



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 17th October — Thursday 20th October 2022

Venue:

MEMKO - L12, 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: _____ Fax: _____

E-mail: _____

Registrations close Friday 7th October 2022

Email or fax this form with your payment details to:

MEMKO Aviation, Aerospace and Defence Pty Ltd

Fax: 03 8080 1645

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 Amex 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

Dr Shaibatul Hamd Macci (Shai)

Shai has served the aeronautical and aviation industry for over thirty years, and in that time he has worked for a variety of organisations including aircraft manufacturers, aircraft operators, government agencies, consultancies, and academia / education and research establishments. His experience has involved in the main designing / analysing / evaluating / certifying engineering products, developing engineering degree programs, managing courses and lecturing, and leading multidisciplinary teams.

The majority of Shai's technical experience is in the area of structural strength assessments, and fatigue and damage tolerance analysis. His knowledge of analysis of aircraft structures has evolved through addressing design and certification issues related to platforms such as the A380, the A330, the B787, the P3 Orion, the F/A-18, a variety of general aviation and rotary wing aircraft, etc.,. Shai is a Chartered Engineer (CEng) registered with the Engineering Council of the United Kingdom, a Registered Professional Engineer of Queensland (RPEQ), and a Fellow Member of the Royal Aeronautical Society (FRAeS). He holds a delegated Authority from Civil Aviation and Safety Authority (CASA) of Australia and CASA PNG for approval of technical design data.

Shai also has a PhD in the field of Aerospace Technology gained from Cranfield University, UK, and has recently obtained the qualification, TAE40116 Cert IV in Training and Assessment. Presently Shai works as a Design Supervising Engineer for Hawker Pacific Avionics, Cairns.

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 plus 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 7th October 2022.

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.