CONTINUING EDUCATION AND
TRAINING SERIES

Introduction to Fatigue & Damage Tolerance Analysis

This 4 day course *is designed to develop participants understanding of the concepts related to aircraft structural fatigue and damage tolerance (F&DT) analysis.*
The course is intended for Engineers who are seeking to develop their skills and understanding of the concepts as well as practitioners and managers who require familiarity with contemporary rules, standards and tools in the area of F&DT and engaged in work requiring design, certification and maintenance of aircraft structures. It includes questions & answers sessions / quizzes / discussion sessions / worked examples and aims to provide hands-on experience to solve structural F&DT problems.

Monday 14th — Thursday 17th October 2024
9:00am – 5:00pm

Venue:
MEMKO - L28, 303 Collins Street,
Melbourne VIC 3000, Australia

Course managed by MEMKO Aviation, Aerospace and Defence, Pty Ltd, ABN 73 619 452 470

COURSE REGISTRATION

Introduction to Fatigue & Damage Tolerance Analysis

Name: _

Company: _

Address: _

_ _

Telephone: _

E-mail: _

Registrations close Friday 4th October 2024

Email this form with your payment details to:

MEMKO Aviation, Aerospace and Defence Pty Ltd
Email: training@memko.com.au

Payment Method:

☐ Bank transfer ($3,575) to MEMKO P/L BSB 033-060 Ac 437512

☐ Charge my credit card:

☐ Visa ☐ MasterCard Amount: $ 3,575

Number: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ CVC: _ _ _ _

Card expiry: _ _ / _ _ Cardholder Name:_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Cardholder's Signature: _

For further info, please contact MEMKO on 03-8605 7777 or training@memko.com.au
Tax invoices/receipts will be emailed to above email address.

COURSE OUTLINE

The purpose of this course is to allow the participants to develop a sound understanding of the concepts related to fatigue and damage tolerance, and understand the impact on structural safety due to associated damage. The intent of the course is to;

1. Walk through some key historical events that have helped the aviation community gain better understanding of structural behaviour.
2. Identify the applicable regulations requiring consideration (for compliance) for the design and certification of structures.
3. Provide theoretical coverage of the concepts (and terminology) through examples (and problem solving) to reinforce the associated knowledge.
4. Use appropriate tools and techniques to establish threshold and repeat inspection periods for particular structural features.
5. Ensure full participant involvement through interactive problem solving.

COURSE OUTCOMES

By the end of this course the participants will have an;

1. Overview understanding of the design philosophies and good design practice for structural fatigue and damage tolerance of aircraft structures.
2. Awareness of problem areas and regulatory requirements for fatigue and damage tolerant design in aircraft structures.
3. Understanding of the principles and techniques of fatigue and fracture mechanics analysis, strength and service durability predictions.
4. Understanding of fatigue concepts and applying these to solve problems related to aircraft structures through analysis.
5. Understanding of damage tolerance (DT) concepts and applying these to solve problems related to aircraft structures through analysis.
6. Ability to use AFGROW and solve practical problems through making appropriate assumptions.
7. Understanding of the concepts associated with wide spread fatigue damage.

The course includes questions & answers session / quizzes / discussion sessions / worked examples and aims to provide hands-on experience to solve structural fatigue, and damage tolerance problems.

COURSE LECTURER

JET AVIATION
A GENERAL DYNAMICS COMPANY

David Rees

Principal Design Engineer Jet Aviation Special Missions

David is an aerospace professional engineer with over 30 years industry experience in aircraft design, certification and sustainment of civil and military platforms across multiple technical domains including aircraft structures, mechanical systems and cabin systems. He started his career as a Research Engineer with DSTO and CRS-AS before joining Aerostructures Australia providing design services and aircraft structural integrity support across multiple RAAF platforms including C-130 and F-111. David subsequently held senior design roles on major projects with Airbus UK on the A380 and with GKN on the Lockheed Martin F-35. David then spent 12 years as a Senior Certification Engineer with CASA where his responsibilities included entry control and oversight of CASR 21M Authorised Persons and 21J Approved Design Organisations. David is currently responsible for design assurance and certification functions within the Jet Aviation DASR 21J Military Design Organisation, holding the position of Chief of the Office of Airworthiness for the ADF B300 King Air 350 fleet.David is a member of RAeS and a Fellow and CPEng (Aerospace) of the Institution of Engineers Australia. He holds a Bachelor of Aeronautical Engineering from the University of Sydney, Australia.

COURSE ACCREDITATION

All participants will receive a certificate of completion after full attendance of the course.

COURSE FEES

Fee for this 4-day course is $3,575 (includes GST). This includes course notes, morning and afternoon tea/coffee and lunches.
Course fees will be returned less a $50 administration fee, upon receipt of a written cancellation notice before Friday 4th October 2024.

MEMKO Aviation, Aerospace and Defence Pty Ltd reserves the right to cancel the course, in which case participants will be notified and the course fee will be returned in full.

Places are limited.

Please note the course notes will be delivered in an eBook format. iPads will be provided to access the material. Participants are welcome to bring their own laptops.