

F&E Forschungsk Kooperation mit dem National Research Council (NRC)



Ein anderer Weg der Zusammenarbeit am Beispiel eines Forschungsprogrammes der EADS Military Air Systems, Manching

Horst Haslach
Projektleiter im Technologiemanagement

Agenda

- National Research Council Canada (NRC)
- NRC Institute for Aerospace Research NRC-IAR
- EADS MAS Motivation
- EADS MAS - NRC Kooperation
- Basis der Kooperation



20 Institute
4100 Mitarbeiter
www.nrc-cnrc.gc.ca

- National Bioproducts Program (NBP)
- National Institute for Nanotechnology (NINT)
- NRC Biotechnology Research Institute (NRC-BRI)
- NRC Canada Institute for Scientific and Technical Information (NRC-CISTI)
- NRC Canadian Hydraulics Centre (NRC-CHC)
- NRC Canadian Neutron Beam Centre (NRC-CNBC)
- NRC Canadian Photonics Fabrication Centre (NRC-CPFC)
- NRC Centre for Surface Transportation Technology (NRC-CSTT)
- NRC Genomics and Health Initiative (NRC-GHI)
- NRC Herzberg Institute of Astrophysics (NRC-HIA)
- NRC Imaging Network Portal (NRC-IMAGING)
- NRC Industrial Materials Institute (NRC-IMI)
- NRC Industrial Research Assistance Program (NRC-IRAP)
- **NRC Institute for Aerospace Research (NRC-IAR)**
- NRC Institute for Biodiagnostics (NRC-IBD)
- NRC Institute for Biological Sciences (NRC-IBS)
- NRC Institute for Chemical Process and Environmental Technology (NRC-ICPET)
- NRC Institute for Fuel Cell Innovation (NRC-IFCI)
- NRC Institute for Information Technology (NRC-IIT)
- NRC Institute for Marine Biosciences (NRC-IMB)
- NRC Institute for Microstructural Sciences (NRC-IMS)
- NRC Institute for National Measurement Standards (NRC-INMS)
- NRC Institute for Nutrisciences and Health (NRC-INH)
- NRC Institute for Ocean Technology (NRC-IOT)
- NRC Institute for Research in Construction (NRC-IRC)
- NRC Plant Biotechnology Institute (NRC-PBI)
- NRC Steacie Institute for Molecular Sciences (NRC-SIMS)



British Columbia

- Penticton
- Vancouver
- Victoria

Alberta

- Calgary
- Edmonton

Saskatchewan

- Regina
- Saskatoon

Manitoba

- Winnipeg

Ontario

- Chalk River
- London
- Mississippi Mills
- Ottawa

Quebec

- Boucherville
- Gatineau
- Montréal
- Saguenay

New Brunswick

- Fredericton
- Moncton

Nova Scotia

- Halifax
- Ketch Harbour

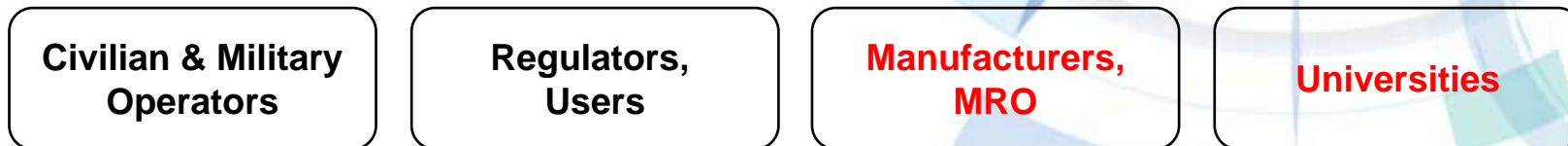
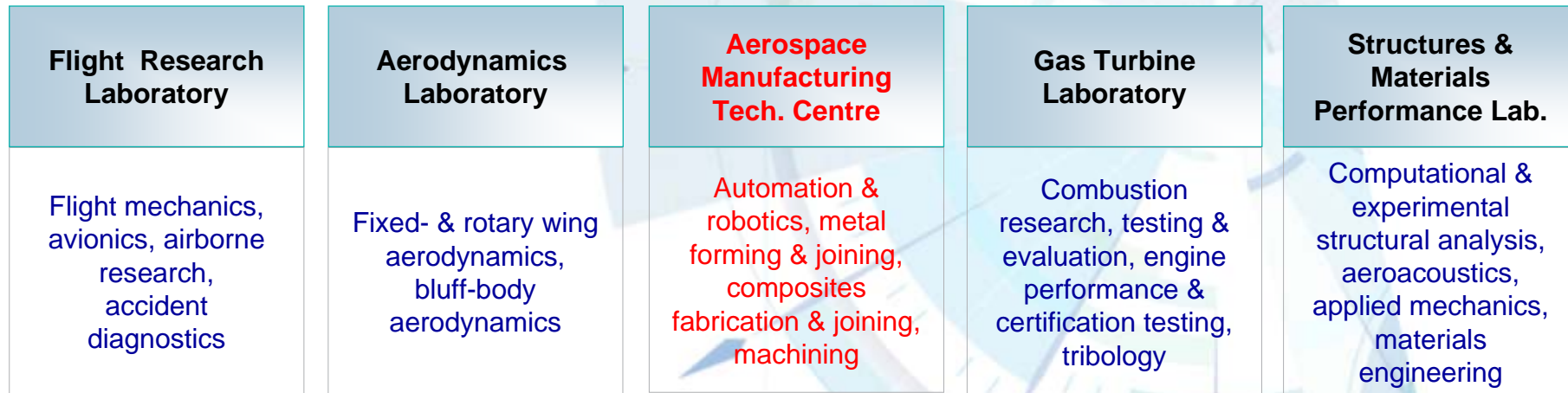
Prince Edward Island

- Charlottetown

Newfoundland and Labrador

- St. John's

NRC Institute for Aerospace Research NRC-IAR



EADS Military Air Systems (MAS) Motivation

„Inservice“-Schäden an metallischen
Flugzeugstrukturen in Form von z.B.: Rissen

Behebung der Schäden i.d.R. durch:

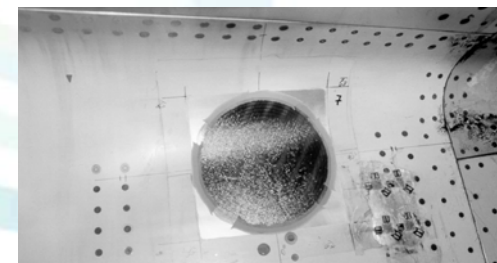
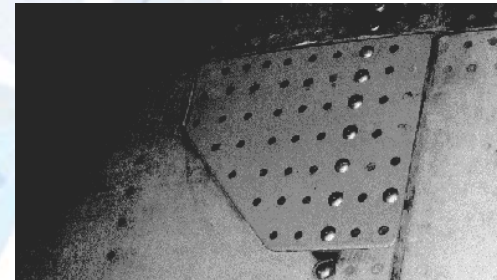
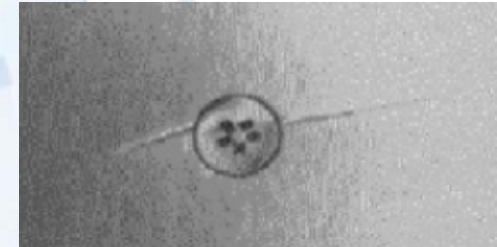
- Austausch der beschädigten Teile
(sehr teuer, nicht immer möglich)
- Aufnieten eines metallischen Dopplers
(einfach – sehr aufwendig, oft strukturell ungünstig)

alternative Möglichkeit:

Aufkleben eines Dopplers

(auch als Präventivmaßnahme möglich)

Vorteile: sehr gute strukturelle Integrität, kosteneffektiv

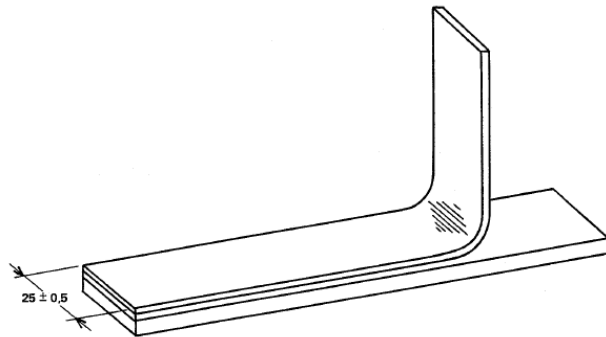


→ Beherrschung der Klebetechnologie

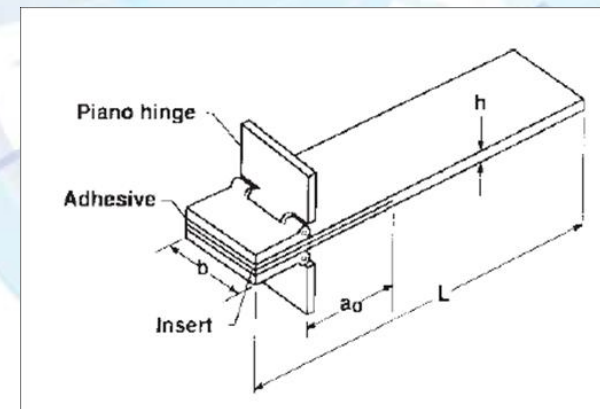
EADS MAS - NRC Kooperation

Entwicklungsprogramm auf dem Gebiet der Oberflächenvorbehandlung zum Kleben

NRC führt Untersuchungen zur
Klebevorbehandlung von Aluminium
durch:



EADS MAS führt im Gegenzug
Untersuchungen zur
Oberflächenvorbehandlung von CFK
zum Kleben durch:



- Testprogramm mit insgesamt 135 Proben
- Austausch von Kenntnissen und Testergebnissen

Basis der Kooperation - Agreement for R&D Collaboration



	National Research Council Canada	Conseil national de recherches Canada	Agreement for R&D Collaboration
BETWEEN: NATIONAL RESEARCH COUNCIL OF CANADA whose head office address is: 1200 Montreal Road Ottawa, Ontario K1A 0R6 (called "NRC")			
through its Institute, whose name and address are: <u>Institute for Aerospace Research</u> (called the "Institute")			
AND: EADS DEUTSCHLAND GMBH MILITARY AIR SYSTEMS a corporation under the laws of Germany whose address is: Rechliner Strasse 85077 Manching Germany (called the "Collaborator")			
In consideration of	<p>1. This Surface</p> <p>6. The Collaborator shall make an in-kind contribution to the Project by performing, at its own cost, work as described in the Statement of Work and Deliverables at an estimated cost of <u>seventy four thousand (74,000) Euros.</u></p> <p>7. NRC shall make an in-kind contribution to the Project by performing, at its own cost, work described in the Statement of Work and Deliverables at an estimated cost of <u>fifty eight thousand eight hundred Canadian dollars (\$58,800).</u></p>		
SIGNED by Collaborator	<p>Date: <u>13/08/2005</u></p> <p>Per: <u>[Signature]</u> Name and title: <u>VP SRM Technology</u></p> <p>EADS DEUTSCHLAND GMBH MILITARY AIR SYSTEMS</p> <p>Date: <u>17/08/2009</u></p> <p>Per: <u>[Signature]</u> Name and title: <u>SRM Commercial Sales</u></p>		
SIGNED by NRC in duplicate at Ottawa, Ontario, CANADA	<p>NATIONAL RESEARCH COUNCIL OF CANADA</p> <p>Date: <u>25 Aug 2009</u></p> <p>Per: <u>[Signature]</u> Name and title: <u>W. Bellinger, Acting Director - SMRC</u></p>		

Basis der Kooperation – Statement of Work



National Research Council
Canada

Conseil national de recherches
Canada

Institute for Aerospace
Research

Institute de
recherche aérospatiale

NRC - CNRC

Structures and Materials
Performance Laboratory

Laboratoire de performance
des structures et des matériaux

Ottawa, Canada
K1A 0R6

CONFIDENTIAL

Statement of Work and Deliverables RP-SMPL-2009-0106

Development of Surface Preparation Process For Bonded Repairs

Submitted to: Mr. Anton Maier
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Vielen Dank für Ihre Aufmerksamkeit

← Fragen ?

Gerne auch später an horst.haslach@eads.com