_E6_c67_273964.htm 巴西客机A320失事造成两百多人死亡, 据说可能是南美历史上最大的空难事件。现在事件仍未平息, 美国已经开始总结教训了, 我们看看美国怎么分析这个事件吧。 Lets get the bottom line to the top: You cant do commercial aviation on the cheap without killing people. While the tragedy in Brazil this week is neither an indictment of the airline involved (TAM), nor Brazil itself, it is further, tragic proof that the goal of safety in commercial aviation and the goal of frugality in government spending are diametrically opposed. In the case of the horrific accident in Sao Paulo and the deaths of just under 200 people, there will be much for the glaring light of hindsight to illuminate. Brazil has clearly been dragging its feet on modernization of its air traffic control system, airports, runways and safety infrastructure despite a recent explosion in air travel. But whatever individual failures are revealed by the subsequent investigations, whats also sadly true is how the growing evidence of major aviation safety problems have been ignored, denied or discounted. Over the past several years, a steady host of complaints from the front lines of Brazilian aviation (air traffic controllers, pilots, airport employees, etc.) that major government-financed improvements were needed went unheeded. Why? Because Brazil, like so many nations, failed to grasp two key truths: That you cant grow a large, safe national aviation system from a small one without massive spending on

airports and the safety infrastructure. and second, that the responsibility for funding that infrastructure falls on the government, which, of course, means the people as a whole. Airliners need well-equipped airports. Unless those airports have what's necessary for safe airline operation (lengthy runways with grooved surfaces, adequate overruns, carefully planned approaches clear of towers and buildings, a clear system of ground markings, lighting, radio aids, etc. etc. etc.) safe daily operations aren't possible. Brazil's leaders know this, by the way. They've helped nurture a major aircraft manufacturer named Embraer into a world standard producer of regional jets and other well-built products. They've simply been too slow to push up their own throttle. A safe airline system also requires strict national standards for everything from the way the planes are built and the way the pilots are trained and checked to how the mechanics are licensed. It requires an FAA-like agency to monitor and hopefully regulate the minimum standards, and it requires a large, reasonably competent, and carefully-trained group of professional air traffic controllers reasonably compensated and trained to world class standards with equipment to match. What happened in Sao Paulo Tuesday will prove to have resulted from a very complex chain of causal factors, but the presence of a short runway that had been recently resurfaced without the grooves that help drain water and vastly improve aircraft braking will undoubtedly be significant. First, contrary to many news reports, the pilots of the Airbus A-320 did not skid off the end of the runway. Instead, when it became apparent that they were not going to be able to stop in the remaining runway

(due to what may have been hydroplaning tires riding on a thin film of water on the nongrooved runway surface), they elected to try to get airborne again. In fact, the Airbus did make it over the fence at the end of the runway and over the busy street beyond, but without enough airspeed, they couldn't climb clear of the structures ahead. Had they skidded off the end of the runway at 40 or 50 miles per hour still trying to stop rather than trying to lift off again, the survivability profile of the crash would have been much different. As it was, the impact with the gas station came at speeds above 100 miles per hour. The pilots' decision to try to get airborne again will have to be examined and understood against all the factors revolving around this tight and demanding airport, but it's important to know in advance that when given the choice between the certainty of running out of runway and the possibility of being able to fly out of the problem, most professional pilots will elect to fly. Here are some of the basic challenges a pilot faces when he or she lands and realizes the airplane can't be stopped in the remaining runway especially when that runway is a shade more than 6,000 feet long. A jetliner normally comes over the "fence" 50 feet high around 130 to 150 miles per hour, and it takes time and distance to get the main wheels onto the surface, a process that can eat up as much as a thousand feet of runway length (or more). The pilot rapidly pulls the "spoiler" or speed brake lever to raise panels on the wings (which "spoil" some of the lift and help the aircraft settle onto the main wheels for better braking), and then pulls the throttles into reverse thrust. But those steps take time and eat up more runway at approximately 200 feet per

second. Even when the pilots start braking it may be several seconds before the realization sets in that the runway is too slick and their brakes aren't effective -- and even more time to realize that they may not make it before the end of the runway comes up. But when that recognition hits -- if it comes after deployment of the spoilers and thrust reversers -- a lot of remaining runway is going to be consumed as the pilot struggles to re-stow the thrust reversers and the spoilers and get the engines back up to maximum power. Until all three of those occur, the decelerating airplane won't start accelerating again, and there may not be enough runway left for the jetliner to achieve flying speed once more. We do not know yet whether the spoilers and thrust reversers were a factor Tuesday, nor whether the pilots landed a bit too far down the runway or a bit too fast. But while there will be many contributing factors to this accident when the final investigations are complete, one thing stands out clearly: Sao Paulo's airport -- which is similar to New York's La Guardia, Chicago's Midway, and San Diego's Lindbergh field -- is short enough and demanding enough to garner the maximum attention and expenditure by government and airport authorities to offset its limitations with the best precautions. And certainly with respect to the lack of a grooved surface in heavy rain, that responsibility does not appear to have been upheld. Airlines, as a rule, do not have the money to build the airports, groove the runways, hire and train the necessary air traffic controllers, nor buy a nationwide array of state-of-the-art radar systems. Such expenditures are the flat-out responsibility of government. And that circles back with a very large

warning to the nation that largely helped the world learn to fly with near-perfect safety: the United States. In this age of exploding air travel that the United States has fostered, promoted and pushed as national policy, there is no excuse for the FAA asking Congress to pawn off federal funding responsibilities for a national system through "user fees" (as our current FAA administrator has asked Congress to do). And there is certainly no excuse for starting an economic-based "war" with the nations air traffic controllers to save a few federal bucks in the short term, which will be one of the legacys of the current FAA administrator. Our national air system is the funding responsibility of all of us through the federal government, and to search for ways to operate it on the cheap tracks the same dangerous course that is now going to seriously embarrass our neighbor to the south. 100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com