

AF_MV01_Composites. Repairs in fiberglass structures

The target

The aim of this FA is to allow students to carry out repairs in fiberglass structures (MP09, UF2, RA3). In order to accomplish this goal, they must be able to :

- Clean up and prepare the wrecked surface. (RA3, 3.6)
- Laminate the hole with fiberglass and polyester resin to rebuild it. (RA3, 3.6)
- Embellish the surface to its original condition. (RA3, 3.7)
- Write a report for the customer, explaining the steps needed to carry out the repair. (RA3, 3.8)

Teaching material description

Apart from the damaged boat, the teaching materials we are going to use to implement this FA are divided into two groups: the tools required and the composites' materials strictly speaking.

In the first group, we'll find the grinders, rollers and polishers, while in the second group we'll deal with different types of fabrics, resins and gelcoats.

It goes without saying that we will need some laptops wired up to the Internet to have the e-learning material and websites at hand.

Educational and methodological aspects

I reckon the duration of the FA can be at least of 10 hours, but that depends on the time needed to write the proposal, which at the same time depends on the English level of the students.

I recommend, if it's possible, to carry out the FA working alone, but that's not always feasible as there might not be so many damaged boats available. . . In this case, I would recommend each student to build a bended surface copying the curved surface of the hull of boats with a mold, and then to do the wrecked hole themselves. But that would take some extra time . . .

While carrying out the task, students will have to consult the e-learning material quite often, so it could help to have some computers connected to the Internet near the workshop, but not in the same workshop, as the fibreglass dust could easily damage them.

Because labour risk prevention and environmental protection are not negotiable in this MP, the teacher has to provide the security and recycling material and make sure all the students wear it and use it properly.



The e-learning material is interactive in order to allow students to check or review whatever they need whenever they need , at the same time that is open enough to permit students to carry out different kinds of repairs, depending whether the repair must be done from the outside of the boat or it can be done from inside the boat.

Teaching resources

We are going to use the prezi with youtube videos, photographs, glossaries and texts linked to it, and on-line dictionaries as well as notes extracted from a book.

Location of the FA in the curricula

The FA is located in the Maintenance and boats repairs Curricula in the professional module MP09 about Composites, and inside this MP, we can find it in the formative unite UF02, called Structural Techniques. This FA is fulfilling part of the Learning Outcome RA3 about repairs in fiberglass structures.

When referring to the English Learning Outcomes, this FA fulfils the assessment criteria 4.1 of the Learning Outcome RA4 about writing short proposals for customers included in the professional module MP14, Technical English.

Attached documents

Teacher's materials

- The material for the teacher includes the notes with farther explanations than the ones in the FA, as well as the rubric with its levels or degrees to do the assessment of the FA.

Students' materials

- The materials for students are the FA, divided into 3 units, a prezi and some extracts of a book about fiberglass repairs.
- In the prezi they will find photos, texts, youtube videos and a glossary both of the vocabulary of the composites world and the collocations, phrasal verbs and links needed for the style required for writing the proposal.

Authorship

The authorship of this material (text and drawings), excluded the youtube videos and the extracts of the book, belongs to Joan Baca, teacher at the Maintenance and leisure boat repairs Department of the Sant Feliu de Guíxols High School. The author of the photographs and videos linked in the units is Ricard Baca Badia.

