



KSL Newsletter 21.10.2008

Dear customers, agents and friends of our company,

KSL is known for its expertise in sewing technology. What many people do not know is that we have evolved to be an expert for a wider range of automation solutions. Therefore, this edition of our newsletter gives you an idea and some examples of our scope of business.

Yours sincerely,

Robert Keilmann
Managing Director

Content:

1. KSL – Automation Expert
2. Reference Project: Eurocopter
3. Reference Project: Bulk Head for Airbus A380
4. Exhibitions and Fairs 2008

1. KSL – Automation Expert

In 1964 we started out as an industrial sewing machine manufacturer and today we are proud to be an expert for any kind of industrial automation. As specialist for customized systems solutions, KSL offers groundbreaking technologies for the competitive advantage of your production.

KSL has put a strong focus on full systems for the textile industry and has been able to achieve market leadership in many applications. Besides our core business of sewing machines for technical textiles we also offer process automation based on 3D motion controlled units like robots and portal construction units. These robots are "enhanced" by KSL for the industrial use, especially in process engineering,

We would be pleased to jointly elaborate concepts and their respective implementation for your current or future production. We can also offer you to carry out trials up to advanced prototype in our technical workshop in Lorsch.

2. Reference Project: Eurocopter

Since the beginning of 2008, Eurocopter in Ottobrunn disposes of a new robotic cell made by KSL which is the result of a close cooperation of KSL and Eurocopter within the development process.

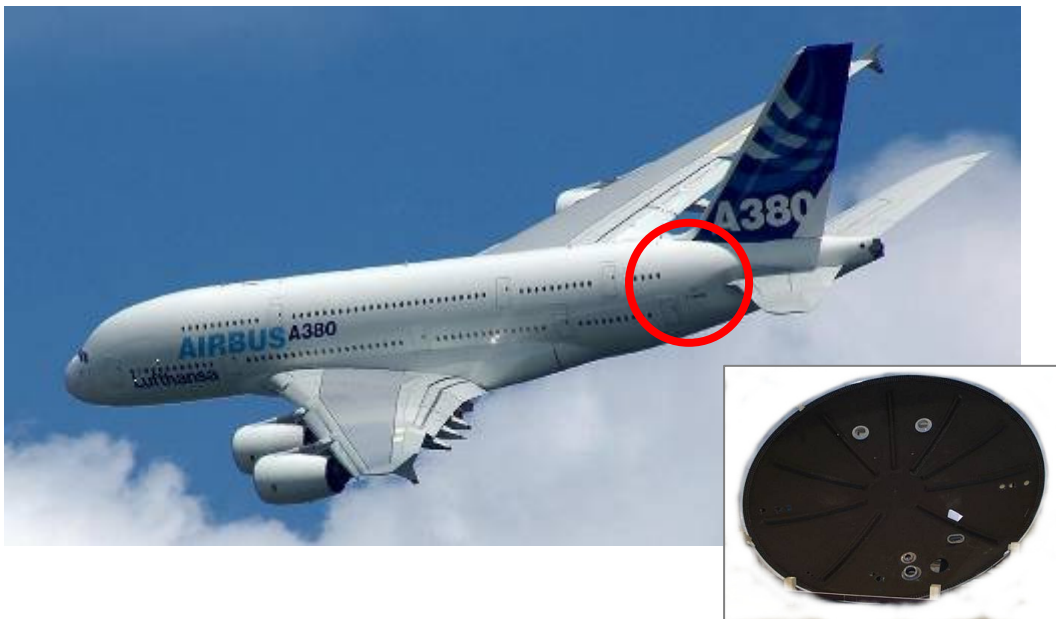
The machine is used for the automation of manufacturing processes in the preforming technology. This flexible robotic cell will take over the assembling and trimming of complex, three dimensional carbon fiber preforms.

In the design of the machine, Eurocopter put a strong focus on flexibility to be able to achieve a high productivity rate by covering a wide range of possible applications. A first job in industrialization of structural parts for helicopters is about to happen



3. Reference Project: Bulk Head for A380

The second reference project that I would like to introduce to you is the machine that we built for the production of the CFRP bulk head of the Airbus A380.



A bulk head has the function to protect the rear end of the passenger cabin from atmospheric pressure. Curved geometries such as the bulk head need innovative manufacturing impulses, so KSL took over the development and manufacturing of an automated solution including One Side Stitching Technology. The achievement is that the innovative KSL contribution allows a serial production of the bulk head.

This machine for the bulk head was developed in cooperation with Airbus and is now standing at Airbus' supplier Saertex in Stade, Germany.

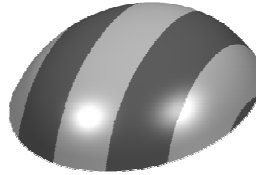
STEP 1

The carbon layers are assembled on the KSL machine to an 8 m wide carpet.



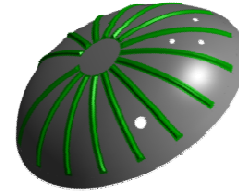
STEP 2

The carbon material is draped to the shape of the bulk head.



STEP 3

The resin is injected and stiffeners for reinforcement are added.



KSL Portal CNC Sewing Unit

4. Exhibitions and Fairs 2008

We will exhibit at the following fairs:

CINTE China

China Carbon Composites

Shanghai New International Expo Centre, Shanghai/Pudong/China

20-22 October 2008

Airbag 2008

9th International Symposium and Exhibition on Sophisticated Car Occupant Safety Systems

Congress Center Karlsruhe, Karlsruhe/Germany

1-3 December 2008

If you do not wish to receive any further issues of our newsletter, please write an e-mail to info@ksl-lorsch.de

Contact and legal notice:

KSL Keilmann Sondermaschinenbau GmbH
Bensheimer Str. 101
64653 Lorsch
Germany

Phone: +49 6251 9620-0

Fax: +49 6251 9620-26

Website: <http://www.ksl-lorsch.de>

e-Mail: info@ksl-lorsch.de

Company's registered office: Lorsch

Register court: Amtsgericht Darmstadt

Entry in the commercial register: HRB 21978

Managing Director: Robert Keilmann

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