

# Farewell, good and faithful servants



**Is building more or less the best in today's global economy? The world's largest aircraft manufacturers have different points of view.**

But at the other end of things, when aircraft reach the end of their long careers carrying passengers and freight safely and reliably around the world, a call has been made for improvements in both safety and environmental management. Netherlands-based Aircraft End-of-Life Solutions' Derk-Jan van Heerden believes parked aircraft should not be left for extended periods without both maintenance and final solution programs.

"On average, an aircraft is parked for two years before it is scrapped. AELS believes that parking without a maintenance program should be considered as a kind of land filling," he said.

## Bogus parts concern

"The aviation sector should focus on not having aircraft parked for a long time without any action. "It is both bad for the environment, but maybe even more important, can seriously influence the safety of the aircraft industry. Each abandoned aircraft is potentially a source of bogus parts," he said.

At the end of 2008, 15.2 per cent of the global commercial aircraft fleet was parked; this rose to 17.8 per cent by last August 2009 – meaning 4691 aircraft parked globally. Some may return to service but most are not expected to fly again: they are already in end-of-life status.



*Mmmm, crunchy. One of seven Fokker F27s about to get the opposite of winglets as AELS recyclers get to work in Cologne last year. Picture: AELS*

Mr van Heerden said the international aircraft end-of-life business should now be settling into disposing of about 450 units per year. "I believe that the biggest factor that will affect us is the oil price and, in the future, the price fixed by government on carbon emissions," he said. "The higher both are, the more expensive it is to fly an old technology aircraft or the cheaper it is to fly a new aircraft. You can see that the market is expecting the same thing, as both Airbus and Boeing have not really slowed production during the economic crisis."

## Very aviation-specific plastics cannot be recycled

AELS reckons that with development of efficient supply chains for non-metal components recovered from end of life aircraft recycling could be boosted to 90-95 per cent.

"All metals can be recycled as there are good recycling supply chains; plastics are not recycled as they are very aviation specific, although some OEMs are working on improving recyclability," Mr van Heerden said.

"This is, however, not being done by changing materials in current manufactured models but by improving recycling techniques and recycling supply chains. If

OEMs changed the material composition of new aircraft we will not notice that for the next 25 years.

"Technologies are available and being further developed to be able to recycle composite materials such as carbon fibre reinforced plastics, but the industry has learned from developments in the recycling of other goods such as cars and household appliances.

"We can use that technology to benefit the recycling of aircraft."

The different types of alloys making up an airliner are also a recycling management issue. "It is negatively affecting the process," Mr van Heerden said. "If an aircraft was made out of one type of alloy we could recycle and turn them into ingots of the same material. As we are dealing with a mix of alloys, the end material is also a mix of alloys," he said.

