

ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeals of --)
)
Laser Manufacturing, Inc.) ASBCA Nos. 55436, 55437
)
Under Contract Nos. N00383-02-C-P115)
N00383-04-D-002P)

APPEARANCE FOR THE APPELLANT: Stephen J. Johnson, Esq.
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OPINION BY ADMINISTRATIVE JUDGE TUNKS

Laser Manufacturing, Inc. (LMI) requests an equitable adjustment of \$1,165,847 allegedly incurred as a result of changes to the welding inspection procedures for jet blast deflector (JBD) modules. Only entitlement is before us.

FINDINGS OF FACT

1. On 16 August 2002, the Naval Inventory Control Point (NAVICP or Navy), Philadelphia, Pennsylvania, awarded firm, fixed-price Contract No. N00383-02-C-P115 (P115) to LMI in the amount of \$1,675,955 for 2,106 JBD modules (55436, R4, tab 1 at 2 of 18). On 19 November 2003, NAVICP awarded three-year requirements Contract No. N00383-04-D-002P (002P) to LMI for additional JBD modules. NAVICP ordered 3,414 JBDs under the 002P contract at a unit price of \$842.50 per module for a total price of \$2,876,295. (55437, R4, tabs 1, 9 through 14)

2. Thirty-two modules are mounted on a frame on the flight deck of an aircraft carrier to block the blast of jet engines. Each module consists of a prefabricated hollow aluminum extrusion measuring 2 feet x 6 feet. End caps are welded onto either end of the panel and two nipples (or nozzles) are welded into holes on the front of the panel. Water enters and exits the interior of the panels through the nipples. Channels within the panels direct the water throughout the interior to cool them. (Tr. 1/25-26)

Inspection and Acceptance Requirements

3. Drawing No. 617156 was included in both contracts. Note 4 provided, in part, as follows:

WELDING PROCESS AND INSPECTION FOR
NIPPLES SHALL BE IN ACCORDANCE WITH
MIL-STD-278, CLASS A3.

(55436/55437, R4, tab 5)

4. Drawing No. 617156 also required that the rib under the nipples be removed (55436/55437, R4, tab 5).

5. Both contracts contained a list of changes to the drawings. Revision U was the current version of drawing No. 617156. Revision U indicated that MIL-STD-278 had been superseded by NAVSEA S9074-AR-GIB-010/278, "REQUIREMENTS FOR FABRICATION WELDING AND INSPECTION, AND CASTING INSPECTION AND REPAIR FOR MACHINERY, PIPING AND PRESSURE VESSELS" (NAVSEA 278). (55436, R4, tab 1, REI-01-10193; 55437, R4, tab 1, REI-03-10125)

6. Section 10 of NAVSEA 278 set forth the minimum inspection requirements for the nipple welds. Among other things, table X of paragraph 10.3.3 required that the final weld for class A-3 welds be subjected to visual testing (VT) (supp. R4, tab 1 at 92).

7. Table XI of paragraph 10.4 of NAVSEA 278 required the welds to meet the acceptance criteria for visual testing for class 2 welds set forth in MIL-STD-2035A(SH), "NONDESTRUCTIVE TESTING ACCEPTANCE CRITERIA" (MIL-STD-2035A). (Supp. R4, tab G1 at 96, tab G2)

8. Paragraph 10.4.1.1 of NAVSEA 278 provided, in part, as follows:

VT inspection shall be accomplished without the use of magnifying glasses or other visual aids except for corrective aids to restore normal vision.

(Supp. R4, tab G1 at 97)

9. Paragraph 4 of MIL-STD-2035A set forth, among other things, the following acceptance criteria for visual testing:

4.2.4 Cracks. Weld joints and base material shall be free of cracks.

4.2.5 Burn-through. Weld joints and base material shall be free of burn through.

....

4.2.7 Melt-through. Melt-through and repaired burn-through areas are acceptable provided the areas do not contain cracks, crevices, excessive oxidation, or globules, and provided the root convexity and concavity limits are not exceeded.

....

4.2.9 Oxidation. Welds and adjacent base metal shall be free of oxide scale accompanied by a wrinkled or crystalline surface appearance. Tightly adhering, iridescent temper films shall be considered acceptable.

(Supp. R4, tab G2 at 5-6)

10. There is no evidence showing how LMI interpreted these provisions during bidding.

First Article

11. Mr. John Unger, a Quality Assurance Specialist (QAS) with the Defense Contract Management Agency (DCMA), conducted the initial in-process inspection and the interim inspections for the first article (app. supp. R4, tab 1; tr. 2/25-26, 30). He has had over 20 years of experience with JBDs as a machinist, a foreman, a quality assurance representative (QAR), and a QAS (tr. 2/8-10). Mr. Unger was not aware of any prior dispute over the interpretation of paragraph 10.4.1.1. During his visits, he did not instruct either LMI or the local QAR, whom he was training, to inspect the underside of the welds (tr. 2/19, 26). Mr. Unger did not have any concern that the inspections performed by LMI and the QAR would be inadequate (tr. 2/30).

12. On 16 May 2003, the contracting officer (CO) accepted the first article for the P115 contract and authorized LMI to begin production (55436, R4, tab 24). The 002P contract did not require a first article (app. supp. R4, tab 9).

063P Contract

13. On 9 March 2004, DCMA rejected 42 of 519 JBD modules for melt-through in connection with Contract No. N00383-03-C-P063 (063P), another LMI contract for

JBDs. Although some of the 063P inspection records are in evidence, the contract is not part of the record. During the inspection of the modules, the QAR found melt-through immediately below the internal bore of the nipple, globules, some of which extended into the fluid channel of the module, oxidation, and cracks. (55436, R4, tab 28) The defects were discovered during an inspection of the interior of the panels with a dental mirror and a flashlight to verify that the rib under the nipple had been removed. The defects were not discovered as the result of a visual inspection of the welds. (Tr. 1/90-91).

Performance of the P115 and 002P Contracts

14. In September 2004, LMI requested a meeting with the Navy to clarify the inspection requirements for the JBDs (55436, R4, tab 43; app. supp. R4, tab 3).

15. The “crossroads” meeting took place in Lakehurst, New Jersey, on 21 September 2004 (55436, R4, tabs 43, 44; app. supp. R4, tab 3). Following the meeting, Mr. Michael Withers, a NAVAIR representative, responded to questions from LMI regarding globules. Mr. Withers was not a contracting officer (55436, R4, tabs 44, 45). One of those questions and answers was as follows:

Inspection of Weld Areas. Weld inspections on drawings need clarification. Is there an acceptable globule limit[?]

Answer[:] No globules or melt[-]through are to be allowed inside the nipple area.

(App. supp. R4, tab 3)

16. As a result of the crossroads meeting, LMI issued revised procedures for three inspection points (welder, arc-spray, and press/final inspection) on 1 October 2004. The revised procedures stated, in part, as follows:

Scope: To provide total compliance with new inspection criteria requested by [the Navy]. This procedure should be used as a supplement to LMI welding inspection checklist. Added inspection reads:

CONTRACTOR SHALL PERFORM VT TO ENSURE CONFORMANCE TO ALL ASPECTS OF MIL-STD-2035 INCLUDING INSIDE THE NIPPLE ON THE BACK SIDE OF THE FILLET WELD.

....

Inspection: Module must be placed in a position so that [a 7/8-inch inspection] mirror may be inserted to the full depth of the nipple and the backside of the fillet weld may be viewed. Flashlight should used to illuminate viewing area....

(App. supp. R4, tab 17 at 2)

17. LMI's revised procedures also indicated that welds with melt-through on the backside were to be rejected (app. supp. R4, tabs 14-17). In addition, LMI's training outline for the module, which was issued at or about the same time as the revised procedures, indicated as follows:

No Flaws was discussed at our meeting with NAVICP.... The people at the Navy wanted there to be no flaws on the inside of the nipple area. This should convey the importance of keeping the inside of the nipple area free from any melt-through....

(App. supp. R4, tab 18 at 4)

18. Mr. Oscar Draguicevich, LMI's quality assurance manager, described the impact of the alleged changes as follows:

Well, to get rid of this melt-through condition that we had previously been able to have and now was [sic] no longer available, we changed up our – everything – welding procedures, inspection procedures. We had now, at three points, we had people inspecting back underneath this weld, using mirrors and flashlights, had to retrain people...on what new inspection criteria we were expected to go by.

(Tr. 1/105-06)

19. On 4 October 2004, the Navy issued a Quality Assurance Letter of Instruction, which stated, in part, as follows:

Drawing 617156

Visually inspect the welds, including the backside of the fillet weld on the nipple. Verify conformance to MIL-STD-2035.

(55436, R4, tab 48) (Emphasis in original)

20. By telefax dated 7 October 2004, the CO advised LMI that the Navy planned to modify the contract, in part, as follows:

The following note shall be added to drawing 617156, Rev. U to clarify that a visual inspection shall be performed to the inside of the nipple area.

Added Note 14: "CONTRACTOR SHALL PERFORM VT TO ENSURE CONFORMANCE TO ALL ASPECTS OF MIL-STD-2035 INCLUDING INSIDE THE NIPPLE ON THE BACK SIDE OF THE FILLET WELD."

(55436, R4, tab 49)

21. Pursuant to a request from the Navy, Dayton T. Brown, Inc. (DTB) inspected the welds on four LMI panels to assess the feasibility of using penetrant testing to inspect the internal diameter (ID or underside) of the welds (55436, R4, tab 52; tr. 2/227-28). DTB's report, which was dated 22 October 2004, concluded that even if the OD (outside diameter) of the weld was satisfactory visually, heat from excessive melt-through could cause a crack on the ID. As a result, DTB recommended that penetrant, borescope, or eddy current testing be added to the final inspection requirements for the ID of the welds. (55436, R4, tab 52)

22. On 29 October 2004, LMI submitted a cost break-down dated 2 November 2004 for the P115 contract and releases 5000 and 5001 of the 002P contract for the modifications proposed in the CO's telefax of 7 October 2004. Among other things, the break-down included line items for development of procedures and processes for VT inside the nipple area, development of training of personnel on VT inside of nipples, training of personnel on VT of inside of nipples, slow welding, sand blasting, arc spraying to reduce heat and stress from the nipple area, and adding VT of the inside of the nipple area to welding, arc spraying, and final inspection, and a reject rate. LMI quoted a cost per module of \$342.86 for 2,173 modules. (55436, R4, tab 53)

23. On 7 December 2004, DCMA found that LMI's labor hours "appear...to be fair and reasonable" (55436, R4, tab 55 at 2).

24. On 29 December 2004, the Defense Contract Audit Agency (DCAA) computed an hourly rate of \$122 per hour (vice the \$125 per hour proposed by LMI) and took no exception to LMI's proposed module reject rate of \$842.50 (55436, R4, tab 56).

25. On 19 January 2005, Ms. Sandra Parker, the CO, wrote LMI as follows:

After reviewing your request [for an increase in the contract price to inspect under the nipple welds], it has been determined [that] the requirements for the inspection and acceptance of the nipple welds were part of the original contract[;] therefore the additional costs related to welding and inspection are not justified.

(55436, R4, tab 57 at 1)

26. The technical assessment attached to the CO's letter stated, in part, that paragraph 4 of MIL-STD 2035A required:

[That] the base material be free of cracks and burn-through, and melt-through must be free of cracks and globules. This requirement is part of the original contract. In order for the contractor to meet this original requirement, it is concluded that a visual inspection inside the nipple weld area would be required to ensure that these defects were not present.

(55436, R4, tab 57 at 3)

27. On 1 March 2005, LMI requested a final decision. The CO rejected the request because it was not certified as required by section 605 of the Contract Disputes Act (CDA). (55436, R4, tabs 60, 62)

28. On 20 July 2005, LMI submitted a second request for a final decision. The claim package included a valid CDA certification, documents setting forth the basis of the claim, and a cost break-down. The cost break-down referenced the P115 contract and releases 5000 and 5001 of the 002P contract and included the same line items as the one submitted on 29 October 2004. LMI quoted a cost of \$342.86 per module for a quantity of 2,173 modules. (55436, R4, tab 63)

29. The CO rejected LMI's claim on 5 October 2005, stating as follows:

In order for [me] to issue a Final Decision on this matter, it is requested that you submit one letter that contains all the information required by the Disputes clause[.] Specifically, it is requested that this letter clearly set forth:

- the particular contract or contracts involved,
- for each contract, the specific amount in dispute,
- for each contract, a detailed statement of the basis for the claim, and
- for any claims that exceed \$100,000, the certification

set forth in the Disputes clause.

(55436, R4, tab 65)

30. On 11 November 2005, LMI submitted its third request for a final decision, seeking \$264,323 (\$321 per unit x 823 units) in connection with the P115 contract and \$901,524 (\$321 per unit x 2,807 units) in connection with releases 5000 through 5005 of the 002P contract (55436, R4, tab 68). LMI reduced the cost per module from \$342.86 to \$321.00 as a result of the DCAA audit. Like the previous cost-break-downs, the cost break-down submitted on 11 November 2005 included line items for development of procedures and processes for VT inside the nipple area, development of training of personnel on VT inside of nipples, training of personnel on VT of inside of nipples, slow welding, sand blasting, arc spraying to reduce heat and stress from the nipple area, and adding VT of the inside of the nipple area to welding, arc spraying, and final inspection.

31. The CO denied the claim on 29 March 2006, stating as follows:

[E]ach of the original contracts incorporated (i.e., either set forth in full or referenced) specifications that required visual inspection of the welds on the nipples on the JBDs. Further, according to the specifications incorporated in [the] original contracts, this visual inspection must verify that the weld...joints and base material are free from cracks and burn-through, and melt-through must be free from cracks and globules in order to be acceptable. The only way to verify that these defects are not present (and thus, that the visual inspection is acceptable) is to inspect inside the nipple weld area. Therefore, it is clear that the specifications contained in the contracts at the time [of] award required visual inspection of the inside of the nipple area. These requirements were not added to the contract after...award.

(55436, R4, tab 70)

32. On 24 April 2006, LMI appealed the denial of its claims to this Board. We docketed the appeal relating to the P115 contract as ASBCA No. 55436 and the appeal relating to the 002P contract as ASBCA No. 55437. Both appeals were docketed on 27 April 2006.

The Experts

33. The Navy called Mr. Wilbun E. Mitchell, Jr., as an expert in welding inspection. Mr. Mitchell is the technical warrant holder for metals and welding at the Naval Sea Systems Command. He has final technical responsibility for the welding specifications for submarine pressure holes, surface ship pressure holes, all machinery piping and pressure vessel systems, including NAVSEA 278. Mr. Mitchell testified that table XI of NAVSEA 278 required that the outside and inside of class A-3 welds be visually inspected and that the welds meet the acceptance criteria of MIL-STD-2035A (tr. 2/253). MIL-STD-2035A prohibits cracks, burn-through, globules, and excessive oxidation (supp. R4, tab G2 at 5). Except for cracks, which may occur on either the outside or inside of the welds, these defects occur predominantly on the undersides of the welds and can only be seen on the undersides of the welds (tr. 2/252-55). Thus, Mr. Mitchell concluded that MIL-STD-2035A required that the undersides of the welds be inspected (tr. 2/256).

34. Mr. Mitchell was also responsible for the revision of paragraph 10.4.1.1 at the time it was added to NAVSEA 278 (tr. 2/262). He testified that some inspectors had insisted upon the use of magnification or other extraordinary means to perform visual inspections and that those enhancements were beyond the scope of the specification (tr. 2/263). Paragraph 10.4.1.1 was added to “clarify that...magnification or enhancements to visual acuity were not required in the conduct of visual inspection of the Navy’s welds” (*id.*). The phrase “other visual aids” was intended to prohibit the use of borescopes, jeweler’s loupes, and things of that nature rather than a light and a mirror (*id.*). Mr. Mitchell testified that it is common to use a light and a mirror to inspect the undersides of welds and that there are times where access is so limited that even the welder has to use a mirror to place the weld (tr. 2/267). Mr. Mitchell testified that he has never heard of anyone interpreting paragraph 10.4.1.1. to preclude the use of a light and mirror (*id.*).

35. The Navy also called Mr. Joel D. Benton as an expert in the inspection of welds. Mr. Benton is a quality assurance specialist and the non-destructive test (NDT) examiner for the Supervisor of Shipbuilding and Conversion Repair (SUPSHIP), Newport News, Virginia. Mr. Benton is a level 3 certified metals inspector in visual testing, radiography, ultrasonics, penetrant testing, and magnetic particle testing (tr. 2/298). He is qualified to interpret specifications, write procedures, approve procedures, and test and train inspectors. He primarily performs NDT on the hulls of ships and pipe welds (tr. 2/300). As a result, he works with NAVSEA 278 almost every day (tr. 2/301). He interprets paragraph 10.4.1.1 as follows:

It means that if you wear glasses, you can use them to perform visual inspections, but you can’t use anything that magnifies the weld...like a magnifying glass or a borescope or video probe.

(Tr. 2/304)

36. Mr. Ted M. Liles, III, is certified by the American Welding Society (AWS) as a welding inspector and instructor. He has owned and operated his own inspection company for the last 16 years and has inspected a wide variety of welds, including oil field high pressure welds, clean-room welds, and structural steel welds in buildings and bridges. In addition, Mr. Liles develops welding procedures for companies, such as Westinghouse Motor Company. LMI initially hired Mr. Liles to develop its welding procedures for the subject contracts. After this dispute arose, LMI asked him to testify as an expert in the inspection of welds. (Tr. 2/87-111; app. supp. R4, tab 22)

37. In Mr. Liles' opinion, paragraph 10.4.1.1. precluded the use of a mirror and a flashlight to view the undersides of the welds (tr. 2/132-34). In his experience, welding codes specifically state whether or not visual aids, such as flashlights and mirrors, may be used to inspect the welds (tr. 2/129-35). For example, paragraph 6.5.5 of AWS D1.1, "STRUCTURAL WELDING CODE—STEEL," which is not a part of these contracts, provides, in part, as follows: "[v]isual inspection for cracks in welds and base metal and other discontinuities should be aided by a strong light, magnifiers, or such other devices as may be found helpful" (app. supp. R4, tab 22 at appendix C, ¶ 6.5.5).

DECISION

These appeals involve a dispute over the interpretation of the acceptance criteria set forth in paragraph 4 of MIL-STD-2035A and the inspection requirements in paragraph 10.4.1.1 of NAVSEA 278. The acceptance criteria prohibit cracks, burn-through, melt-through, globules, and excessive oxidation. Except for cracks, which may occur on the outside and inside of the welds, these defects occur predominantly on the undersides of the welds. Paragraph 10.4.1.1 of NAVSEA 278 prohibits "the use of magnifying glasses or other visual aids except for corrective aids to restore normal vision" to perform visual inspections. Since the undersides of the welds on the JBD modules could only be viewed using flashlights and mirrors, LMI argues that it reasonably concluded that it did not have to inspect the undersides of the welds. NAVICP argues that the prohibition on "other visual aids" in paragraph 10.4.1.1 applies to devices that magnify and that LMI's interpretation renders portions of the contract meaningless.

NAVICP moves to strike LMI's claim as it relates to the change to the acceptance criteria for melt-through on the grounds that it was not submitted to the contracting officer for a decision. According to LMI, the original specification allowed melt-through under certain conditions, but after the crossroads meeting, the standard was changed so that melt-through was no longer acceptable. This claim arises from the same set of operative facts as those presented in the rest of LMI's claim. As a result, we have

jurisdiction to decide the claim. *Placeway Construction Corp. v. United States*, 920 F.2d 903, 907 (Fed. Cir. 1990). NAVICP's motion to dismiss is denied.

Reading paragraph 4 of MIL-STD-2035A in conjunction with paragraph 10.4.1.1 of NAVSEA 278, the only reasonable interpretation is that flashlights and mirrors could be used to inspect the welds. Paragraph 4 requires that the outside and inside of the welds be inspected. However, the undersides of the welds could only be accessed using flashlights and mirrors. To interpret these paragraphs in the manner suggested by LMI would require us to ignore that part of paragraph 4 which requires visual inspection of the undersides of the welds. Thus, the appeals must be denied. *NVT Technologies, Inc.*, 370 F.3d 1153, 1159 (Fed. Cir. 2004); *AshBritt, Inc.*, ASBCA Nos. 55613, 55614, 09-1 BCA ¶ 34,086 at 168,537. Even if we were to find that LMI's interpretation was within the zone of reasonableness, it could not prevail because it presented no evidence of how it interpreted these provisions during bidding. *Fruin-Colnon Corp. v. United States*, 912 F.2d 1426, 1430 (Fed. Cir. 1990).

The appeals are denied.

Dated: 19 February 2010

ELIZABETH A. TUNKS
Administrative Judge
Armed Services Board
of Contract Appeals

(Signatures continued)

I concur

I concur

MARK N. STEMLER
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

EUNICE W. THOMAS
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA Nos. 55436, 55437, Appeals of Laser Manufacturing, Inc., rendered in conformance with the Board's Charter.

Dated:

CATHERINE A. STANTON
Recorder, Armed Services
Board of Contract Appeals