STUDY AT YOUR OWN PACE & BECOME A CWI

PASS FIRST TAL

How to conquer part B of the CWI

cwi.first.try@gmail.com



Hello future CWI candidate! My name is Alberto, and I'm a CWI/CWE for Southern California Gas Company.

I developed this training guide from my personal experience with the CWI exam. It covers a wide range of topics to help you thoroughly understand "The Book of Specifications". In it, I detail the type of questions I encountered in the exam, giving you a better chance of passing on your first try, just as I did. Those who have taken the test a second time and used my guide have confirmed its accuracy and relevance to the exam questions.

I dedicated time and put together a meticulously crafted 46-question practice test, closely resembling the code interpretation section of the exam. This ensures that you're comprehensively prepared.



CONTACT INFORMATION

in

LinkedIn: https://www.linkedin.com/in/alberto-guzman-b9a881187

YouTube: www.youtube.com/@CWI-First-Try

Email: Cwi.first.try@gmail.com

Website: www.cwifirsttry.com



cwi.first.try@gmail.com



Introduction

Hello CWI candidate! My name is Alberto and I've put together this study guide to help you conquer the AWS CWI exam Part B.

First things first, if you are not committed and serious about this exam, you might as well close this training guide right now. When I made the commitment to become a CWI, I studied day, night and during my sleep. This is not an easy exam, but it's achievable on the first try.

Even if you don't have a background in welding, my study guide, practices test and your own personal determination, you can pass on the first try. I work for the Gas company, and helped many of my co-workers obtain their certification. I came up with the idea to put together this guide to help individuals out that are on a monetary budget. A small price to pay, that may help you conquer part B first try!



You must know the Specification B Booklet like the back of your hand!

The Specification B portion of the AWS CWI can be confusing if you don't know where to locate the material in the booklet. It's essential for someone to know the Book of Specificatios like the back of your hand so when test questions are asked, you know where to locate your answers. It's very easy to navigate through that book since there are only six sections and a total of 64 pages.

Most of the time, the answers will give you a hint/idea on where to locate the information on a certain section. With this guide I created and your commitment to conquer this exam you'll succeed on the first try.

Remember all you need is a 72% on eact part to PASS!





E D E	
LABL	

INTRODUCTION	. 3
GENERAL REQUIREMENTS	5
STRUCTURAL STEEL REQUIREMENTS	6
PIPELINE REQUIREMENTS	7
PRESSURE PIPING REQUIREMENTS	8
PROCEDURE QUALIFICATION REQUIREMENTS	9
PERFORMANCE QUALIFICATION REQUIREMENTS	13
THE DIFFERENCE BETWEEN A WPS AND PQR	. 15
SECTIONS OF BOS TO REMEMBER	17
UNDERSTANDING POST WELD HEAT TREATMENT	. 18
USING A PROTRACTOR GAUGE FOR MEASURING BEVEL ANGEL	.20
UTILIZING THE V-WAC GAUGE	.21
MEASURING ROOT AND FACE REINFORCEMENT	. 22
POROSITY ACCEPTABILITY FROM TABLE 1	23
HOW TO DETERMINE ACCEPTABILITY FOR CONVEXITY'W'	. 24
UNDERCUT ACCEPTABILITY FROM TABLE 1	25
EXPLANATION OF A-NUMBERS (CHEMICAL ANALYSIS) FROM ANNEX 1	26
NDE QUESTIONS	. 27
MATHEMATICAL SYMBOLS	. 28
F-NUMBER CHART	. 29
HOW TO USE DIAL CALIPERS	. 30
HOW TO DETERMINE DEPOSITED FILLER METAL ON A GROOVE WELD	31
DETERMINING ACCEPTABILITY ON FILLET WELD SIZE FROM TABLE 1 WITH	
TOLERANCES	. 32
UTILIZING A HI-LO GAUGE	33
MEASURING THE ROOT OPENING	. 34
HOW TO CONVERT CELSIUS(OC) TO FAHRENHEIT(OF) & VICE VERSA	35
FINAL TIPS AND TRICKS TO CONQUER PART B & ADDITIONAL INFORMATION	36
RECOMMENDED ITEMS TO BRING DUING YOUR PART B EXAM	. 37
QUICK REFERENCES AND USEFUL FORMULAS	38
PRACTICE TEST (46 QUESTIONS)	. 40
Answer Key	. 50

FIGURE 1: PWHT CHART	19
FIGURE 2: USING A PROTRACTOR GAUGE	20
FIGURE 3: USING THE V-WAC GAUGE	. 21
FIGURE 4: MEASURING ROOT AND FACE REINFORCEMENT	. 22
FIGURE 5: POROSITY ACCEPTABILITY	. 23
FIGURE 6: DETERMINING ACCEPTABLITY FO CONVEXITY 'W'	24
FIGURE 7: UNDERCUT ACCEPTABILITY	25
FIGURE 8: A-NUMBER TABLE	26
FIGURE 9: MATHEMATICAL SYMBOLS	28
FIGURE 10: F-NUMBER TABLE	29
FIGURE 11: USING DIAL CALIPERS	30
FIGURE 12: VISUAL INSPECTION ACCEPTANCE CRITERIA	32
FIGURE 13: UTILIZING A HI-LO GAUGE	33
FIGURE 14: MEASURING THE TOOT OPENING	34





PIPELINE REQUIREMENTS

Section 3 covers the rules for pipeline inspections.

Be careful on questions that use "shall" - you can be tricked on questions if they replace it with "should".

Don't be in a rush to answer questions; read the whole question and answers before making a decision.

The Maximum misalignment or hi-low is allowed only 1/8". *Beads that are adjacent to each other shall not be started nor terminated at the same location. (*"It's Possible" that this will be seen on the pipe specimen replica!)

The completed weld's face shall not be wider than 1/8" than the original grove. Spatter is not allowed, and Arc burns are not permitted.

Cracks that are less than 8% can be repaired, as long as there is company authorization, and a qualified repair weld procedure is established addressing crack repairs. If there are multiple cracks they can be repaired as long as they are within 8% of the weld length and you have received company authorization WITH a qualified repair procedure. A repaired crack that has already been repaired once and is still cracked must be cut out. Star cracks and Shallow crater cracks that are found can be removed by grinding off the weld reinforcement.

After a weld repair has been removed, it must be then visually examined, PT or MT to ensure that the defect has been completely removed.

MT can't be done on Stainless material; this would be a trick question on the exam so you would have to select PT and RT the completed weld.

Once the repaired weld has been completed, it must be visually examined, and the entire weld shall be RT. Back weld repairs shall have company authorization and a repair weld procedure must be established.

A second repair of a previous repaired location can only be made if you receive company authorization.

Section 3.2, this covers visual inspection acceptance criteria for IP, IPD, IF, BT, porosity, cracks, and Table 4 covers the maximum dimension of undercut (EU or IU).

Accumulation of Imperfections (AI) criteria can be found on 3.2.8.





You will see "Fast Facts" on my CWI Part B Training Guide on Questions that I was asked during my exam. This will better prepare you so when you take you exam you have an idea on how to approach the question.

✓Fast Fact

During the exam, you might encounter a valve question where you're asked to determine the groove angle after adding a beveled T-Joint specimen. To solve this, measure the bevel angle on the T-Joint using the provided protractor. Then, add both bevel angles to find the total groove angle. The valve angle might be given in millimeters, so you may need to convert it to degrees for the final answer.







BOOK OF SPECIFICATION CODE INTERPRETATION SAMPLE TEST QUESTIONS

During your Part B exam, you will have a minimum of 6-8 code interpretation questions based on the Book of Specs. Based out of photographic memory, I put together 46 questions that were REALLY close to what I saw on the exam. Here are some sample I will provide for visualization.

- 1. If a PQR was qualified and tensiles were pulled, where would the information be documented for the type of failure and location of failure on the Annex VIII form?
 - A. Space 17
 - B. Space 22
 - C. Space 59
 - D. Space 58
 - E. Space 45
- 1. A welder qualified with GMAW spray, pulsed spray or globular transfer are also qualified to weld:
 - A. SMAW
 - B. GTAW
 - C. SAW
 - D. FCAW with gas shielding and vice versa
 - E. All of The Above
- 1. When the weld on a PQR Is being made In the 6G position, where would this information be placed In the Annex VIII form?
 - A. Space 17
 - B. Space 23
 - C. Space 59
 - D. Space 26
 - E. Space 45
- 1. When a welder is being qualified and he takes a test on base metal from the M-4 number grouping, then he/she is qualified to weld what other base metals?
 - A. M-1 through M-11
 - B. M-1 through M-5
 - C. M-1 through M-15
 - D. M-1 through M-7
 - E. None of The Above





Reviews on LinkedIn

Please take a look at my professional LinkedIn page and view my recommendations on my study guide. It has helped a lot of people pass their CWI Part B exam, and I'm confident it will help you pass too! Here are a few revies for your reference!



Yazmin Barrios · 1st ICC Reinforced Concrete Deputy Inspector June 3, 2024, Yazmin was Alberto's client

To anyone looking to pass the CWI exam get this guide! It's worth it's weight in gold. Personally, I believe it's worth more than what it it actually cost. Its easy to read and touches on just about everything you need to know to pass your exam on the first try. This guide is more informative then any YouTube video out there. 5 out of 5 Highly recommended!



Ashley Cooper · 1st Pipefitter

. May 29, 2024, Ashley was Alberto's client

Alberto Guzman's Arc of War Study Guide is very informative and provides detailed information that can assist anyone in passing Part B of the CWI exam. I'm very grateful to have found him.



Channing Robertson · 1st



I highly recommend Alberto's aws study guide "Book of Arc" for Part B. His material provides a clear understanding of the Book of Specifications (BOS) and teaches effective navigation of the BOS code. The "Book of Arc" simplifies the complex language of the code, making it more accessible and comprehensible. It also guides users on utilizing the provided tools, interpreting dimensions, and applying the formulas of the BOS. The "Book of Arc" is an essential resource that will give you a significant advantage in the Part B practical exam.



