



FUTURE REPAIR AND MAINTENANCE FOR AEROSPACE INDUSTRY

Deliverable 6.3

**Demonstration of the work flow developed
for the hybrid manufacturing/repair chain
combining additive manufacturing and
conventional subtractive machining**

Documentation

Jeppe Skinnerup Byskov

Danish Technological Institute

November 2015

Work Package 6

Project Coordinator

Prof. Dr.-Ing. Rainer Koch (University of Paderborn)

7th Framework Programme

for Research and Technological Development

COOPERATION

AAT2013.4-4.: Maintenance, repair and disposal



Public deliverable

Distribution level	Public			
Due date	31/05/2015 (postponed)			
Sent to coordinator	31/07/2015 (update on 24/09/2015 and 2/11/2015)			
No. of document	D6.3			
Name	<i>Demonstration of the work flow developed for the hybrid manufacturing/repair chain combining additive manufacturing and conventional subtractive machining</i>			
Type	<i>Demonstrator</i>			
Status & Version	2.0			
No. of pages	18			
Work package	6			
Responsible	<i>DTI</i>			
Further contributors	<i>Maria Gaudalupe Rodriguez Diaz, ATOS Jens Pottebaum, UPB Gereon Deppe, UPB</i>			
Authors	<i>Jeppe Skinnerup Byskov, DTI</i>			
Keywords	<i>Interactive webpage, hybrid manufacturing, additive manufacturing, subtractive machining</i>			
History	Version	Date	Author	Comment
	V0.1	28/11/2014	UPB	Structure
	V0.2	30/07/2015	DTI	Content
	V0.3	31/7/2015	DTI	Comments from Gereon (UPB) implemented
	V0.4	22/9/2015	DTI	Updated with webpage content and comments from Jens (UPB)
	V0.5	22/9/2015	DTI	General updates of content
	V1.1	2/11/2015	DTI	Finalization of document
	V2.0	13/11/2015	UPB	Finalization for submission

Public deliverable

The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n°605779.

Executive Summary

This deliverable intends to demonstrate the workflow developed in RepAIR for hybrid manufacturing and repair of aeronautics parts. By workflow is meant all the work around the manufacturing of a part (decision making, cost analysis, design, quality assurance, certification, ...). This will be done by setting up an interactive webpage embedding videos as well as links, guiding the user through the webpage in accordance to the decision process in maintenance, repair, and overhaul itself. Therefore, the deliverable refers to several other deliverables and incorporates corresponding results. The interactive webpage collects it and presents it to potential 'end users' in an illustrative way.

On the webpage, the user will be able to select a sample part. Then information about this part will be shown along with possible manufacturing methods. More information about the processes and process parameters can also be found. The user will also get information about what to consider regarding certification of a hybrid manufactured part for the aeronautics industry.

Future work will be added later on in order to model an even higher percentage of the whole RepAIR process.

Please see the webpage <http://repair-parts.atosresearch.eu/>