ENGINEERS AND MANUFACTURERS OF—CENTRIFUGAL PUMPS • HYDRAULIC TURBINES • VALVES • NUCLEAR COMPONENTS

EST. 1921

Bingham-Willamette Company

A DIVISION OF GUY F. ATKINSON COMPANY

CABLE: TELEX-36-0516 • TWX-910-464-8031

EST. 1965

Main Offices and Factory — 2800 N.W. FRONT AVENUE • PORTLAND, OREGON 97210
P.O. BOX 10247

January 2, 1980

U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

Attention: Mr. Uldis Potapovs, Chief
Vendor Inspection Branch

Reference: NRC Letter, Potapovs to Tharp, Dated 29 November 1979

Gentlemen:

Enclosed are our responses to the NRC findings forthe audit performed by your office on October 29 through November 2, 1979.

We trust that the specific actions contained in the enclosed response will meet with the approval of your office. If we can be of any further assistance, please do not hesitate to contact us.

Very truly yours,

BINGHAM-WILLAMETTE COMPANY

Wm. E. Tharp

William E. Tharp
President & General Manager

WET:bb
enc.

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DEVIATION A, PAGE 1

DEVIATION

QA Manual Section 9, paragraph 9.2.5.4, states in part, "...All welding materials in the Rod Storage Room shall be maintained with respect to size, metallurgy and heat number."

Contrary to the above, certain welding materials in the Rod Storage Room were not maintained with respect to metallurgy and heat number in that an open canister containing 1/8" Type 8018-C2 electrodes identified as Heat Number 402T8111, also contained at least two (2) 1/8" Type 7018 electrodes which were subsequently identified as Heat Number 401E6771.

CORRECTIVE ACTION

The electrodes in question were removed from the open canister at the time of discovery.

CORRECTIVE ACTION TO PREVENT RECURRENCE

Open canisters have been examined for similar condition, but none were found. Personnel involved in issuance of weld filler metal have been instructed to double check filler metal identification prior to placement in ovens.

DATE CORRECTIVE ACTION WILL BE COMPLETED

Completed as of 12/17/79.

DEVIATION B, PAGE 1

DEVIATION

QA Manual Section 9, paragraph 9.2.5.3, states in part, "All welding stick electrode, wire and flux shall be routed through Receiving Inspection where the supplies will be inspected in accordance with the requirements of the purchase order..."

QA Manual Section 4, paragraph 4.3.5, states, "Prior to releasing material to Production, the test reports supplied by the vendor for each item of material will be checked by the Material Records Technician for compliance with the requirements of the purchase order."

Contrary to the above, E70T-1 weld wire was released to and used by Production, prior to the receipt of test reports from the vendor. (See Details Section I, paragraph B.3.a(2)).

CORRECTIVE ACTION

As discussed at the time of the survey, the weld filler metal had been released on a verbal basis. Since the weld filler metal was later released for use on this contract on a formal basis, no corrective action is required.

CORRECTIVE ACTION TO PREVENT RECURRENCE

Quality Assurance personnel will be instructed in writing that weld filler metal approval Form No. 769 must be utilized in documenting releases so that the basis and date of same is recorded.

DATE CORRECTIVE ACTION WILL BE COMPLETED

12/31/79

DEVIATION

QA Manual Section 9, paragraph 9.3.2.1, states in part, "All heat treating involving Code items shall be performed in accordance with a written procedure..." Procedure D50.23, paragraph 3.3, states in part, "During heating and cooling, the temperature difference between any two points on the weldment as indicated by Thermocouples, shall not exceed 250° F within any 15 foot interval..."

Paragraph 3.4 states in part, "During the holding time at the specified stress relieving temperature, the maximum temperature difference between any two points on the weldment, as indicated by Thermocouples, shall not exceed 100° F.

Contrary to the above, a review of the heat treat charts and records for Class I Motor Stands, S.O. No. 00N03 and 00N04, revealed that just one (1) thermocouple had been attached to each motor stand which precluded making a determinatior of temperature difference within any 15 foot interval and within any two points on the weldment (See Details Section 1, paragraph C.3.a(1)).

CORRECTIVE ACTION

BWC has reviewed heat treatment records for motor stands 00N01 and 00N02 which are identical to 00N03 and 00N04 and were heat treated to the same procedure on 10/16/79 (Ht. 7442) and did have thermocouples attached at the prescribed intervals. Records indicate that no excursions above or below specified limits have taken place and therefore the determination can be made that the motor stands in question are within specified heat treat limits.

CORRECTIVE ACTION TO PREVENT RECURRENCE

Procedure D50.23 has been upgraded to specify thermocouple spacing on weldments requiring stress relieving (D50.23, Rev. 6).

DATE CORRECTIVE ACTION WILL BE COMPLETED

Completed 11/8/79

DEVIATION

QA Manual Section 9, paragraph 9.2.6.2, states in part, "... The welding foreman shall initiate the Bingham-Willamette 'Welder and Material Record', form W005 card... The W005 information block is rubber stamped on the back side of a preprinted time card that is contained in the item's work order. The preprinted information on the face of the time card carries as a minimum the Sales Order Number... The foreman shall enter all required information on the W005 card..."

Paragraph 9.2.9 states in part, "The Plate Shop Tool Room Foreman shall forward...all completed W005 cards (Welder and Material Record) to the Quality Assurance Department. Quality Assurance shall assemble the cards into weld records... The assembled weld records shall become part of customer document package."

Paragraph 9.3.1 states in part, "The following section shall be used to assure that all heat treating performed on Code items...shall as a minimum meet the requirements of the Code."

The subsequently referred to welds are required to be post weld heat treated by the Code.

Contrary to the above, a review of post weld heat treat charts and records, and the W005 cards relative to Motor Stands 00N03 and 00N04 revealed the following discrepancies:

1. The post weld heat treat (PWHT) charts and records showed that the two (2) Motor Stands were PWHT on August 29, 1979.

2. The W005 cards showed that the following welding was performed after PWHT, on the indicated joints at the indicated times:

   a. Shielded Metal Arc Welding (SMAW), Joints 34 thru 37 on August 31, 1979.

   b. SMAW, Joint 13-16 on August 30, 1979.

   c. SMAW, Joint 29 to 31, on September 13, 1979.

   d. Flux Core Arc Welding, Joint 13 and 17, on September 17, 1979.

DEVIATION D, PAGE 2/3 (con't)

CORRECTIVE ACTION

The W005 weld record card utilizes the preprinted time card which provides sales order, drawing number, item and quantity. When performing welding on motor stands 00N01 and 00N02 the shop supervisor inadvertently used preprinted time cards listing sales orders 00N03 and 00N04. This information was therefore entered on weld record summary sheet for 00N03 and 00N04, leaving the impression welding was performed after heat treat. Comparing the W005 cards against operation completion dates on work orders revealed the actual welding performed on motor stands 00N01 and 00N02.

The error is strictly in the recording and no product deviation exists.

CORRECTIVE ACTION TO PREVENT RECURRENCE

Written instructions are being issued to shop supervision to re-emphasize the need for verifying the correct sales order is indicated on the W005 cards. In addition, the Quality Assurance Manager is duscussing including weld data verification as part of the work order with the Manufacturing Supervisor.

DATE CORRECTIVE ACTION WILL BE COMPLETED

Instructions to supervision 1/11/80.

DEVIATION

QA Manual Section 9, paragraph 9.3.2.1, states in part, "All heat treating involving Code items shall be performed in accordance with a written procedure..." Procedure D50.4, paragraph 3.1.1.1 states, "To avoid setting up harmful stress due to temperature gradients within heavy sections, the rates at which temperature of the part is raised and lowered shall be 100° F maximum per hour. This temperature rate limitation shall be restricted to the temperature ranges above 300° F."

Contrary to the above, D50.4, a low temperature stress relief procedure (700-750° F) was used to stress relieve eight(8) Seal Sleeves, Drawing No. B-35173 (b), S.O. No. 00N01/4, Serial No.'s 01-1 through 01-8, on February 5, 1979, in which the temperature was raised from 450° F to 600° F in 50 minutes, and from 500° F to 600° F in 32 minutes, as shown by the heat treat charts.

CORRECTIVE ACTION

The low temperature stress relieve is a BWC imposed requirement to relieve stresses incurred in rough machining. Since, however, on a similar item for this sales order the same condition was recorded on an Inspection Report and subsequently dispositioned, this same process will be followed for part noted.

CORRECTIVE ACTION TO PREVENT RECURRENCE

The procedure referenced (D50.4, Rev. 9) was provision for higher temperature raising and lowering for parts with thinner than 3" wall thickness.

DATE CORRECTIVE ACTION WILL BE COMPLETED.

1/18/80

DEVIATION F, PAGE 3

DEVIATION

Paragraph 9.7.3 of SNT-TC-1A, 1975 states in part, "The employer shall in his written practice establish rules covering the duration of interrupted service which will require re-examination and re-certification."

Contrary to the above, the employer, BWC, did not establish rules covering the duration of interrupted service which would require re-examination and re-certification of NDE personnel in Procedure No. H29.6, Revision 5.

CORRECTIVE ACTION

Since BWC has not had a case of interrupted service, no actual corrective action is required.

CORRECTIVE ACTION TO PREVENT RECURRENCE

Procedure H29.6 will be revised to establish rules for interrupted service of inspection personnel in accordance with paragraph 9.7.3 of SNT-TC-1A, June '75 Edition.

DATE CORRECTIVE ACTION WILL BE COMPLETED

1/11/80

DEVIATION

Section 15 of the QA Manual, paragraph 15.2, states in part, "... and further shall identify and segregate the part by placing an Inspection Report Sticker on the part or group of parts with the corresponding Inspection Report Number..."

Contrary to the above, a Volute Case, Order No. 15210159, Item No. 101, was not identified and segregated, in that the Inspection Report Sticker was not attached to the part corresponding to Inspection Report No. 20612.

CORRECTIVE ACTION

A sticker identifying the nonconformance was placed on the part. The IR 20612 has subsequently been completed and closed out and sticker removed.

CORRECTIVE ACTION TO PREVENT RECURRENCE

The ASME III Quality Assurance Manual is being revised (Section 14, para. 14.2.1 and Section 15, para. 15.2) to more clearly define segregation method of nonconforming items, i.e. the work order with the Inspection Report and check-sheet are the means by which the nonconformance is positively identified.

DATE CORRECTIVE ACTION WILL BE COMPLETED

1/31/80

DEVIATION

Section 10 of the QA Manual, paragraph 10.1.1, states in part, "The required inspection operation will be performed by BWC inspection personnel. The accomplishment of these requirements will be verified by Inspection review of the work order to assure all prior operations have been signed off..."

Contrary to the above, Inspection did not review work order No. 1A041, Item No. 109(1) to assure all prior operations had been signed off as illustrated by the following examples:

1. Authorized Nuclear Inspector witness point had not been signed off on work operation 180-190, check sheet No. 13.

2. The heat number of item 4 had not been recorded on work operation 130, checksheet No. 9.

CORRECTIVE ACTION

The operations in question are signed off and the missing heat number entered on the checksheet.

CORRECTIVE ACTION TO PREVENT RECURRENCE

The above deviations have been discussed at training sessions held by Inspection on 12/17/79 and 12/18/79.

ANI sign-off appears on the checksheet only and not on the work order. The notification of ANI by BWC is acknowledged on the work order.

DATE CORRECTIVE ACTION WILL BE COMPLETED

Completed.

DEVIATION I, PAGE 4

DEVIATION

Procedure D50.92, paragraph 2.3, states in part, "Welding Foreman shall document attachment material and serialize area of attachment on Form 671-3. W005 cards shall be identified 'Temporary Attachment No.,' which will provide traceability to welder, weld procedure and filler metal used."

Contrary to the above, the welding foreman did not fill out Form 671-3 on Work Order No. 1A041, Item No. 109(1) giving the location of temporary attachments and the W005 was not filled out on Work Order No. 6A235, Item No. 3003A to provide traceability to welder, weld procedure and filler metal used.

CORRECTIVE ACTION

The requirement for recording location, material I.D. of temporary attachments as well as welder and weld filler metal traceability and procedure used was acknowledged at the time of the survey. The records for the items in question have been completed and are on file at BWC.

CORRECTIVE ACTION TO PREVENT RECURRENCE

The above deviations and required corrective action to prevent recurrence were discussed at a supervisors meeting dated 12/17/79.

DATE CORRECTIVE ACTION WILL BE COMPLETED

Completed.

DEVIATION

Procedure D50.92, paragraph 3.3.1, states in part, "The welding foreman shall...supply material that has identification to material type..."

Contrary to above the welding foreman did not supply material that was identified to material type for eight (8) lifting lugs welded on Work Order No. (R) 6A235, Item No. 3002.

CORRECTIVE ACTION

Subsequent investigation revealed that the material identification was recorded as A36 on Form 671-3 (Temporary Attachment Record). This record is on file at BWC for your review.

CORRECTIVE ACTION TO PREVENT RECURRENCE

N/A

DATE CORRECTIVE ACTION WILL BE COMPLETED

N/A