

# **INFORMATION COLLECTION SUPPORTING STATEMENT**

## **Damage Tolerance and Fatigue Evaluation of Composite Rotorcraft Structures 14 CFR Part 27 and 29**

### **Notice of Proposed Rulemaking**

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information. (Annotate the CFR parts/sections affected).***

New composite rotorcraft structure standards are needed because:

- Existing regulations, §§ 27.571 and 29.571, authorized under 49 USC 44701, do not adequately describe the fatigue certification requirements for composite rotorcraft structures. The lack of regulatory requirements has led to inconsistent interpretations from one rotorcraft certification project to another, resulting in different burdens on industry to substantiate their composite rotorcraft structures. As discussed in the NPRM, some special conditions have been required to establish adequate and appropriate safety standards.
- Some applicants state the lack of a separate composite rotorcraft structure rule has resulted in confusion because neither the current rules nor the various advisory materials provide clear and complete guidance for certification of composite rotorcraft structures. New rules and AC material are intended to alleviate this problem.
- The new rules and advisory materials will integrate and reflect the rotorcraft industry historical experiences carrying out certification of composite rotorcraft structures.

There have been significant changes in composite technology since the current rule and the original advisory material were written. In recent years, there have been changes in design, analysis, testing, manufacturing, maintenance techniques, and maintenance procedures. The new proposed regulations and advisory materials will account for these significant changes.

- 2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.***

To obtain type certification of a rotorcraft, an applicant must show that the rotorcraft complies with specific certification requirements. To show compliance, the applicant must submit substantiating data. FAA engineers or designated engineer representatives from industry would review the required data submittals to determine if the rotorcraft complies with the applicable minimum safety requirements for damage tolerance and fatigue evaluation of composite structures and that the rotorcraft has no unsafe features in the composite structures. The FAA is proposing to require an applicant to submit the compliance methodology for the FAA to assure that the rotorcraft has no unsafe fatigue characteristics.

3. ***Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.***

The FAA does not specify the means of submission. Consequently, the applicant can collect the necessary data by any means appropriate for obtaining the necessary data. Additionally, the applicant can submit the appropriate data by any means appropriate so that the FAA can evaluate the data to make a finding of compliance to the minimum certification requirements.

4. ***Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purpose(s) described in Item 2 above.***

No other agency is responsible for collecting information on the certification of aircraft products and parts.

The information is not available from any other source. Persons requesting certification of rotorcraft must comply with applicable airworthiness standards. The FAA is the only government agency that administers parts 27 and 29 of Title 14 of the Code of Federal Regulations. There is no duplication.

5. ***If the collection of information has a significant impact on a substantial number of small businesses or other small entities (Item 5 of the Paperwork Reduction Act submission form), describe the methods used to minimize burden.***

This request for required information does not have a substantial impact to small businesses or other small entities. The information required is the minimum needed to determine if an unsafe condition exists.

6. ***Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.***

The frequency of collection of this information is not a set time; it is established as needed by the respondent to meet their certification schedule. The respondent is required to submit the required information prior to type certification.

7. ***Explain any special circumstances that require the collection to be conducted in a manner inconsistent with the general information collection guidelines in 5 CFR 1320.5(d)(2).***

This collection of information is consistent with the guidelines in 5 CFR 1320.5(d)(2).

- 8. Describe efforts to consult persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d) soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.**

Under the Federal Advisory Committee Act, the proposed rule is the result of a recommendation by an ARAC Working Group. This group consisted of potential respondents and international aviation authorities. The group proposed these requirements and agreed that this collection was necessary to assure rotorcraft safety.

A 60-day notice for public comments was included in the preamble of the proposed rule, which published on January 6, 2010, 75 FR 793. Comments received will be incorporated into the PRA submission for the Final Rule.

- 9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.**

There will be no payment or gift given to any respondents.

- 10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.**

The information collected is type design data and is proprietary.

- 11. Provide additional justification for any questions of sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.**

There are no sensitive questions in this collection of information.

**12. Provide estimates of hour burden of the collection of information.**

There will be 109 annual certification reporting and record keeping hours from 6 respondents (see Table 12-1).

Table 12-1	
Estimated Hour Burden of Information Collection	
Reporting and Record Keeping	
Item	# of Hours
Certification Reporting and Record Keeping Hours	
Rule 29.573	
Reporting and Record Keeping Hours Per Certification	322.5
New Certifications	6.0
Total Certification Reporting and Record Keeping Hours	1,935.0
Number of Years	27.0
<b>Annual Certification Reporting and Record Keeping Hours-Rule 29.573</b>	<b>71.7</b>
Certification Reporting and Record Keeping Hours	
Rule 27.573	
Reporting and Record Keeping Hours Per Certification	96.0
New Certifications	10.5
Total Certification Reporting and Record Keeping Hours	1,008.0
Number of Years	27.0
<b>Annual Inspection Reporting and Record Keeping Hours-Rule 27.573</b>	<b>37.3</b>
<b>Annual Inspection Reporting and Record Keeping-Rules 29.573 &amp; 27.573</b>	<b>109.0</b>

**13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information.**

The total annual certification reporting and record keeping hours are \$10,900 (see Table 13-1).

<b>Table 13-1</b>	
<b>Estimated Dollar Burden of Information Collection</b>	
<b>Reporting and Record Keeping</b>	
<b>Item</b>	<b># of Hours &amp; \$</b>
<b>Certification Reporting and Record Keeping Hours</b>	
<b>Rule 29.573</b>	
Reporting and Record Keeping Hours Per Certification	322.5
New Certifications	6.0
Total Certification Reporting and Record Keeping Hours	1,935.0
Unit Cost (Per Hour)	\$ 100.00
Total Certification Reporting and Record Keeping Costs	\$ 193,500.00
Number of Years	27.0
Annual Certification Reporting and Record Keeping Hours-Rule 29.573	71.7
<b>Annual Certification Reporting and Record Keeping Costs-Rule 29.573</b>	<b>\$ 7,166.67</b>
<b>Certification Reporting and Record Keeping Hours</b>	
<b>Rule 27.573</b>	
Reporting and Record Keeping Hours Per Certification	96.0
New Certifications	10.5
Total Certification Reporting and Record Keeping Hours	1,008.0
Unit Cost (Per Hour)	\$ 100.00
Total Certification Reporting and Record Keeping Costs	\$ 100,800.00
Number of Years	27.0
Annual Certification Reporting and Record Keeping Hours-Rule 27.573	37.3
<b>Annual Certification Reporting and Record Keeping Costs-Rule 27.573</b>	<b>\$ 3,733.33</b>
<b>Annual Total Inspection Reporting and Record</b>	
<b>Keeping Hours-Rules 29.573 &amp; 27.573</b>	<b>109.0</b>
<b>Annual Total Inspection Reporting and Record</b>	

Keeping Costs-Rules 29.573 & 27.573	\$ 10,900.00

**14. Provide estimates of annualized cost to the Federal Government. Also, provide a description of the method used to estimate cost, and other expenses that would not have been incurred without this collection of information.**

It is current practice to submit a compliance methodology to the FAA. The current §27.571(a)(1) requires that “the procedure for the evaluation must be approved” (fatigue methodology). Hence, normal category (27) certification approval requestors have the requirement, and many transport category (29) have followed this process. While this is a new requirement for part 29, historically it has been done for part 29 certification approvals. Therefore, there is little or no additional cost burden in requiring the collection of this information.

**15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB Form 83-I.**

This is a new submission; therefore it is a program change.

**16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.**

There are no plans for statistical publications.

**17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

The FAA is seeking approval to not display the expiration date. An expiration date on the rotorcraft metallic structures data is inappropriate. The required data submittals to determine if the rotorcraft complies with the applicable minimum safety requirements for fatigue critical rotorcraft and that the rotorcraft has no unsafe features in the metallic structures. The applicant must submit the required information prior to type certification, which can span a number of years. Additionally, it would not be cost effective to the applicant to destroy unused, dated stock and a burden on third parties to remove and replace dated material that would essentially be unchanged. FAA therefore, requests an exemption from placing the expiration date on the forms.

**18. Explain each exception to the certification statement identified in Item 19, “Certification for Paperwork Reduction Act Submissions,” of OMB Form 83-I.**

There are no exceptions.