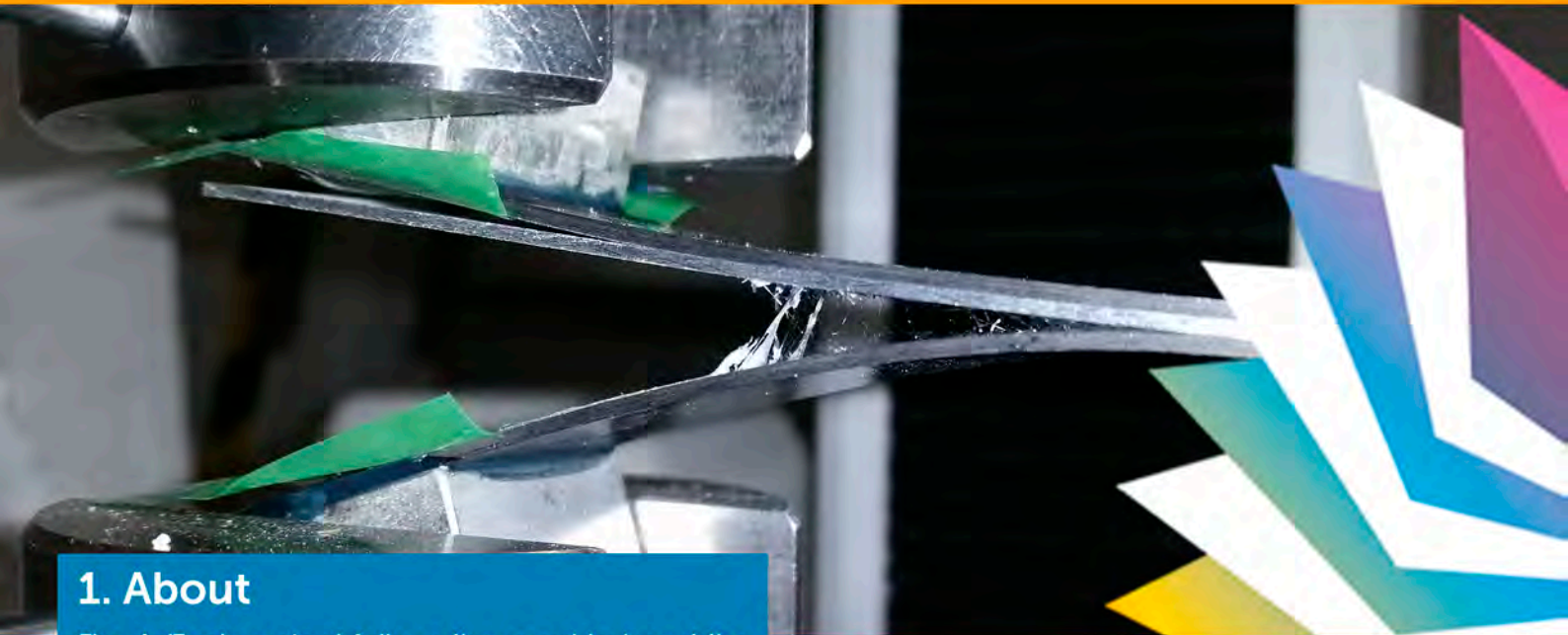




AdTech

European Harmonised Training for Adhesive Bonding Technology

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FEUP FACULDADE DE ENGENHARIA
UNIVERSIDADE DO PORTO



1. About

The AdTech project follows the need to boost the creation of a high quality work based VET, since it will consider 3 professional profiles, that will cover the market needs.

2. Overview

European Adhesive Qualifications:
EAE (Engineer), EAS (specialist) and EAB (Bonder)
Professional tasks and activities.

3. Results

The common EU state of art report allows to identify the most critical points and skills gaps in terms of education and training in the area of adhesive bonding.

4. Meetings

Highlighting the work of partners in the frame of the project meetings, which took place in Porto, Germany and Madrid.

5. Events

Highlighting the Adhesive Bonding International Conferences and Congress that occurred in 2016.

6. Website

Visit our website:
www.adtecheducation.com



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NEWSLETTER #1



AdTech

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1

About the project

Adhesive bonding technology is fast becoming the most important joining technology of the 21st century. Today, product designers and manufacturing engineers rely on adhesives more than ever for greater design flexibility, more efficient production and improved performance.

In order to achieve efficiency and increase performance today's specialists need to have the technical background and also the ability to adapt to these changes. In an interconnected world, as it is the world today, harmonised educational training system becomes a necessity to respond to market request and to link higher education with the business environment.

AdTech project follows the need to boost the creation of high quality work-based VET, since it will consider 3 professional profiles (Adhesive Bonder, Specialist and Engineer) that will cover the market needs identified by the companies using the adhesive technologies in their products.



The project aims at avoiding the skills mismatch of the employers of companies involved in adhesive bonding manufacturing or repairing process.

The project will develop a harmonised training course of personnel involved in this activities.

AdTech will define the educational materials for the training of personnel.



Overview about the European Adhesive Profiles

The **European Adhesive Engineer (EAE)** is the person within the organisation of the company who actively participates in all stages of the life cycle of a product. He is responsible for taking the appropriate decisions regarding the adhesive, from the product conception, development, design for production, to the assembly and characterization tests. The Engineer must also take into account marketing issues, monitor the product in service, wear and check the need for maintenance.

*The **EAE** is responsible for the integration of adhesive bonding into the design and manufacture of products, including design, evaluation of process parameters, problem solving and failure analysis.*

The EAE has the ability to combine the production process with adhesive production conditions, adapting them to the identified needs. He will be responsible for selecting the adhesive and establishing contact with manufacturers and distributors. He has a full understanding of how the adhesive works, in order to indicate working parameters within the maintenance of the adhesive properties. He will oversee the process bonding, recognising failures, preventing them and correcting them. To do this, the Engineer maintains a continuous control over the quality of the adhesive.

The **European Adhesive Specialist (EAS)** is the person who oversees and checks the direct and indirect adhesive operations.

Within the organisation of the company, he will have the ability to prepare work instructions and supervise the European Adhesive Bonder (EAB) practitioners, thus regarding theoretical and practical issues.

He will be responsible for planning, organising and following the adhesion process, as well as process parameters, and doing the necessary adjustments. The EAS will have the ability to identify irregularities and to respond accordingly.

*The **EAS** will write and explain working instructions for the bonder in theory and practice. He will instruct and supervise practitioners. He will control process parameters, with responsibility for inspection and identification of problems.*

*The **EAB** has industrial experience and can carry out bonding without supervision. He is able to read and understand working instructions and is well informed about production methods concerning bonded*

The **European Adhesive Bonder (EAB)** is the person with the adequate knowledge, experience and skill to make the adhesive bonding.

EAB is the person who cleans and prepares the surface of the substrates, applying adhesive and/or sealant, thus according to previously established procedure or work instructions.

Results

One of the AdTech project first results is a common EU state of art report on the methodology and market requirements in terms of qualified personnel. **The tool** used for this purpose was a **survey** aiming to **identify the most critical points and skills gaps in terms of education and training in the area of adhesive bonding in each country**. In addition through **this survey were identified the market needs** in terms of available training courses in adhesive bonding.

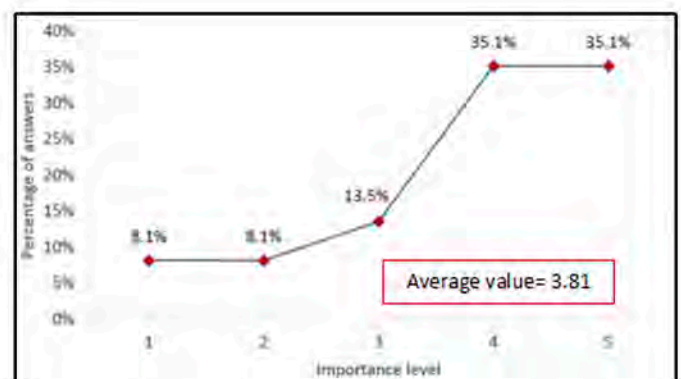
There was a very large disparity in the number of answers provided by companies of the different countries, which precluded the comparison between the different partners' countries. More than 77% of the answers to the survey were collected by German and Portuguese companies.

The report demonstrates, for companies which apply adhesives on the development of their products, that they:

- (i) Attribute high importance to the use of adhesive bonding in their processes (average value of 3.81) and recognise the high added value of adhesive bonding courses;
- (ii) Have trained employees (88.6%);
- (iii) Are aware of EWF courses (80%).

Regarding education and training, the report allows to conclude that:

- (i) EWF courses have a positive overall assessment, providing all the necessary competencies. However, contents complexity should be reconsidered;
- (ii) No significant changes have to be done to the actual teaching methodologies and materials
- (iii) VET providers and industry agree about the fact the companies are the entities who search most the training courses, but do not agree in terms of the existence of a demand for training in the adhesive bonding filed;
- (iv) VET provider companies perceive the need for new courses to be lower than that of the industry. This may reveal the existence of a gap between the industry needs and the services provided by the VET companies.



Importance level of adhesive bonding technology in companies, not VET provider, which apply adhesives in their production

	Frequency	Percentage
No	4	11.4 %
Yes	31	88.6 %
Total	35	100.0 %

Existence of employees trained in a course within the adhesive bonding technology area.

Meetings

1. Kick-off Meeting – Porto, Portugal, 26-27 October 2015

The AdTech kick off meeting was a great opportunity for all partners (CESOL; EWF; FEUP; Fraunhofer; ISQ, IZV and SZA) to get to know each other, as well as to discuss the work to be developed in the scope of the project, which is to create high quality work-based VET for 3 professional profiles in adhesive bonding (Adhesive Bonder, Specialist and Engineer), in accordance with the market needs and under the Europe Union recommendation.

2. Second Meeting – Bremen, Germany, 11-12 April 2016

On the second consortium meeting the focus went into exchanging ideas regarding the work done so far. During the meeting, each partner presented their work responsibility and planning the future activities. This was also the opportunity to distribute tasks related to the expected results, which have to be done effectively in the upcoming months.



3. Third Meeting – Madrid, Spain, 20-21 of October 2016

The third consortium meeting was successfully organised by CESOL, in Spain and counted with participation of the members of the consortium. The scope of the meeting was the follow-up of the project, by presenting the work done by each partner until the time being and exchanging ideas of good practice. One of the meeting conclusions was that the work flow process is assured; the AdTech project goes as planned. The date for the next working group meeting was scheduled for April 2017 in Slovenia.





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5

Events

1. 69th Annual Assembly

Melbourne, Australia - 10-15 July 2016



IIW 2016
10-15th JULY 2016

The conference was in its third edition and was held alternately between Brazil and Portugal since 2012. The aim of the conference is gathering work of the various areas that involve the study of the phenomenon of adhesion and adhesives.

During the 2016 edition, EWF presented the paperwork about the International Qualification of Personnel in Adhesive Bonding, which also included a brief presentation of the Adtech project.

In 2018, the event will take place in Lisbon, Portugal at IST (Instituto Superior Técnico).

2. Brazilian and Portuguese Conference on Adhesion and Adhesives

Rio de Janeiro - Brazil, 25-27 January 2016

The conference was in its third edition and was held alternately between Brazil and Portugal since 2012. The aim of the conference is gathering work of the various areas that involve the study of the phenomenon of adhesion and adhesives.

During the 2016 edition, EWF presented the paperwork about the International Qualification of Personnel in Adhesive Bonding, which also included a brief presentation of the Adtech project.

In 2018, the event will take place in Lisbon, Portugal at IST (Instituto Superior Técnico).



3. International Meeting of Welding and Other Bonding Technologies, Gijón, Spain, May 2016

The main objective of the congress is to disseminate the know-how of the latest achievements in the field of joining, coating, additive manufacturing and related processes like structural integrity, inspection, quality and environmental management.

During the international meeting, and in the scope of the event, AdTech project was mentioned and presented by the project partner CESOL. During the event an interesting article about the qualification of personnel in the adhesive bonding field was presented (available on the AdTech project website <http://www.adtecheducation.com>)





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6

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