Atomization from an automotive perspective

Karl-Otto Strömberg

Flexprop AB, Kilgränd 4, 302 40 Halmstad, Sweden

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INTRODUCTION
Volvo Truck Umeå plant, ABB Automation Technology and FlexProp AB have since 1999 studied and developed manufacturing technology to increase flexibility in production lines and minimize investment cost in production equipment both in respect of new investments and reinvestments. 2005 the project was awarded founds from Vinnova for a three year extended research program introducing Volvo Cars, Halmstad University and LTH.

ABSTRACT
The use of composite materials has increased in resent years and one of the most expansive industries is the aerospace industry. Aerospace industry has experienced an combination of market growth at the same time as the amount of composite materials introduced has increased significantly forcing aerospace industry and in particular manufacturer of composite parts to increase the level automation and specialization.

By introducing technology and production strategies used in automotive industry there is a significant potential for aerospace industry and in particular the composite manufacture to be more competitive. Automotive industry has been the leading industry for many years in respect of assembling and manufacturing fairly complex products in large scale. In addition automotive industry has developed towards more flexible technology that allows shorter series and more specialized vehicles to be built on the same production line. Aerospace industry and automotive industry is also closing up the gap in respect of number of part produced.

By introducing lightweight fixtures and grippers manufactured in composite materials the mechanical performance in respect of weight and structural rigidity have been improved significantly allowing a much more flexible manufacturing system. In addition productivity and quality have been improved. The concept have also successfully been used for manual equipment were the mechanical performance improve quality and ergonomics.

By introducing manufacturing strategies developed in the automotive industry and in particular technologies as the composite technology above the composite industry could improve productivity, flexibility and quality.

REFERENCES