

# Lessons learned

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**Rotorcraft Structures Workshop**  
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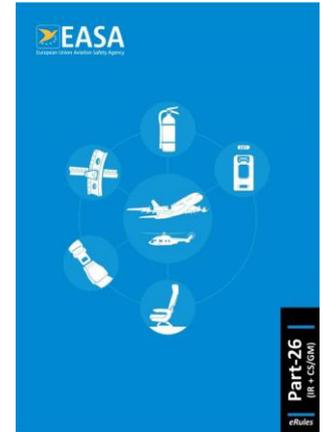
# Contents

- PART 26 implementation
- Use of the CMs
- CIVP & CRFS & Bird retroactive application
- Safety Recommendation
- Material qualification
  - Titanium,
  - EAC...
- Best working practices

# Lessons learned - PART 26 implementation

## Article 1 Subject matter and scope

1. Additional airworthiness specifications related to the continuing airworthiness and safety improvements of aircraft.
2. This Regulation applies to:
  - a) operators
  - b) Holders of a TC
  - c) Applicants Ageing Aircraft Experience



Communication between EASA (including NAAs), Applicants and TCHs, operators through

# Lessons learned

## Use of the CMs

- Do not constitute any legal obligation
- Provide complementary information and/or acceptable MOC for compliance demonstration
- Alternative MoC possible but can request more time and energy

## CM-S-005 Bonding repair size limit



EASA CM No.: CM-S-005 Issue 01

### Certification Memorandum

**Bonded Repair Size Limits**  
in accordance with CS-23, CS-25, CS-27, CS-29  
and AMC 20-29

EASA CM No.: CM-S-005 Issue 01 issued 11 September 2011

Regulatory requirements: CS-23, CS-25, CS-27, CS-29

EASA Certification Memoranda clarify the European Aviation Safety Agency's general course of action on specific certification items. They are intended to provide guidance on a particular subject and, as non-binding material, may provide complementary information and guidance for compliance demonstration with current standards. Certification Memoranda are provided for information purposes only and must not be misinterpreted as formally adopted Acceptable Means of Compliance (AMC) or as Guidance Material (GM). Certification Memoranda are not intended to introduce new certification requirements or to modify existing certification requirements and do not constitute any legal obligation.

EASA Certification Memoranda are living documents into which either additional criteria or additional issues can be incorporated as soon as a need is identified by EASA.

# Lessons learned

## Safety Recommendations

Significant pressure to provide action following accident investigation.

- Overreact
- Add conservatism
- Duplication of the requirement

# Lessons learned

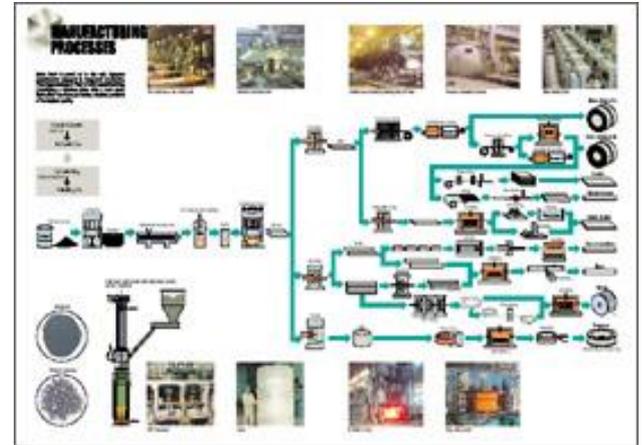
Material qualification & selection

- EAC Embedded stress generated by interference & chemical reaction
- Titanium. process & traceability

Can generate significant

- commercial & economical impact
- Impact in CAW

**Robust & well approved solution recommended**

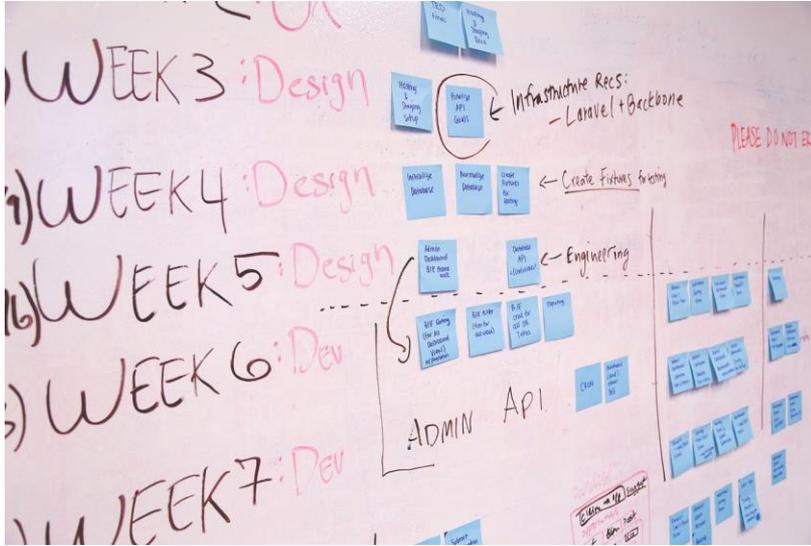


*Titanium Manufacturing process*

# Best Working Practices



# Planning!



- ✓ Cert Basis / Cert Plan first
- ✓ Please allow sufficient time for Expert review
- ✓ For complex projects, please provide realistic planning.
- ✗ Please try to avoid extended breaks in the project → continuity saves time

# Avoid long email/discussion back-and-forth



- ✓ Break the chain with a phone call / WebEx
- ✓ Check Expert availability first!

# Clear and Complete Compliance Information



- ✓ Please tell the story: document the design change and compliance
- ✗ Do not assume we know the design and compliance history as well as you do!

# Problem Solving Mentality / Open Mind



- ✓ Every project is unique
- ✓ Rotorcraft are complex
- ✓ We need a problem solving mindset
- ✓ Listen and learn from each other
- ✓ Open to revise position when unnecessarily conservative or restrictive

# Escalation Process



- ✓ If stuck on a technical issue, please inform the PCM and Expert first.
- ✓ Escalation steps:
  1. Senior Expert and Product Section Manager,
  2. Then, Chief Expert and Head of Department, if necessary
- ✗ Please do not start escalation from the top!

# Conclusion

- Good Communication is key
- Transparency
- Listen and learn from each other
- Good planning
- Open to change



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