



Trinidad Inspection Services Ltd.

Cor. Pacific Avenue and Caribbean Drive
Point Lisas Industrial Estate, Point Lisas, Trinidad
Telephone: (868) 679-1573 / 636-3201 Fax (868) 636-6175
Web: www.tistt.com e-mail: tis@tistt.com

CERTIFIED WELDING INSPECTOR TRAINING PROGRAM

In preparation for the
**AWS Certified Welding Inspector
Examination**

13-18 August 2017

TISL Course Code 17-M007

About CWI Training

Trinidad Inspection Services Ltd in association with Welder Training and Testing Institute (WTTI) will be hosting a comprehensive 6-day training course to prepare individuals to take the AWS Certified Weld Inspector (CWI/CWE) examination. The CWI/CWE preparation course provides a comprehensive review over a 6-day period, for a total of 48 instructional hours.

The week includes:

- Three days of theory on welding inspection technology
- One day of code clinic to teach you how to efficiently navigate through AWS D1.1 code book and correctly interpret specifying documents
- Two-day workshop offering hands-on instruction in visual inspection and non-destructive testing

Benefits

- Become certified to improve technical competence and to earn higher income

- Gain the knowledge and personal experience of industry experts who developed and currently teach this program
- Re-training for career development

Who May Register

Certified Welding Inspector Training Program may be taken by: -

- Persons preparing for the AWS CWI Examination
- QA/QC Technicians/Inspectors, Welders, Engineers, Plant Inspectors, Educators
- Anyone who wish to develop their career path as a Welding Inspector.

Fees: (Introductory pricing)

Tuition Fee: \$14,995.00 TT + 12.5% Vat

Registration deadline: Friday 30th June 2017

Class size is limited to a maximum of 16 attendees.

Course Materials: -

Students will receive the following materials:

*Welding Inspection Technology Textbook
Welding Inspection Technology Workbook*

Venue, Dates and Times

Venue: - Trinidad Inspection Services Ltd.
Training Facility, 223 Union Road, Marabella,
Trinidad

*Classes run from Sunday-Friday from
8am -5pm with a 1 hour lunch break at 12
noon.*

***Lunch will not be provided for this
program and students are encouraged to
cater for their specific needs.***

***Please note that only Light refreshments
will be served.***



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Course Highlights

Session 1: Welding Inspection Technology **(Part A – Fundamentals, 3 days)**

Module 1: Welding Inspection and Certification

- A. Who is a Welding Inspector
- B. Important Qualities of the Welding Inspector
- C. Ethical Requirements
- D. Personnel Certification Programs
 - Fundamental
 - Practical
 - Code Book

Module 2: Safe Practices

- A. Eye and Face Protection
- B. Protective Clothing
- C. Noise
- D. Fumes and Gases
- E. Exposure Factor
- F. Ventilation
- G. Handling of Compressed Gases
- H. Manifolds
- I. Electric Shock

Module 3: Metal Joining and Cutting Processes

- A. Welding Processes
 - SMAW
 - GMAW
 - FCAW
 - GTAW
 - SAW
 - PAW
 - OAW
- B. Brazing Processes
- C. Cutting Processes
 - OFC
 - CAC-A
 - PAC
 - Mechanical Cutting

Module 4: Welding Joint Geometry and Welding Symbols

- A. Welding Joints
- B. Type of Welds

TISL -Certified Welding Inspector Training Program

- Groove Welds
- Fillet Welds
- Plug and Slot Welds
- Stud Welds
- Seam Welds
- Surface Welds
- Flange Welds
- C. Fusion and Penetration Technology
- D. Weld Size Terminology
- E. Weld Application Terminology
- F. Welding Symbols
- G. Welding Symbol Dimensioning

Module 5: Documents Governing Welding Inspection and Qualification

- A. Drawings
- B. Codes
- C. Standards
- D. Specifications
- F. Control of Materials
- G. Alloy Identification
 - Typical Steel Specification
 - Typical Filler Metal Specification
- H. Procedure Qualification
- I. Welder Qualification

Module 6: Metal Properties and Destructive Testing

- A. Mechanical Properties
 - Strength
 - Ductility
 - Hardness
 - Toughness
 - Fatigue Strength
- B. Chemical Properties of Metals
- C. Alloy Groupings
- D. Effects of Chemical Elements in Steel
- F. Destructive Testing
 - Tensile Testing
 - Hardness Testing
 - Toughness Testing
 - Soundness Testing
 - Metallographic Testing
 - Fatigue Testing



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Module 7: Metric Practice for Welding Inspection

- A. Conversion from English to Metric
- B. Conversion from Metric to English
- C. Various Examples
- D. Various Computation Exercises
- E. Conversion Factors for Common Welding Terms

Module 8: Welding Metallurgy for the Welding Inspector

- A. Basic Metal Structures
- B. Crystal Structures
- C. Alloying of Metals
- D. Microstructure Constituents of Carbon Steel
- E. Metallurgical Considerations for Welding
- F. Heat Treatments
- G. Solid Solubility

Module 9: Weld and Base Metal Discontinuities

- A. Cracks
- B. Incomplete Fusion
- C. Incomplete Joint Penetration
- D. Inclusion
- E. Porosity
- F. Undercut
- G. Underfill
- H. Overlap
- I. Convexity
- J. Lamellar Tears
- K. Lamination
- L. Spatter

Module 10: Visual Inspection and Other NDE Methods and Symbols

- A. Visual Inspection
- B. Non-destructive Testing
 - Penetrant Testing
 - Magnetic Particle Testing
 - Radiographic Testing
 - Ultrasonic Testing
 - Eddy Current Testing
- C. NDE Symbols

Session 2: AWS D 1.1 Code Clinic (Part C, 1 Day)

The code clinic is designed to guide the participant through the codebook with instruction on how to efficiently navigate through code and correctly interpret specifying documents.

Session 3: Practical (Part B, 2 Days)

- A. Review Book of Specifications
- B. Review PWHT Charts
- C. Review WPS's, PQR's, and WQTR's
- D. Bend Specimen Clinic
- E. Fillet Weld Clinic
- F. Pipe Weld Clinic
- G. Groove Weld Clinic

N.B

AWS D1.1 Code books are not provided by Trinidad Inspection Services nor WTTI and is the responsibility of the participant to provide.

Participants are reminded that this program is only a preparatory course for those who wish to take the AWS CWI Examination.

The CWI Examination is conducted by MIC Institute of Technology and participants may sign up for examination with this independent body if they so wish. (TISL is not responsible for examination arrangements.)

Accreditation

Welder Testing and Training Institute (WTTI) is recognized as an AWS Educational Institution Member and has been accredited by The Accrediting Commission of Career Schools and Colleges (ACCSC)



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Trainer's Resume

Sterling I. Buss

V.P. Industrial Services Division

Mr. Sterling I. Buss has been affiliated with WTTI since 1978, initially as a part-time technical seminar instructor. He joined WTTI full-time in December 1982. Prior to joining WTTI, Mr. Buss had functioned as a welding engineer involved in the construction of boilers, pressure vessels, chemical processing equipment, heat exchangers, high pressure piping, as well as, structural components for submarines. He has had broad experience in procedure and performance qualifications in accordance with ASME, API, AWS, as well as, Mil-Std's and NAVSEA Tech Pub's.

His responsibilities at WTTI have included:

1. Establishing the organization's ISO 17025 mechanical and NDT labs
2. Overseeing all welding procedure and welder performance qualification testing and documentation preparation.
3. Qualification and supervision of inspection personnel.
4. Development and/or review of technical training programs, courses and seminars for content, technical accuracy, and completeness.
5. Maintenance of the QA system, documentation, and calibrations.

In addition, Mr. Buss has been involved in non-destructive testing and the interpretation of the results with respect to specific code criteria. NDT methods used include PT, MT, UT, and RT. Mr. Buss is a Level III (PT, MT, VT), a current AWS CWI with several code endorsements, and an ASQ Auditor. He holds a Bachelor of Science Degree in Welding Engineering from Le Tourneau College.

He is a member of the American Welding Society and has served on the Lehigh Valley Section Board as Chairman, Education Chairman, Certification Chairman, and Technical Representative.

Administrative Information

Payment Information

Registration accompanied by fee payment in full is required to guarantee your reservation. Payment may be made by Wire transfer, Bank Draft, Certified cheque.

Payment in full is due at the time of registration.

TISL regrets that it cannot be responsible for any loss or damages incurred as a result of cancellation of a course by TISL for any reason. This includes, but is not limited to, airfare penalties. Prices for courses and products are subject to change without advance notice.

Cancellation and Refund Policy

Invoiced, paid or guaranteed registrations cancelled in writing before the registration deadline date will receive a full refund, less a \$680 TT service fee.

Invoiced, paid or guaranteed registrations cancelled in writing up to 7 days before an event will receive a refund of 50% of the registration fee.

There will be no refunds or credit on cancellation requests received less than 7 days before an event begins.

All requests for cancellation must be submitted in writing.

IF TISL CANCELS A COURSE, AT LEAST FIVE (5) DAYS NOTICE WILL BE GIVEN AND A FULL REFUND WILL BE ISSUED.

TRINIDAD INSPECTION SERVICES RESERVES THE RIGHT TO CANCEL THIS COURSE IF MINIMUM ENROLMENT IS NOT OBTAINED

All requests for cancellation must be submitted in writing.



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This form is to be filled out and returned to: **Trinidad Inspection Services Ltd, Cor. Pacific Avenue and Caribbean Drive, Point Lisas Industrial Estate, Point Lisas, Trinidad.**

COMPANY'S NAME & ADDRESS:

CONTACT PERSON: - SUBMISSION DATE:-

PHONE..... FAX..... E-MAIL.....

No.	NAME	JOB TITLE/ DESCRIPTION	Tuition Fee \$14,995.00+ Vat	AWS D1.1 Code Clinic	Examination
1.				<p>The AWS D1.1 CODE is required for this clinic and may be purchased by attendees online.</p> <p>Code books are not provided by Trinidad Inspection Services nor WTTI. and is the responsibility of the participant.</p>	<p>Attendees preparing to take the upcoming AWS CWI examination will need to register with MIC Institute of Technology at their soonest convenience.</p>
2.					
3.					
4.					
5.					
6.					
		Sub-Total			
		VAT 12.5%			
		TOTAL TTD			

ATTENDEES: -

Registration deadline: Friday 30th June 2017

COURSES SHALL BE CONDUCTED AT TRINIDAD INSPECTION SERVICES TRAINING FACILITY AT 223 UNION RD., MARABELLA, TRINIDAD AND SHALL RUN FROM Sunday -Friday 8.00am-5.00 pm
 ONLY LIGHT REFRESHMENTS WILL BE PROVIDED.

- COPIES OF THIS FORM CAN BE USED IF YOUR NUMBERS EXCEED SPACES PROVIDED.

• Authorised by: _____ **PLACE COMPANY STAMP ⇒**