Attendant profile

Attendant profile: WTG Service technicians, Production team leaders,

Course duration

5 days, 40 lessons

Pre-requisites for participation

1.
To attend this training course the participant must hold a certificate from one of the following:

- Global Blade Service Level 3

And minimum 6 months documented/logged practical experience from blade service in the field.

Alternatively:
Same level of qualification gained from blade service in the field or from blade production.
Knowledge and skills must be proven by a qualification test prior to joining the course.

2.
For training taking place in Denmark:
Participant must hold a certificate Personal Safety when Working with Epoxy and Isocyanates, issued by the Danish Working Environment Authority.

Course outcome

To qualify the participant to complete in-house instruction and supervision of operators. Work tasks are repairing structural laminate defects according to internal work instructions and quality specifications from OEM.

Objectives

After training the participant is qualified to:

- Instruct, demonstrate, supervise and document structural repair processes to operators, including the following repair methods:
  - Hand lamination,
  - Vacuum consolidation
  - Infusion.
- Supervise operators and give feedback
- Train new employees systematically to document all steps of repair process
- Explain the consequences of having defects in blade laminate

And has achieved the following competences:

- Repair according to OEM service and repair work instructions
- Repair on fiberglass laminate with polyester or epoxy matrix
- External and internal repair of single skin laminate or sandwich construction, including replacement of relevant core materials
- Repair on blade structure for various types of blades including:
  - Shell laminate and core all positions
  - Structural shell laminate
  - Spar and web laminate
  - Bonding of blade structure
  - Reconstruct lightning protection system
- Relevant processes in terms of bonding, hand layup, vacuum consolidation, infusion for repair under field conditions
- Document and report service and repair work carried out on site

Training method

Theoretical training, class and group
Practical instruction and demonstration exercises

Success criteria

Minimum 80% correct answers on theoretical test
Approval of practical test

Training modules

1 Training information

1.1 Practical information on the training course
1.2 Presentation of participants
1.3 Reason for training
1.4 Objectives for training course
1.5 Success criteria

2 Blade construction

3 Infusion

4 Prepreg

5 Materials for blades

6 Health and safety

6.1 Risk from epoxy, isocyanate and polyester
6.2 Health risk from fibre glass and carbon dust
6.3 Risk management on site
6.4 Personal protective equipment
6.5 Handling and storing chemicals on site
6.6 Handling and sorting of waste

7 Bonding

8 Defect awareness and root cause

9 Inspection and categorization

10 Documentation

11 Repair technique

12 Field repair

13 Educational communication

14 Supervision

15 Documentation

16 Practical exercises

16.1 Practical exercises will be targeted to blade type from OEM, relevant for participant

17 Tests

17.1 Theoretical test representing objectives for training course

17.2 Practical test representing skill level for training course