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Comptroller General  
of the United States

Washington, D.C. 20548

## Decision

**Matter of:** Corbin Superior Composites, Inc.

**File:** B-242394

**Date:** April 19, 1991

James J. McCullough, Esq., and Daniel I. Gordon, Esq., Fried, Frank, Harris, Shriver & Jacobson, for the protester. John B. Denniston, Esq., and Michele J. Woods, Esq., Covington & Burling, for Brunswick Corporation, an interested party. Jonathan H. Kosarin, Esq., and Neil L. Hirsh, Esq., Department of the Navy, for the agency. Jennifer Westfall-McGrail, Esq., and Christine S. Melody, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

### DIGEST

1. Requirement that inflating cylinders be visually inspected after endurance test portion of first article test is reasonable where the record shows that inspection of cylinders at this point is the only way to establish that the barrier coating on the cylinders has not been impaired during the endurance test.
2. Requirement that inflating cylinders showing any unwrapping of fiberglass after endurance test portion of first article test be rejected is reasonable where the record shows that such unwrapping breaks the moisture-barrier coating applied to the exterior of the cylinder and increases the rate at which moisture, which breaks down the fiberglass over time, is absorbed into the cylinder.

### DECISION

Corbin Superior Composites, Inc. protests an allegedly overly restrictive technical requirement in invitation for bids (IFB) No. N00104-91-B-0001, issued by the Navy Ships Parts Control Center for inflating cylinders to be used on U.S. Navy life rafts. Specifically, Corbin objects to the requirement for a visual inspection of the cylinders between the endurance and burst test portions of the first article test and for rejection of any cylinders exhibiting any unwrapping of fiberglass. Corbin contends that these requirements exceed the agency's minimum needs and target its cylinders for exclusion from the competition.

We deny the protest.

The IFB, as amended, asked for bids on a total quantity of 5,628 inflating cylinders to be manufactured in accordance with military specification MIL-C-24604. Of the five bids received and opened on December 21, 1990, Brunswick Corporation's price of \$1,243,788 was low and Corbin's price of \$1,288,812 (if first article test was required) or \$1,271,925 (if first article test was waived) was second low. The agency subsequently determined that urgent and compelling circumstances required that it proceed with award, and awarded to Brunswick on March 8, 1991.

The cylinders in question hold compressed air at normal room temperature at a pressure of 5,000 pounds per square inch and are manufactured by winding fiberglass filaments impregnated with a thermosetting plastic resin on an aluminum liner. The Navy explains that the aluminum liner by itself is capable of withstanding only approximately 3,000 pounds per square inch and that it is the fiberglass laminate that enables the cylinder to withstand the 5,000 pounds per square inch service pressure, as well as any increase in pressure that might occur under normal operating conditions. (For example, increases in temperature will raise the pressure in the air cylinder.)

The Navy further explains that a number of these cylinders have failed in recent years. To date, 15 of the highly pressurized cylinders have exploded. Although only minor injuries have occurred thus far, the Navy is concerned about the potential threat to the safety of its shipboard personnel, since an exploding cylinder is similar in force to a bomb. The Navy further notes that although it has been unable to identify the cause for the explosions, it has been able to determine through research at the David Taylor Ship Research and Development Center that the cause of the failure is not in the aluminum liner of the cylinder. Thus, it has concluded that the cause of the explosions is a failure of the fiberglass laminate that surrounds the aluminum liner, and it thinks that this failure may be caused by the absorption of moisture into the fiberglass over time.

Military specification MIL-C-24604 describes the required design and construction of the cylinders. One of the specification's requirements is that a transparent moisture-barrier coating, which is sufficiently flexible to resist crazing, cracking, blistering, or separation during required pressure and environmental testing, be applied to the exterior surface of the cylinder. The specification also includes a number of tests to which first articles are subjected to measure the cylinder's ability to provide the required level

of performance. One of the performance requirements concerns the cylinder's endurance and provides as follows:

"3.3.3 Endurance. The cylinders, when tested as specified in 4.6.6 [the endurance test to which first articles are subjected, which involves various forms of abuse, such as high and low temperatures, soaking, and pressure], shall show no deterioration. The first cylinders shall meet 3.3.2 [regarding rate of leakage] and shall be capable of withstanding a hydrostatic burst pressure of not less than 2.2 times room temperature operating pressure. The second cylinder shall withstand a hydrostatic burst pressure of not less than 9450 [pounds per square inch] (1.5 times 160 [degrees Fahrenheit], operating pressure of 6300 [pounds per square inch])."

The agency added the following language--to which the protester objects--to the military specification through amendment No. 0002 to the solicitation:

"3.1.2 The following is added to para. 3.3.3 of MIL-C-24604 for clarification. Endurance. The cylinders, when tested as specified in 4.6.6 shall be visually inspected prior to burst and shall show no deterioration. Any unwrapping of fiberglass or other visible defects is considered deterioration and cause for rejection of the cylinder and failure of the first article."

The Navy explains that it added this language, which it regards as merely clarifying the specification, because under a previous contract awarded to Corbin for production of the cylinders, a few inches of the fiberglass wrap had unraveled during the endurance test portion of the first article test, leading it to conclude that the cylinders had failed to demonstrate compliance with the requirements of the specification that the cylinders show no deterioration when tested as specified in 4.6.6, and that the barrier coating be sufficiently flexible to resist separation during testing. It therefore determined that Corbin had failed the first article test and terminated its contract for default. Corbin appealed the termination for default to the Armed Services Board of Contract Appeals (ASBCA), arguing that the specification did not require a visual inspection of the cylinder after the endurance test and that the unraveling did not constitute deterioration since it involved fiberglass wrap, which was used simply to hold its label in place and did not contribute to the structural strength of the cylinder. These issues were not resolved since the parties settled the matter. The Navy added the language to the specification as a direct result of

the ASBCA appeal and its desire to prevent future litigation on this point.

Corbin contends that the requirement for a visual inspection of the cylinders between the endurance and burst test portions of the first article test exceeds the agency's minimum needs since all that is required to determine that the cylinders have survived the endurance test without deterioration is that they be able to complete the burst test successfully. Corbin further argues that the requirement for rejection of cylinders showing any unwrapping of fiberglass is unduly restrictive of competition since it will result in the rejection of structurally sound cylinders, such as those which it manufactures, which use a "hoop wrap" of fiberglass that does not contribute to the structural strength of the cylinders, and which may unravel slightly during first article testing, to hold the manufacturer's label in place.<sup>1/</sup>

As a preliminary matter, the Navy argues that Corbin was not prejudiced by the addition to the specification of the language to which it objects since it was in fact able to submit a responsive bid. The Navy contends that we should dismiss the protest since no prejudice has been demonstrated.

The protester responds that the requirement did work to its prejudice since it was forced to raise its price to take into account the higher cost of producing cylinders, which comply with the stricter requirement of the amended military specification. As support for its position, Corbin has submitted, in camera, a copy of the bid that it had prepared prior to amendment No. 0002, which shows that its original bid was lower than Brunswick's. The Navy disagrees, arguing that the fact that Corbin increased its price after the amendment does not demonstrate that there was a link between the changed requirement and Corbin's price increase.

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<sup>1/</sup> Corbin explains that after it has wrapped fiberglass around the aluminum liner to create a sufficiently strong shell, it then adds a final "hoop wrap" of fiberglass to hold its label in place. According to Corbin, the hoop wrap is wound enough times to allow up to 40 inches to unwrap without affecting anything other than the appearance of the cylinder, and in no known instance, even after the most abusive testing, has enough hoop wrap unwound to let the label fall off. Corbin further contends that even if the hoop wrap were removed entirely, the underlying fiberglass shell and aluminum liner would remain intact.