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**Comptroller General
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**United States Government Accountability Office
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Decision

Matter of: Messier-Bugatti, Safran Group

File: B-401064

Date: May 5, 2009

Richard J. Conway, Esq., Scott Arnold, Esq., and Pablo Nichols, Esq., Dickstein Shapiro, for the protester.

Rand L. Allen, Esq., Paul F. Khoury, Esq., Nicole P. Wishart Esq., and Daniel I. Nysten, Esq., Wiley Rein, for Meggitt Aircraft Braking Systems Corporation; and David C. Hammond, Esq., and Puja Satiani, Esq., Crowell & Moring, for Goodrich Corporation, the intervenors.

Michael J. O'Farrell, Esq., Defense Logistics Agency, for the agency.

David Ashen, Esq., and John M. Melody, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

DIGEST

Protest that specification requirement for lock-ring, demountable flange wheel design as part of retrofit systems for C-130 aircraft unduly restricts competition, improperly precluding protester from offering a tie-bolt, split-rim wheel design, is denied where agency reasonably determined that tie-bolt wheel will require significantly more time to maintain than a lock-ring wheel, such that it does not meet agency need for wheel design permitting efficient maintenance.

DECISION

Messier-Bugatti, Safran Group (MB), of Boone County, Kentucky, protests the terms of request for proposals (RFP) No. SPRHA1-08-R-70650, issued by the Defense Logistics Agency (DLA), Defense Supply Center Richmond (Ogden), for C-130 aircraft retrofit wheel and brake assembly systems under the C-130 Wheel and Brake System Improvement Program. MB asserts that the solicitation is unduly restrictive of competition.

We deny the protest.

DLA reports that the current wheel and brake design used on the Air Force fleet of (approximately 600) C-130 aircraft, using 1960s-era technology, has demonstrated inadequate reliability, maintainability, and dependability. As part of the resulting

program to upgrade the current wheel and brake systems, the solicitation provides for replacing the current steel brakes with carbon brakes. In addition, the solicitation provides for upgrading the C-130 wheel design. Currently, the C-130 aircraft uses a 20-inch diameter tie-bolt, split-rim wheel design, in which the wheel splits into 2 halves that are bolted together with 18 tie-bolts, each including a bolt, nut, and 2 washers. In order to change the current tires, agency maintenance technicians must individually remove each tie bolt; disassemble the wheel; collect and clean the tie-bolts and clean the wheel; verify nut running torque; inspect the wheel; lubricate the tie-bolts; assemble the wheel; install the tie-bolts; and then tighten the tie-bolts to the proper torque in a complex, criss-cross sequence involving multiple applications of torque.

Under the RFP, instead of the current tie-bolt design, “[t]he design of wheels shall be of the lock ring demountable flange type to facilitate changing the tire.” Performance Specification § 3.5.2; RFP Minimum Mandatory Requirements § 3; see RFP Proposal Preparation Instructions, Technical Subfactor 1; RFP Evaluation Factors, Technical Subfactor 1. In a typical lock-ring, demountable flange design, the tire is retained on the wheel cylinder by a removable circular flange that slides over one end of the wheel cylinder, with the flange held in place by a lock ring, which is retained by an end tie plate fastened to the lock-ring with two screws and a lock wire. See, e.g., Comments of Meggitt Aircraft Braking Systems Corp. at 5-17. The RFP further requires that the lock-ring wheel design “us[e] methods and materials that have been fleet proven in a previous commercial or military main landing wheel program.” RFP Proposal Preparation Instructions, Technical Subfactor 1. In addition, the specifications establish for off-aircraft wheel assembly a mean time to repair of no more than 1 hour, “includ[ing] time to visually inspect and/or accomplish all required NDI [–non-destructive inspection–] procedures per applicable maintenance manual.” Performance Specification § 3.5.1.11.1.

MB asserts that the requirement for a lock-ring, demountable flange wheel design—which precludes MB from proposing a tie-bolt, split-rim wheel design—unduly restricts competition. According to the protester, an improved version of the tie-bolt design, using corrosion-resistant bolts, and thereby requiring less inspection, also will meet the agency’s needs.

Contracting agencies have the discretion to determine their needs and the best method of accommodating them. Parcel 47C, LLC, B-286324, B-286324.2, Dec. 26, 2000, 2001 CPD ¶ 44 at 7. However, agencies are required to specify their needs in a manner designed to achieve full and open competition, and may include restrictive requirements only to the extent they are necessary to satisfy their legitimate needs. 10 U.S.C. § 2305(a)(1)(B) (2006); Innovative Refrigeration Concepts, B-272370, Sept. 30, 1996, 96-2 CPD ¶ 127 at 3. Where a protester challenges a specification as unduly restrictive, the procuring agency must establish that the specification is

reasonably necessary to meet its needs. Chadwick-Helmuth Co., Inc., B-279621.2, Aug. 17, 1998, 98-2 CPD ¶44 at 3. A protester's mere disagreement with the agency's judgment concerning its needs and how to accommodate them is not sufficient to establish that the agency's judgment is unreasonable. See Dynamic Access Sys., B-295356, Feb. 8, 2005, 2005 CPD ¶ 34 at 4. Further, where, as here, a requirement relates to national defense or human safety, an agency has the discretion to define solicitation requirements to achieve not just reasonable results, but the highest possible reliability and/or effectiveness. Vertol Sys. Co., Inc., B-293644.6 et al., July 29, 2004, 2004 CPD ¶ 146 at 3. We find the solicitation requirement for a lock-ring, demountable flange wheel design to be reasonable.

In explaining the basis for the lock-ring specification requirement, DLA reports that Air Force experience with both designs indicates that lock-ring wheels have lower life-cycle costs; are logistically simpler to support; and offer improved maintainability over tie-bolt designs. Agency Report at 13. In particular, according to DLA, the primary and most desired benefit of the lock-ring wheel design relative to the tie-bolt design is the more efficient maintenance possible with lock-ring wheels. Id. In this regard, the agency reports that experience with F-15 and F-16 fighter aircraft, the earlier models of which are equipped with tie-bolt wheels and the later models with lock-ring wheels, indicates that tie-bolt wheels, on average, require 100% more time to maintain for F-15 aircraft and 50% more time for F-16 aircraft than lock-ring wheels. Id. at 15. Further, the agency has furnished a video showing maintenance technicians breaking down (disassembling) and building up (reassembling) F-15 lock-ring and tie-bolt wheels. While the video shows the technicians requiring only 34 minutes 22 seconds to complete the process for the F-15 lock-ring wheels, it shows a time of 1 hour 15 minutes 3 seconds for technicians to partially complete the process for the F-15 tie-bolt wheels, with a further, approximately 30-minute required additional inspection not performed. In addition, the agency has furnished a video showing maintenance technicians disassembling and reassembling a tie-bolt wheel for the larger KC-135 aircraft; that process required 1 hour 29 minutes 28 seconds to partially complete, again not including the approximately 30-minute required additional inspection. The agency reports that the more efficient maintenance possible with the lock-ring design is particularly important due to the fact that C-130 aircraft are often deployed at austere forward operating locations under wartime conditions, requiring maintenance to be performed in the shortest possible timeframe. Id. at 11, 15.

MB asserts that the agency's concerns do not justify the restriction because it will propose a tie-bolt design that will meet the specification requirement for a mean time to repair of no more than 1 hour. In support of its assertion, the protester has furnished a video showing its maintenance technician disassembling and reassembling a C-130 tie-bolt wheel in [REDACTED]. The agency notes, however, that the protester's claimed time of [REDACTED] does not include the full extent of inspection and cleaning currently required under agency maintenance procedures. Agency Report at 26; Agency Supp. Report at 4, 7, 9. MB concedes that its video omits some steps that the agency reports are currently required, MB Comments,

Mar. 16, 2009, at 15, but maintains that the omitted steps are not necessary with its improved design. However, the solicitation requires a mean time to repair of no more than 1 hour “includ[ing] time to visually inspect and/or accomplish all required [non-destructive inspection] procedures per applicable maintenance manual.” Performance Specification § 3.5.1.11.1. While the protester would have the agency forego some of the currently required inspections due to its claimed improved design, there is no basis for us to preclude the agency from taking these inspections into account; again, where, as here, a requirement relates to national defense or human safety, an agency has the discretion to define solicitation requirements to achieve not just reasonable results, but the highest possible reliability and/or effectiveness. Vertol Sys. Co., Inc., *supra*, at 3. Further, the agency reports that the video submitted by MB reflects the use of labor-saving special tooling that is not typically available at Air Force bases, including forward operating locations the C-130s will use. As noted by DLA, the use of such special tooling appears to be inconsistent with the specification requirement that the proposed “configuration shall be compatible with the total aircraft performance, maintenance, and operational environment.” Performance Specification § 3.5.1.

In any case, even if we agreed that MB has shown that its proposed tie-bolt design will meet the 1 hour mean time to repair requirement, it is evident from the record that a tie-bolt wheel will require significantly more time to maintain than a lock-ring wheel. It is just as clear from the record that the agency has determined that it needs a wheel design permitting more efficient maintenance than is possible with a tie-bolt design. Under these circumstances, requiring the agency to revise the specification to reflect a shorter permissible mean time to repair based on the lock-ring wheel would be a useless act. *See Arrow Eng'g, Inc.*, B-215585, Dec. 26, 1984, 84-2 CPD ¶ 702 at 3.

MB asserts that the lock-ring wheel design has not yet been shown to be reliable for use on larger aircraft. However, whether the lock-ring design is sufficiently developed to permit its use on the C-130 aircraft is not a matter we will question under our bid protest function since it involves how an agency will perform its military function. *See Glock, Inc.*, B-236614, Dec. 26, 1989, 89-2 CPD ¶ 593 at 6 (GAO will not question agency’s management of its law enforcement function); Travenol Laboratories, Inc., B-215739; B-216961, Jan. 29, 1985, 85-1 CPD ¶ 114 at 3 (GAO will not question agency’s management of its medical activities).

The protest is denied.

Daniel I. Gordon
Acting General Counsel