

AVTEC Maritime Marine Maintenance



SECTION 2 – Marine Composites

Topic 0- Intro

Lecture: 0.25 Sim/Exercise: 0.0hr(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Be familiar with AVTEC policies2. Be familiar with the training facility layout, including: heads, scuttlebutts, maritime main office, student lounge, emergency egress and muster station, fire extinguishers, business office.3. Describe the contents of the unit and understand objectives	<ol style="list-style-type: none">A. Reference Materials:B. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and MonitorC. Student Training Aids:<ol style="list-style-type: none">1. Handouts

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SECTION 2 – Marine Composites

Topic 1- What are composites and coatings

Lecture: .75 Sim/Exercise: 0.0 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Define composites as it pertains to the marine industry2. Explain where composites are used	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and MonitorC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual

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SECTION 2 – Marine Composites

Topic 1- What are composites and coatings

Lecture: .75 Sim/Exercise: 0.0 hr.(s)

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SECTION 2 – Marine Composites

Topic 2- Composite Materials

Lecture: 1.50 Sim/Exercise: 3.0 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Describe the most common resins and epoxies used in the marine industry2. Identify common structural and filler composites	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. White boards and markers3. Power Point Presentation and Monitor4. Materials and fastenersC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Composite products

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SECTION 2 – Marine Composites

Topic 2- Composite Materials

Lecture: 1.50 Sim/Exercise: 3.0 hr.(s)

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Topic 3- Core Materials

Lecture: .5 Sim/Exercise: 1.0 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Identify the common core materials used in the marine industry.	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and Monitor3. AVTEC Marine Composites Manual4. Media LinksC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Core materials4. Cored Vessel sections

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SECTION 2 – Marine Composites

Topic 3- Core Materials

Lecture: .5 Sim/Exercise: 1.0 hr.(s)

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Topic 4- How Composites Work

Lecture: 1.0 Sim/Exercise: .5 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Describe the differences between chemical and physical bonds.	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and Monitor3. AVTEC Marine Composites Manual4. Media LinksC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Materials

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SECTION 2 – Marine Composites

Topic 4- How Composites Work

Lecture: 1.0 Sim/Exercise: .5 hr.(s)

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Topic 5- Tools and Equipment

Lecture: 1.0 Sim/Exercise: .5 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Identify and demonstrate the various tools and equipment used in marine composite work.	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and Monitor3. AVTEC Marine Composites Manual4. Media Links5. Materials6. Applicable toolsC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Materials4. Provided tools

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Topic 5- Tools and Equipment

Lecture: 1.0 Sim/Exercise: .5 hr.(s)

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Topic 6- Identifying Damage

Lecture: 1.0 Sim/Exercise: 1.0 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Identify damaged areas on hulls, decks, and rudders.	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and Monitor3. AVTEC Marine Composites Manual4. Media Links5. Vessels6. Applicable toolsC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Vessels4. Provided tools

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SECTION 2 – Marine Composites

Topic 6- Identifying Damage

Lecture: 1.0 Sim/Exercise: 1.0 hr.(s)

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SECTION 2 – Marine Composites

Topic 7- Composite Repair Techniques

Lecture: 2.0 Sim/Exercise: 6.0 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Describe and apply the common composite laminating techniques	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and Monitor3. AVTEC Marine Composites Manual4. Media Links5. Composite materials6. Applicable tools7. Core materials8. PPEC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Composite materials2. Applicable tools3. Core materials4. PPE

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SECTION 2 – Marine Composites

Topic 7- Composite Repair Techniques

Lecture: 2.0 Sim/Exercise: 6.0 hr.(s)

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SECTION 2 – Marine Composites

Topic 8- Minor Repairs

Lecture: 1.0 Sim/Exercise: 10.0 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Explain the steps necessary to repair holes, cracks/blisters, cores, and bulkheads.2. Demonstrate the proper and safe techniques for minor composite repairs.	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and Monitor3. AVTEC Marine Composites Manual4. Media Links5. Composite materials6. Applicable tools7. Materials8. PPE9. Vessel sectionsC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Composite materials2. Applicable tools3. Core materials4. PPE5. Vessel sections

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SECTION 2 – Marine Composites

Topic 8- Minor Repairs

Lecture: 1.0 Sim/Exercise: 10.0 hr.(s)

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SECTION 2 – Marine Composites

Topic 9 - Major Repairs

Lecture: 1.5 Sim/Exercise: 9.5 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Explain the steps necessary to repair floors, decks, cored hulls, and transoms.2. Demonstrate the proper and safe techniques for major composite repairs.	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and Monitor3. AVTEC Marine Composites Manual4. Media Links5. Composite materials6. Applicable tools7. Materials8. PPE9. Vessel sectionsC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Composite materials2. Applicable tools3. Core materials4. PPE5. Vessel sections

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SECTION 2 – Marine Composites

Topic 9 - Major Repairs

Lecture: 1.5 Sim/Exercise: 9.5 hr.(s)

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SECTION 2 – Marine Composites

Topic 10 - Coatings

Lecture: 12.0 Sim/Exercise: 6.0 hr.(s)

LEARNING OBJECTIVES	TRAINING MATERIAL REQUIRED
<p>Upon successful completion of this topic the trainee will be able to:</p> <ol style="list-style-type: none">1. Explain the steps necessary to identify corrosion types and signs.2. Demonstrate the proper and safe techniques for surface preparation.3. Describe common types of coatings and application techniques	<ol style="list-style-type: none">A. Reference Materials:<ol style="list-style-type: none">1. AVTEC Marine Composites and Coatings Manual2. Media LinksB. Instructor Training Aids:<ol style="list-style-type: none">1. White boards and markers2. Power Point Presentation and Monitor3. AVTEC Marine Composites Manual4. Media Links5. Coatings materials6. Applicable tools7. Materials8. PPE9. Vessel sectionsC. Student Training Aids:<ol style="list-style-type: none">1. Handouts2. AVTEC Marine Composites Manual3. Coatings materials4. Applicable tools5. PPE6. Vessel sections

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SECTION 2 – Marine Composites

Topic 10 - Coatings

Lecture: 12.0 Sim/Exercise: 6.0 hr.(s)