

FAQ and PR

1. Cleaning of metals. Is the preparation (cleaning) of metal surfaces prior to laser welding covered in the class?

A: Yes – the class covers the conventional and the advanced cleaning methods in full details.

2. Cleaning of metals. Is the cleaning of the laser welds in metals after welding covered in the class?

A: Yes – the class covers the laser cleaning of laser welds in full details.

3. Laser Weld Defects – what portion of the HDE Laser Welding Technology course deals with ‘laser weld defects’?

A: The main objective of the HDE course is to connect the behavior of materials during welding to the performance of the laser, beam delivery optics, tooling, weld geometry, etc.

Preventing and avoiding weld defects is easier than correcting them afterwards. However, the subject is ‘weld defects’ (identification of the nature of the defects, how to evaluate weld defects and how to correct them) is well covered. Here are some statistics:

Total pages in the manual = 725 (approx.)
Estimated content related to weld defects = 35+%

Photos and Illustrations = 66 +
Formulas and algorithms = 8

Weld inspection methods (traditional) = several complete sections.
Weld inspection methods (real time weld monitoring) = 3 sections,
[127 illustrations, 2 PPT, 1 video, and (when time permits) class demo of a working LWM system!]

Classroom assignments: several assignments use the exclusive HDE mathematical algorithms!

4. Registration Fees – for one or more persons attending at the same time.

Please check the Registration Form for details and the Registration Fees. As far as we can tell, for the 4 ½ days of instruction, HDE offers the lowest Registration Fees in the USA. Literature search indicates that for the same length of instruction, the Registrations Fees elsewhere may be over 2x higher. Why would you pay ~\$3,500.00 elsewhere when for approx. ½ that you could attend the HDE Laser Welding Technology course that is well established, that fills up each time and over the years was attended by (est.) well over 5,000 people! PLUS: check the qualification and experience of the instructors.

Take home the ‘text book’ on laser welding!

5. What formal education is required to attend the HDE Laser Welding Technology EQ and PQ classes?

A: The material addresses the entry level, intermediate and the advanced level of Industrial Lasers, Optics and Laser Welding Technology. Each major topic in the HDE Laser Welding Technology course is introduced by covering the basic background technology first. What is important that you have working skills with computer programs such as MS Excel and MS Word.

6. How much hands-on experience should I have to take the HDE Laser Welding Technology EQ and PQ class?

A: For the HDE Laser Welding course you do not need any hands on experience with industrial lasers or laser material processing. Our experience is that people who are new to this technology learn it faster since they come to class without any ‘bias’. Having said this, if you do have some experience, you will have the benefit of applying the information in the HDE Laser Welding course to the experience you already have.

7. Does HDE issue a Diploma, Certificate or CEU-s upon the completion of the HDE Laser Welding Technology class?

A: At the end of the Laser Welding course HDE issues a Certificate of Attendance. Past experience (approx. 40 years) indicates that only about 20% of the attendees looked for some sort of ‘certification’ or CEU-s. The other 80% came to the courses to gain knowledge. There is also the issue of what school, company or agency has the authority and the respect of the industry to issue Diplomas and Certificates. In the field of laser welding - in the USA- the American Welding Society (AWS) is the only professional organization that has the credentials to issue various Certificates to Welding professionals.

8. Does the HDE Laser welding course cover information for Quality Assurance and Quality Control professionals?

A: The HDE Laser welding course covers currently published ISO, EN and AWS (laser related) Standards. References to this information are made throughout the course, and there is a separate Section in the Manual covering numerous (relevant) published standards. During the course we also compare some of the Standards. Finally, as part of the course, the attendees receive the hard copies and electronic copies of Equipment Qualification (EQ) and Procedure Qualification (PQ) Forms that are compliant with current published Standards.

9. What are the 'computational algorithms' mentioned in the Course Description?

A: The 'computational algorithms' presented in the HDE Laser Welding course were developed for this course by Instructor Simon Engel. This MS XLS based computational matrix allows one to compute the optimum laser parameters for pulsed laser welding. The algorithms deliver the key laser welding parameters and the optimum range. There are several class room exercises to learn how to use the algorithms. The attendees are allowed to take the electronic copy of this algorithms use them at work – but not publish it – since it is copyrighted to HDE Technologies, Inc.

Introduced in early 2017, HDE now offers the CW Laser Weld Algorithms, too. Several major corporations have tested and are using the new CW Laser Weld Algorithms.

Imagine: compute the welding schedule for the Pulsed or the CW laser welding process in just a few minutes, key it in the system controller – and viola – you are welding at optimum settings.

10. FDA - Does the HDE Laser Welding course cover the laser related technical requirements to meet FDA qualifications?

A: Please see the Answer in **Item 8.** (Equipment and Procedure Qualification Forms).

11. Is there a demonstration of the laser welding process during the HDE Laser Welding class?

A: The HDE Laser Welding Technology course is a classroom based course. HDE does offer on-site Laser Welding Workshops where shop demonstration and shop practice may be incorporated. The shop content is designed to meet the client's request and may be as much as 80% of the time. If you are interested in the on-site course offerings by HDE, please contact HDE for more information and a costing proposal.

12. Is there a demonstration of a HDE Pulsed Laser Weld Monitor during the HDE Laser Welding class?

A: Yes. The subject of Real Time Laser Weld Monitoring is part of the. Time permitting, toward the end of the class, the 'HDE Patent Pending' Pulsed Laser Weld monitor is demonstrated, live! Part of the demonstration is the remarkably short time it takes to unpack the equipment, set it up, calibrate it and demonstrate how it works. **The LWM equipment is set using the SAME data that was computed with the HDE algorithms.** This demonstration is NOT a sales pitch. Other weld monitoring technologies are also covered.

13. Is the efficient use of fiber lasers for laser welding covered in the HDE Laser Welding Course?

A: Starting early on in the course, the general characteristics of the major industrial lasers are covered in detail. One of those lasers is the fiber laser. Fiber lasers are uniquely suited for laser welding because of their ability to deliver a consistent and stable power and stable spatial profile. These lasers are also able to deliver accurate pulse shapes that are very useful in pulsed and CW power laser welding. During the course these advantages are referred to over and over again. One of the classroom computational exercises computes some of the laser parameters that only fiber lasers can deliver.

Press Releases



MEDICAL CENTER
OF THE AMERICAS
FOUNDATION

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FOR IMMEDIATE RELEASE

HDE Technologies, Inc. Partners with the Medical Center of the Americas Foundation and EPISD's Jefferson and Silva Magnet High School to Host Laser Welding Symposium
Laser Welding Symposium Will Expose Educators and Industry Partners to Numerous Applications for Laser Welding

EL PASO, TX (January 22, 2016) – As part of a grant recently awarded to the Medical Center of the Americas (MCA) Foundation for the development of Career and Technical Education (CTE) tracks at Jefferson High School in El Paso, Texas focused on developing a dual credit curriculum for advanced and bio manufacturing, Simon L. Engel, President of HDE Technologies, a California-based company will be hosting a one day symposium on laser welding. The symposium will discuss the current laser welding activities and market information in several industries, especially in medical device manufacture.

The MCA Foundation has organized a committee comprised of 15-20 local community partners committed to developing a rigorous STEM curriculum focused on advanced and bio-manufacturing in the Paso del Norte region. The committee consists of representatives from Jefferson High School, Maxine Silva Health Magnet School, El Paso Independent School District Career and Technical Education Program, El Paso Community College Advanced Technology Center and Workforce Solutions Borderplex. The committee has also added industry partners focused on advanced and bio-manufacturing in the border region.

STEM-based jobs are expected to grow 17 percent in the next 10 years, outpacing the overall job growth of 10 percent. The lack of quality STEM education for Hispanic students in the workforce has a direct impact on innovation and economic growth for the Paso del Norte region. El Paso, Texas borders Juárez, Mexico and has a combined population of over 2 million people in the region. For this reason, local educators and industry partners are uniting to look at ways to prepare the next generation workforce in the areas of advanced and bio-manufacturing.

"The mutual interest by the participating organizations and individuals to introduce laser welding education to high school level students may well be a milestone in the laser industry," said HDE Technologies, Inc. president, Simon Engel. "Laser welding technology attracts the young workforce – since it is a highly computerized technology, it is learnable and is healthier and more environmentally friendly than conventional welding."

The objectives of the laser welding symposium are to familiarize the participants with industrial lasers and laser welding technology; discuss the current laser welding activities market information in several industries with a focus on medical device manufacture; discuss job descriptions for people involved in laser welding operations; review the status of education available to the currently employed and the upcoming generation of workforce; and lastly discuss the details and costs of preparing educational courses that cover industrial lasers and laser welding technologies, including equipment, facilities, training instructors and curriculum development.

"The El Paso Independent School District strives to provide students with real-world learning opportunities that will make them future- and career-ready," said EPISD Superintendent Juan Cabrera. "We are happy to partner with HDE Technologies to bring laser welding and advanced manufacturing to Jefferson/Silva. These programs will give our students an edge in a field that is competitive and in high demand."

Upon implementation of the advanced and bio-manufacturing program at Jefferson High School, school administrators will be looking at student outcome data, including enrollment, retention, graduation rates, college enrollment, and advanced manufacturing job placement. The end goal is to implement a model for a STEM-based project consortium that includes high school, community college, public and private sectors all working together for the development of an advanced manufacturing workforce.

About the MCA Foundation

The Medical Center of the Americas (MCA) Foundation, a 501(c) (3) nonprofit organization is focused on creating a world class medical center to foster and accelerate biomedical innovation, creating new employment opportunities while meeting healthcare needs of the Paso del Norte region (the larger cross-border region of El Paso County; Doña Ana County, New Mexico; and Juárez, Mexico).

About El Paso Independent School District

Located in El Paso, Texas, the El Paso Independent School District is the largest district in the Texas Education Agency's Educational Service Center - Region 19. With more than 60,000 students in 94 campuses, EPISD also is the 10th largest district in Texas and the 61st largest district in the United States. It also is El Paso's largest employer with nearly 9,000 employees and has an annual operating budget of \$483 million. Organized in 1883, EPISD is not only a large district, but also one rich in history.

About HDE Technologies

HDE Technologies, Inc. is a leading provider of education and training in the field of laser welding, laser cutting and laser drilling. Over the years, since 1978, HDE has provided training to approximately 4,500 individuals. HDE classes are offered at regularly scheduled times in various locations in the USA. HDE is an approved supplier to almost all major automakers, auto-component makers, medical device manufacturers, pharmaceutical companies, aerospace company and several U.S. Defense Contractors. Finally, Mr. Engel is the Vice Chair of the AWS C7.4 Laser Welding Standards subcommittee. The revised C7.4 Standards support the training efforts of the educational industry.

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