ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeals of -	)	
	)	
Konecranes Nuclear Equipment & Services, LLC	)	ASBCA Nos. 62797, 62827
	)	
	)	
Under Contract No. N62470-16-D-2013	)	

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APPEARANCES FOR THE GOVERNMENT:	Craig D. Jensen, Esq. Navy Chief Trial Attorney Susannah M. Mitchell, Esq. Antonio T. Robinson, Esq. Trial Attorneys

OPINION BY ADMINISTRATIVE JUDGE HERZFELD

Konecranes Nuclear Equipment Services, LLC (Konecranes) appeals the Department of the Navy's (Navy) contracting officer's final decisions denying Konecranes' claims to interpret the contract and for delay damages. Konecranes sought to deliver four portal cranes to the Navy, but the Navy refused to accept delivery after an initial test of one of the cranes revealed some damage to the luffing drum. Konecranes quickly identified the root cause of the damaged drum and fixed the problem. However, the Navy would not accept Konecranes' solution and its unsuccessful demand for an unnecessary alternative solution caused further delay and increased Konecranes' costs. We conducted a six-day hearing on entitlement and quantum and conclude that Konecranes' four cranes met the contractual requirements and were ready for delivery. The Navy's decision to delay delivery based on a requested change to contractual requirements was not justified. Therefore, we sustain Konecranes' appeals and award $4,862,696.31 plus any Contract Disputes Act (CDA) interest from the time it submitted its monetary claim.

FINDINGS OF FACT

I. *The Navy Approves of Konecranes' Design for Four Level-Luffing Cranes*

A. *The Navy Purchases Four Level-Luffing Cranes*

On March 3, 2016, the Navy awarded Konecranes contract No. N62470-16-D-2013 (the Contract), an indefinite delivery/indefinite quantity contract to design, fabricate, assemble, and deliver up to four, 25-ton general purpose portal cranes for use at the Navy's Puget Sound Naval Shipyard, Naval Base Kitsap, Bremerton and Bangor, Washington (R4, tab 1, at 27; tab 128 at 795).[1] The cranes will be used to load food, maintenance, parts, and other supplies into the Navy's nuclear submarines at the naval shipyard, but will not handle any nuclear materials (tr. 1/39-40, 43). The Navy ordered two cranes for Bangor (cranes 53-54) and two cranes for Bremerton (cranes 51-52) for a total of $62,241,720 (R4, tab 15; exs. A-15 to -17).

The Navy Crane Center (the Navy agency that typically handles crane procurements involving cranes above 10 tons) conducted the procurement and awarded the Contract (tr. 6/8). The Navy has an inventory of between 4,000 and 5,000 cranes (tr. 6/10). The Navy procured the cranes from Konecranes as commercial items, but the Navy Crane Center had never previously used a commercial items procurement to purchase a crane (tr. 1/43, 6/78-79, 6/101).

Konecranes and its predecessors – Pawling & Harnischfeger and Morris Material Handling – have built over 600 cranes for the Navy, including recently delivering a 140-ton portal crane for lifting nuclear materials, and constructing three, 175-ton portal cranes (tr. 1/41-43). Also, Konecranes is a subsidiary of Finland-based Konecranes, Plc (Konecranes-Finland), which has built tens of thousands of cranes (including hundreds of commercial portal cranes) (tr. 1/41, 57).

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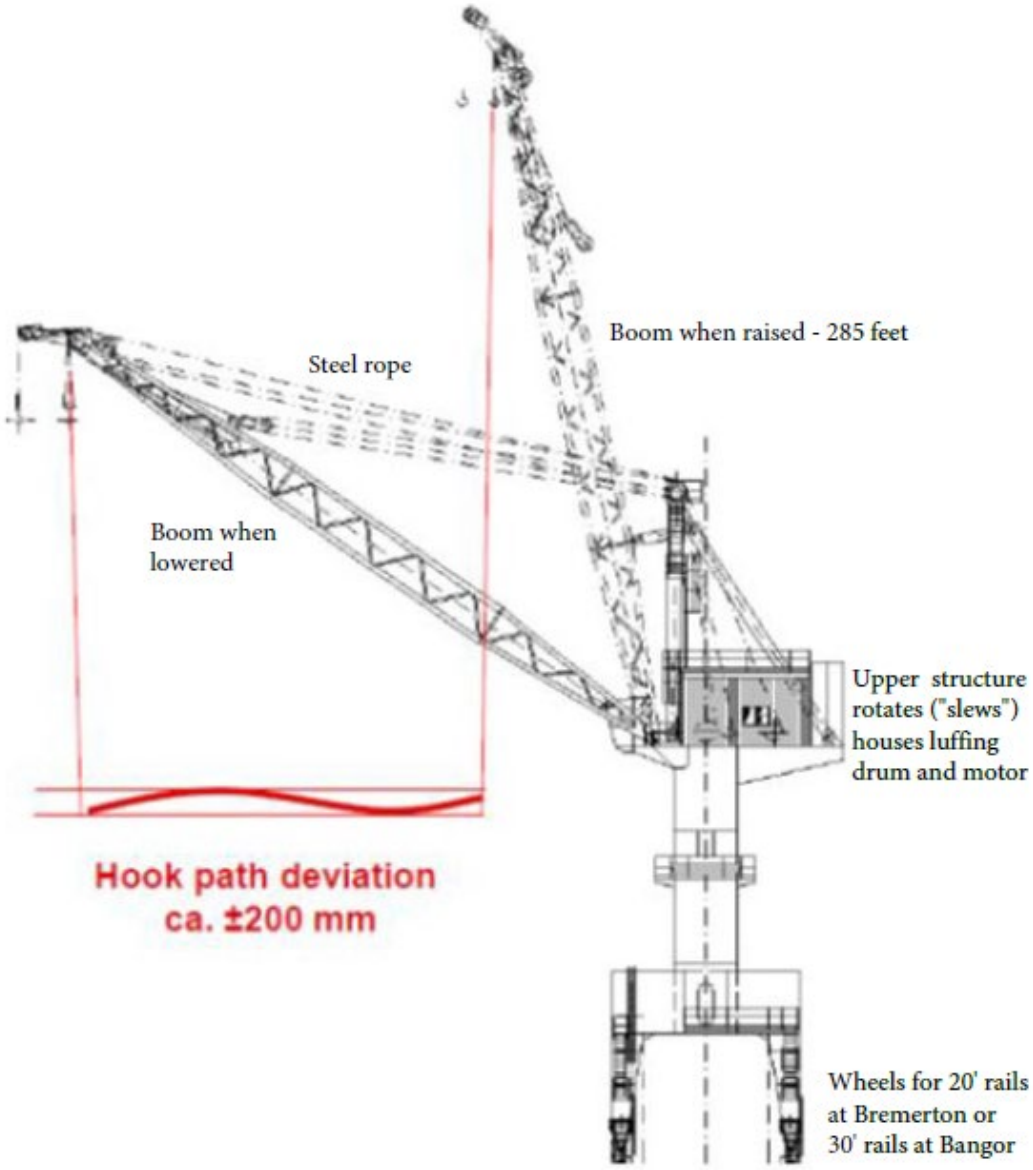
[1] The Rule 4 file submitted by the Navy consisted of Tabs 1-98. Konecranes supplemented the Rule 4 file with Tabs 99-164. At the request of the parties, we admitted all Rule 4 file documents as evidence in our April 13, 2022 Order (*see also* tr. 1/9-10). Because the tabs are sequential, we reference all these documents as "R4." The parties also requested and we admitted Konecranes Exhibits A-1 through A-19 as evidence in our April 13, 2022 Order (*see also* tr. 1/10). We admitted Exhibits A-20 and G-1 during the hearing (tr. 3/67, 5/27-29). As represented to the Board on the first day of the hearing, the parties stipulated to the admission of deposition transcripts for seven witnesses so the parties could cite relevant parts in their post-hearing briefs (tr. 1/8-9). For page citation to the Rule 4 documents, we refer only to the page number and exclude pre-fixes ("GOVRule4," "KNESRule4Sup4," or "GOVPROD") and leading zeroes before the page numbers.

Konecranes proposed using level-luffing portal cranes to meet the requirements of the Contract (tr. 1/60, 69; R4, tab 99). Konecranes-Finland's ports group had showed the Navy's Bremerton personnel a level-luffing crane used in nearby Victoria Island before contract award and Bremerton's personnel were interested in that design (tr. 3/155, 171). Below is a diagram of the proposed level-luffing crane, which we have annotated based on the testimony at the hearing:



(R4, tab 99 (diagram); tr. 1/45, 47 (boom at 285 feet when raised, structure slews/rotates); R4, tab 128 at 796 (30 foot rails at Bangor, 20 foot rails at Bremerton)).

When the boom is raised and lowered it is known as "luffing" (tr. 1/51). To "luff" (or raise or lower) the boom, the crane uses two steel ropes wrapped around a

steel luffing drum (powered by a motor) (tr. 1/64, 118). As the steel ropes unwind, the boom gets lowered, usually to a 35-degree angle when loading submarines or fully horizontal when the crane is subject to quarterly maintenance (tr. 1/65-66). As the steel ropes wind back around the steel drum, the boom gets raised (tr. 1/64, 118, 2/20, 67).

Konecranes proposed using a level-luffing crane (as opposed to a non-level luffing crane, also known as a reeving crane), because the hook holding the payload stays at the same height when the boom is raised and lowered (R4, tab 99; tr. 1/61-62). Konecranes deemed using a level-luffing crane "a little safer" when loading materials because it would result in faster and more efficient loading that would avoid "hitting" the periscopes, antennas, and the submarine sail (the large black tube that sticks up from the submarine) (tr. 1/39-40, 66-67, 70). The level-luffing crane also required less use and, thus, less stress on the luffing drum – sometimes only used for several minutes to move the boom into a steady angle before rotating (or "slewing") a load from the dock to over a submarine (tr. 2/19-21, 3/215-16). Instead of using the luffing mechanism to move the boom up and down to load supplies, the level-luffing crane relies more heavily on a separate main hoist and whip hoist (or auxiliary hoist) with a separate hoist steel drum and ropes to raise and lower the hook to place loads into the submarine (R4, tab 128 at 796-97; tr. 3/215-17).

Prior to the Contract with Konecranes, the Navy had never purchased a level-luffing crane (tr. 5/82, 6/81).

B. *Navy and Konecranes' Design Changes, Design Drawings Approved*

Given the requirement for a commercial item crane, the Contract's specifications stated, "The crane design is intended to be a manufacturer's standard design incorporating the additional features required by the specification" (R4, tab 128 at 795). Konecranes submitted the crane design for Navy approval (tr. 1/71). Konecranes submitted its proposed design drawings in September 2018 (tr. 1/74; *but see* R4, tab 38 at 359 (stating September 18, 2017)). During the Navy's review of Konecranes' design, the Navy requested and Konecranes agreed to modify the Contract to add a steel walkway along the boom to be used during maintenance of the crane (R4, tab 17 at 1; tr. 1/97-98). The addition of the steel walkway added more than 5,000 pounds to the boom weight (tr. 1/98-99, 234).

In analyzing the impact of adding the 5,000-pound walkway to the 80,000-pound boom, Konecranes discovered it had made a calculation error in determining the radial bearing pressure on the luffing drum and wire ropes, which was exacerbated by the increased weight from the walkway (tr. 1/98-99, 229-35; ex. A-18 at 53-54). The Contract's specification stated that "all mechanical components . . . shall be designed for a factor of safety of no less than 5.0" and specifically stated that the main hoist wire rope should have a "minimum wire rope design factor of 5 to 1" (R4, tab 128 at 819-20;

tr. 1/92-93). The Navy asserted that the luffing drum and wire rope needed to meet the "5 to 1" safety factor (similar to the main hoist wire rope) because it considered the luffing drum and rope to be mechanical components like the main hoist drum and rope; Konecranes and other commercial manufacturers considered the luffing drum and rope to be structural components not subject to this safety factor and excessive for a commercial crane (tr. 1/92-93; ex. A-18 at 101, 103).

Konecranes proposed a solution that would make the drums subject to a safety standard more commonly used in commercial cranes – European Normal 13001 (tr. 1/100-01). On May 13, 2020, the Navy's engineers agreed to modify the Contract to insert this standard for the luffing drum on the cranes (R4, tab 100; tr. 1/100-01). However, as an "oversight" the Navy failed to issue and sign a contract modification with this new standard (tr. 3/28-29, 6/127-28). On May 27, 2020, the Navy approved Konecranes' mechanical design drawings (subject to several conditions that Konecranes met) (R4, tab 42; tr. 1/73, 3/19, 6/88).

II. *The Navy Observes Damage to the Luffing Drum on Crane 53 and the Parties Come to Different Conclusions Regarding the Root Cause of the Damage*

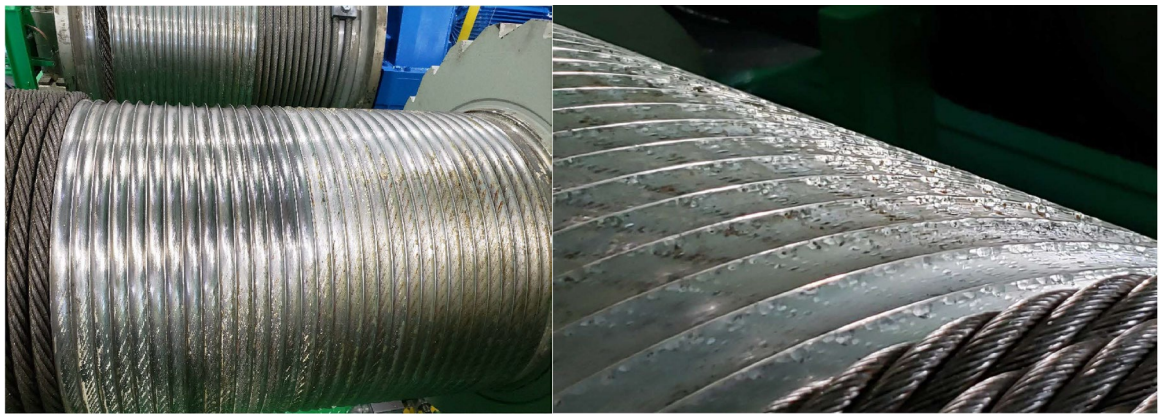
A. *The Damaged Drum*

The Contract required delivery of both Bangor cranes (cranes 53-54) "completely assembled" and, similarly, required delivery of both Bremerton cranes (cranes 51-52) as "complete as possible" (R4, tab 128 at 798; tr. 1/78, 3/118-19). Konecranes leased a site from Alaska Marine Lines in Seattle, Washington, which site could hold the 1.1 million pound cranes, and was located next to a waterway that allowed Konecranes to load and transport the cranes by barge to the Bangor and Bremerton, Washington sites of the Naval base (R4, tab 127 (lease agreement); tr. 3/174-79, 188-89).

By the end of May 2020, Konecranes completed construction of crane 53 – destined for Bangor (tr. 1/76). Before shipment of a completed crane, the Contract required Konecranes to perform a self-test of the crane and then make the crane available for the Navy to conduct an inspection of the crane and witness Konecranes' shop test (R4, tab 128 at 838-39). The Contract's specifications state: "All shop test identified deficient items shall be resolved prior to shipment of the crane, unless authorized by the Contracting Officer" (R4, tab 128 at 838).

On June 3, 2020, Navy Crane Center personnel were conducting their inspection prior to the scheduled June 6, 2020 shop test (ex. A-10 (shop test dates); tr. 2/128 (shop test dates), 2/34 (June 3 inspection)). The Navy's lead inspector observed, "The luff hoist drum has clear corrugation wear/indication in the bottom of the drum grooves which is significant for the very low use of the hoist (a brand new

crane)" (ex. A-9 at 1). The Navy lead inspector continued, "On the top of the drum grooves on the side that is loaded due to the fleet angle, there is significant peening and scrubbing damage including some material loss. The metal shavings that are being removed from the tops of the grooves appear to be imbedded in the wire rope" (ex. A-9 at 1).[2] Noting this might be a "significant issue," the Navy Crane Center's lead mechanical engineer on this project agreed that the "the wear appears to be corrugation," which he defined as where "the grooves of the sheave or drum after they have been worn down to a point where they show an impression of a wire rope" (ex. A-9 at 1-2 (quoting Wire Rope Users Manual); tr. 5/10-11). One Navy inspector described the damage: "In every groove across the drum there are corrugation indentations in a diagonal pattern matching the helix of the wire rope strands" with indentations "estimated to be 0.005" to 0.010" deep" (R4, tab 139 at 184). The Navy's lead inspector photographed the damage to the luffing drum on crane 53:



(R4, tabs 22 at 333, 95 at 521; tr. 5/10-11).

The Navy's inspectors and engineers had never seen such significant damage to a drum, particularly given that the crane had been operated for only 80 hours (tr. 5/10, 13; R4, tab 24; Rexin dep. at 49-50). Indeed, Konecranes' president had never seen anything like this in his 35 years in the crane industry and, accordingly, Konecranes found it "unacceptable" (tr. 1/124-25, 2/34, 3/143). On June 3, 2020, the Navy requested a response from Konecranes regarding the luffing drum (R4, tab 21; tr. 5/14).

[2] A "fleet angle" is the "angle of the wire rope coming off the drum" and as you unwind the rope on the drum "that fleet angle changes as you move up and down the drum" (tr. 1/146). "[T]here's a maximum fleet angle you want" and if you have "too much fleet angle . . . you're wearing away parts of the drum" (tr. 1/146).

B. *Konecranes and the Navy Differed on the Root Cause of the Damage to the Luffing Drum on Crane 53*

Konecranes and the Navy came to different conclusions regarding the root cause of the damage to the luffing drum. Konecranes proposed and implemented a plan to change the type of wire rope used on the luffing drum. The Navy doubted that solution and its personnel coalesced around proposing that Konecranes install stronger flame-hardened steel drums on all four cranes. That difference resulted in Konecranes' claims and is central to the dispute in this appeal.

1. *Konecranes Identifies the Wire Rope as the Root Cause of the Damage and Proposes Changing to a Different Wire Rope*

After receiving the Navy's concerns on June 3, 2020, Konecranes conducted a root cause analysis, which included inspecting the damaged luffing drum (including the drum grooves and wire rope size) and consulting with Konecranes-Finland and wire rope and drum experts (including manufacturers) (tr. 1/125-26, 2/34-36).

The Contract required the use of "6 x 36 class wire rope" for the main hoist drum, but had no such specific requirement for the luffing drum (R4, tab 128 at 820; tr. 2/98). Konecranes opted to use 6 x 36 rope for the luffing drum because it is a "standard rope" and would "minimize the number of different types of rope" used on the crane and minimize "inspection procedures" (tr. 2/99). However, Konecranes determined that the contact pressure from the 6 x 36 wired-rope on the luffing drum had caused the damage identified by the Navy (R4, tab 21; tr. 1/126-27, 2/36). In particular, Konecranes determined that the high strands on the surface of the 6 x 36 rope had caused the indentations to the luffing drum grooves because the pressure from the rope was not evenly distributed (tr. 1/126-28, 2/35-36; R4, tab 21).

On June 5, 2020, Konecranes responded to the Navy with its written conclusion that the root cause of the problem derived from the 6 x 36 rope (R4, tab 21). Konecranes proposed using a different wire rope – "Python Super 8V, Grade 1960 wire ropes" (R4, tab 21). The Python rope is smoother, "18% stronger" than the 6 x 36 rope, and would "minimize contact stress points and reduce drum wear" (R4, tab 21; tr. 2/38-40, 3/22-23). The Python rope would "significantly increase the surface area of the wire rope that is in contact with the drum" (R4, tab 21; tr. 1/131, 2/39-40 (reiterated in conversation between Konecranes personnel and Navy Crane Center lead engineer regarding Python rope being smoother)). Konecranes stated that it would come up with a procedure "to remove all sharp localized indentations" but concluded "the drum can be safely operated" (R4, tab 21). Konecranes also noted that most of the damage to the luffing drum was from lowering the boom horizontally to the "maintenance position" but that "[n]o drum wear [was] visible over the portions of

the drum supporting the wire rope that moves the boom through its normal operating range" (R4, tab 21).

2. *The Navy Identifies the Root Cause of the Damage as a Soft Drum*

After review of Konecranes' response, a Navy Crane Center engineer proposed a different solution on June 6, 2020: "The existing drum should be rejected and replaced with a new drum design with hardened wire rope grooves" (R4, tab 22 at 332; *see also* tab 136 (June 5 email: "I can't envision any repair for this short of a different design and a replacement drum. Re-matching grooves doesn't help, and the wire rope pressures and [fleet] angle is fixed. All that is really left is hardening of the drum grooves."); tr. 3/23-24). This same engineer previously explained that this was "NOT related to the drum calc's where a design with less than 5:1 on ultimate strength was accepted" because even if the drum met the 5:1 safety factor "this exact same problem would still be occurring" (R4, tab 136; Bowen dep. at 81-82). Instead, he concluded, "The root cause of the problem is the high pressure from the wire rope on the drum groove surface and a soft steel material (lower strength material)" (R4, tab 22 at 332).

On June 8, 2020, the Navy Crane Center's lead engineer for this project conceded to the contracting officer (among other Navy personnel) that Konecranes' assertion that the drums were not "'excessively worn'" and that "'the drum can be safely operated' is accurate . . . for now" (R4, tab 137; tr. 3/23). "The obvious concern is that the drum is brand new and is already showing signs of significant wear, so it will likely be excessively worn in the near future" (R4, tab 137).

On June 11, 2020, the Navy sent its initial response to Konecranes, "The use of an alternative wire rope construction does not address the root causes of the problem, which are the high radial bearing pressure from the wire rope on the drum groove surface and the low strength drum material" (R4, tabs 24, 23 (email transmitting)). "Based on the rate at which the current wear has occurred and the future anticipated use (600 hours per year, or 7.5 times the amount of operation so far), the Government estimates this condition will occur in less than five years, and the drum will certainly not last 30 years as required by Section 1.3 of the Specification" (R4, tab 24 (citing R4, tab 128 at 796)). The Navy's conclusion relied on the Contract's Specification, which states: "The entire crane shall be designed with a minimum 30 year life" (R4, tab 128 at 796). A 600 hours per year usage would result in an expected 18,000 hours of usage over 30 years (tr. 1/167, 3/73). The Navy had not looked "into the operational life in hours of the crane until after the damage was discovered during inspection" (tr. 5/24).

Also on June 11, 2020, Konecranes sent its technical justification for its crane design (R4, tabs 25, 26). Among other issues, Konecranes "confirm[ed] minimum crane life of 30 years will be met" and that Konecranes had manufactured the luffing

drum consistent with the Contract's requirements to use ductile ASTM A572, Grade 50 steel (R4, tab 26 at 340 (discussing R4, tab 128 at 810-11); tr. 1/53-54, 107, 2/13).

On June 12, 2020, the Navy's contracting officer repeated the Navy Crane Center engineers' concerns: "The issue is two-fold: 1) the wire rope/drum design is creating premature wear on the luffing hoist drum; and 2) excessive wear on the luffing hoist drum does not meet contract requirements" (R4, tab 32 at 348). The Navy blamed "[t]he current design of the wire rope, including the wire top line pull, drum diameter and fleet angle" as causing "high pressure on the drum groove surface" that "exceeds the drum surface material strength" (R4, tab 32 at 348; tr. 3/25-26). Reiterating the Navy Crane Center's conclusion, the contracting officer concluded "this continued wear will significantly impact the lifespan of the drum, reducing it to a 5-year period, making it noncompliant with the certified 30 year lifespan referenced in the contract" (R4, tab 32 at 348). The Navy cited the "flawed design" of the luffing drum and found it in "non-conformance" with the specification that "[m]aterial shall be free from defects and imperfections that might affect the serviceability and appearance of the finished product. All material shall be new and unused." (R4, tab 32 at 348 (quoting R4, tab 128 at 810))

The Navy acknowledged Konecranes' "proposed solution to replace the current wire rope with a smoother, less abrasive wire rope" but the Navy asserted that "[w]hile this solution *may* slow the rate at which the damage occurs, the Government provides clear and relevant evidence . . . that this solution will not solve the root cause of the problem" (R4, tab 32 at 349 (emphasis in original)). The Navy reiterated its position "that the existing luffing hoist drum is currently non-conforming with the contract requirements, and the wire rope/drum configuration is the root cause of the issue" (R4, tab 32 at 349). "The Government does not intend to grant an approval to ship until the issue is either resolved or an agreed upon resolution is in place prior to shipping" (R4, tab 32 at 349; tr. 3/26-27).

3. *Konecranes Pauses the Shop Test, Changes the Rope on the Luffing Drum, and the Parties Disagree About Whether the Luffing Drum Meets Contractual Requirements*

On June 12, 2020, the same day that Konecranes received the contracting officer's letter, Konecranes informed the Navy it intended to buff the surfaces of the luffing drum and replace the 6 x 36 rope with the smoother Python rope (R4, tab 138; tr. 2/42-43). Konecranes' president wanted to "implement that solution as quickly as possible" to keep the project on the "critical path" by completing the shop test and obtaining the Navy's approval to ship crane 53 by July 2, 2020 (tr. 3/199-200, 1/149-50). Konecranes had a specific contract schedule with the barge company – Alaska Marine Lines (which also rented Konecranes land to construct the cranes in

Seattle) – to ship the cranes from Seattle, Washington and deliver them to Bremerton and Bangor, Washington (tr. 1/149-50, tr. 3/185-86; R4, tab 64). Konecranes paid a base rate of $424,500 for shipments between March 20, 2020 and August 15, 2020, with a $4,500 per day charge for delivery after August 15, 2020 (R4, tab 64 at 425-26; tr. 3/185-86). So, Konecranes' costs rose if the schedule slipped (tr. 1/150, 3/185-86).[3]

On June 15, 2020, Konecranes confirmed it was replacing the rope and buffing the surfaces, but also wrote to dispute the Navy's assertion that the luffing drum must have "600 hours of annual operation" (R4, tabs 34, 33 (cover email sending tab 34), 141 (same document as tab 34)). Konecranes "[did not] know where" the 600 hours of operation (or 18,000 for 30 years) came from (tr. 2/44-45). Nevertheless, Konecranes responded that, based on its understanding of the Contract, the Navy's "specification requires only 3,200 hours of operational life from the luffing hoist components" (which would explain why the Navy was concluding that 600 hours of annual use would result in only five years of life) (R4, tab 34 at 351; tr. 2/44-45, 48-51).

In particular, the Contract's specifications state, "The crane shall have minimum ISO 4301 group classifications of A5 for the crane as a whole and M5 for hoists, luff, slew and travel" (R4, tabs 128 at 796, 34; tr. 2/7). Konecranes reminded the Navy that the Contract specification "does not contain any other information on the state of loading . . . or required numbers of hours of operation" (R4, tab 34 at 351; tr. 2/45 (noting that "there was nothing in the technical specification that discussed 600 hours per year")). An A5 designation (between A1 through A8) meant that the crane was "not a light duty crane" and "not a heavy-duty crane" but "right in the middle . . . a very average crane" (tr. 2/8; R4, tab 54). "'M' classes are mechanical classifications given to mechanisms which guide the designer in selection of components" (R4, tab 34 at 351; tr. 2/8; R4, tab 54 at 401). Similarly, the M5

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[3] In addition to replacing the wire rope, Konecranes also shipped the newly manufactured luffing drum for crane 52 from the firm's Wisconsin fabrication site to Seattle, Washington, as a potential replacement for the luffing drum on crane 53 (tr. 3/200-01). Konecranes' project manager spoke with the Navy's project manager and offered for this like-kind replacement without cost, but it was turned down as not remedying the root cause, which the Navy has always maintained was the softness of the drum (tr. 2/166-67, 5/40-41 (Navy chief engineer acknowledging that he would have recommended not accepting a like-kind replacement because it did not address the root cause)). The Navy's contracting officer never understood that Konecranes was offering to make this change without cost to the Navy (and, indeed, the Navy's project manager apparently never mentioned the offer to her at all), but nevertheless she would have rejected the offer because it did not remedy what the Navy's engineers deemed the root cause of the problem – the softness of the drum steel (tr. 3/34-38, 6/73; R4, tabs 83 at 480, 96 at 544-45).

designation (between M1 through M8) was "in the middle of the M classification system . . . a very standard average design" (tr. 2/9; R4, tab 54 at 401). The higher the classification, the bigger the crane, and the higher the cost to construct the crane (tr. 2/10). Based on the calculations of the expected load, Konecranes determined that the Navy was expecting to use a "heavy" duty crane, which equated to a loading capacity of L3 – "Mechanism subjected frequently to the maximum load and, normally, to loads of heavy magnitude" (R4, tab 34 at 351 (quoting R4, tab 54 at 401); tr. 1/165 (discussing load spectrum equating to an L3 load)). Based on an L3 load and M5 designation, the ISO standard results in an expected crane life of 3,200 hours of use (R4, tabs 34 at 351, 54 at 400-01; tr. 2/16-17). Ultimately, Konecranes stated that "the current drum design meets the applicable requir[e]ments in both the contract and [ISO] standards" (R4, tab 34 at 352; tr. 3/43).

On June 18, 2020, the Navy responded and accused Konecranes of "selectively misappl[ying] minimum requirements in the contract specification to support their position that the luff hoist drum is expected to last less than five years by design" (R4, tab 37 at 355; tr. 3/46). The Navy pointed to the Contract specification that "requires hoists to have a *minimum* ISO 4301 group classification of M5" (R4, tabs 37 at 356 (emphasis in original), 142 at 214 (draft of letter), 128 at 796 (Contract specification (emphasis added)). The Navy asserted that, had Konecranes "used the ISO 4301/1 properly, they would have concluded that the group classification for the luff hoist is significantly higher than the minimum required in the specification" (R4, tab 37 at 356). The Navy asserted that, rather than the M5 classification in the Contract specifications, Konecranes should have arrived at a more "appropriate classification of the luff hoist of M7 or M8" (R4, tab 37 at 356; tr. 5/49-50).

Even as the Navy confidently made these assertions regarding the ISO standard as requiring an M7 or M8 classification, the Navy's lead engineer on this project privately acknowledged he did "not understand" how the commercial ISO standards related to designing crane components, such as drums (R4, tab 148 at 339 (Navy lead engineer: "I do not understand the design implications for a particular group classification. Do you know how being a group classification of M5 or M7 for a hoist affects the design of hoist components?"); tr. 5/59-60). One of the Navy's mechanical engineers on the shop inspection team acknowledged he did "not have much insight or experience in the use of ISO and FEM service class ratings, but from the little I know I do think we could be vulnerable" (R4, tab 148 at 338; tr. 3/60-61). The Navy's lead engineer on this project later acknowledged that, in "retrospect . . . the M7 or M8 would have been appropriate" (tr. 5/57-58). Notably, the Navy had used a minimum M7 classification in its contract specifications for the significantly heavier 140-ton and 175-ton cranes Konecranes had recently built for the Navy (tr. 5/59, 2/12).

Moreover, the Navy engineers were dissatisfied with the 3,200 hours usage number established by the specifications (as explained by Konecranes), which usage

was "significantly lower than what we were expecting" (tr. 6/104-05, 5/44-45 (noting that "the 3,200 hours is not what I'm looking for")). Internally, as the Navy engineers drafted the June 18 letter, they recognized that "we did not provide any usage information or hourly information to the contractor in the RFP and therefore I don't believe we should use any of that specific usage information in our response to this issue. The only thing that we can point to with respect to usage is our 30-year life expectancy." (R4, tab 143 at 4628; tr. 6/103-05, 5/47-48)

In its letter to Konecranes, the Navy cited the "30-year expected service life" in the Contract's requirements and asserted that Konecranes "should have estimated the expected hours of operation . . . of two hours per day and 250 working days per year, over the given 30-year crane life gives a total duration of use of 15,000 hours" (R4, tab 37 at 355; tr. 3/47, 5/64; R4, tab 142 at 214 (draft)). The Navy's engineers did not derive this estimate themselves but requested and received an estimate from the Puget Sound base that "500hrs is in the zone of actual use" (R4, tab 143 at 4629; tr. 5/46-47). However, the Navy had no level-luffing cranes, so the Navy operators and engineers that made these hours usage estimates had no knowledge whether a level-luffing crane would require more luffing usage to move loads than the non-level luffing cranes the Navy had (tr. 5/62 (Navy Crane Center lead engineer: "Like I said, we don't have any level-luffing cranes, so I don't have that info[rmation]" regarding whether it takes less or more luffing time to load), 6/89 (Navy Crane Center Director of Acquisition and Engineering: same), 6/63 (Navy Crane Center Director of Acquisition and Engineering: "not aware" that the Puget Sound staff had ever seen a level-luffing crane), 6/81-82).

The Navy's letter repeated its conclusion that the root cause of the problem was "the high radial bearing pressure from the wire rope on the drum groove surface and the low strength drum material" (R4, tab 37 at 356). The Navy also rejected Konecranes' actions to buff out the drum grooves because that would mean the drum would no longer be "new material" and the drum was already "excessively worn" (R4, tab 37 at 356-57). "[T]he Government does not intend to grant approval to ship the crane using the current luff drum configuration" (R4, tab 37 at 357).

On June 30, 2020, Konecranes responded (through counsel) and demanded that the Navy Crane Center "either allow [Konecranes] to ship the crane based on its current, contract-compliant design, or modify the delivery order technical specification to incorporate the new technical requirements for the luffing hoist drum" (R4, tab 38 at 358). Konecranes noted that (1) the luffing drum on crane 53 was "new material" under the Contract despite being buffed to remove the wear, (2) the luffing drum met the Contract's requirements for M5 classification and the Contract did not include hours of usage or require a higher M7 or M8 classification, and (3) the Navy had approved the crane design and, thereby, endorsed Konecranes' underlying assumptions (including the luffing hoist design provided almost three years earlier) (R4, tab 38).

"On the eve of crane delivery, [the Navy Crane Center] has changed its mind about key technical requirements and wants something in a different group classification" (R4, tab 38 at 361).

On July 1, 2020, the Navy personnel completed the shop test on crane 53 (ex. A-10; tr. 2/127-28, 1/154). Other than the Navy's continued concerns with the buffed out luffing drum, the Navy had only one other issue remaining that would have prevented Konecranes from shipping – an outstanding submittal for a brake shoe adjustment (tr. 3/64-65, 1/156-57, 5/39-40; ex. A-20). Konecranes believed the brake shoe adjustment issue was a "paperwork" issue, such as changing terms "ft/lbs" to "ft-lb" and "nm" to "Nm" and confirming serial numbers for the brakes (tr. 1/157, 3/153-54). Konecranes believed the Navy was using it as a "delay tactic," and believed that it did not prevent shipping crane 53 even though it was part of the Contract's data requirements list (tr. 1/157; 3/153, 5/39). Konecranes was ready to ship the crane (tr. 3/152-54).

On that day, however, the Navy's contracting officer issued a written directive denying Konecranes' request to deliver the crane (R4, tab 39; tr. 3/33-34). The Navy repeated its prior concerns, including that Konecranes "elected to incorporate the *minimum* M5 requirement" that was a "*minimum* requirement for the stated components and does not relieve [Konecranes] from providing a design in which related components work cohesively such that they do not cause abnormal wear of other crane components" (R4, tab 39 at 363 (emphasis in original)). The Navy concluded: "To avoid rejection of the barge for delivery, it is important that you adhere to the contracting officer's directive set forth in this letter by not shipping the crane prior to resolution as stated above" (R4, tab 39 at 363; tr. 3/33-34, 64). The Navy understood that refusing shipment impacted Konecranes' critical path (tr. 6/75). The Navy's letter did not mention the brake shoe issue (R4, tab 39).

On July 2, 2020, and again on July 17, 2020, the Navy listed both the luffing drum and the brake shoe adjustment paperwork as the basis for denying Konecranes' repeated requests to ship crane 53 (R4, tabs 40, 49). Konecranes resolved the brake shoe issue by August 3, 2020 (R4, tab 160; tr. 1/157).

On July 7, 2020, Konecranes (again through counsel) requested technical direction to determine the Navy Crane Center's "minimum technical requirements for the luffing hoist drum mechanism" including identifying: (1) the minimum required hours of use for the luffing mechanism, (2) the appropriate "M" classification the Navy wanted from the ISO 4301 standard, and (3) any minimum hardness requirements for the drum (R4, tab 41 at 365-66; tr. 3/76). Konecranes concluded by stating that it was "incurring unsustainable cost increases and delays with each day the Contract's Technical Specification issues are not resolved" (R4, tab 41 at 366; tr. 3/76-77).

Internally, the Navy contracting officer and Navy engineers acknowledged they were pressing a weak position and agreed with Konecranes' position that the Contract only required delivery of an M5 classified luffing drum (R4, tab 150; tr. 3/73-75). The Navy Crane Center's director of the design division opined that "if our response contains anything more than 'NCC requests [Konecranes] provide a luff drum that meets the M5 minimum requirement, as specified', it will mean we are directing them to provide something that is outside of the original contract, and ultimately, and equate to an REA from [Konecranes]" (R4, tab 150 at 4733; tr. 6/110-11, 3/73-74; Emerson dep. at 9-10 (noting position as director of design division)). The Navy's contracting officer agreed: "You're right, which means we lose this battle. This further supports that we do not have a strong position to get anything more than another M5 drum" (R4, tab 150 at 4733; tr. 3/74-75, 6/112 ("[A]t this point, after the deficiency, that we didn't want to specify a specific M class, because that was really the determination of the designer, and that we couldn't, per the contract, specify anything other than the minimum requirement of M5.")).

Nonetheless, on July 13, 2020, the Navy responded to Konecranes and again blamed Konecranes' "luffing hoist design" (R4, tab 43 at 368). At that time, the Navy disclaimed that it could "have provided details on the load spectrum of the luffing hoist" or regarding "the appropriate material, material surface hardness, surface finish, or material hardness depth" that would have provided greater guidance to the Navy's alleged requirements (R4, tab 43 at 368). As noted above, however, the Contract specified the material hardness and the appropriate material – particularly the type of steel to be used in constructing the drums (R4, tab 128 at 810-11). Konecranes constructed the drums consistent with the Contract's steel material specifications (tr. 1/53-54, 107, 2/13). The Navy's engineers have since acknowledged that the Navy could have provided information regarding the expected number of usage hours for "clarity," but did not (tr. 6/98, 5/61).

III. *Konecranes Submits its First Certified Claim Requesting the Navy's Interpretation of the Contract's Requirements for the Luffing Drum*

On July 20, 2020, Konecranes (through counsel) submitted a certified claim requesting a contracting officer's final decision interpreting the terms of the Contract (R4, tabs 44-45). Konecranes pointed to the Contract's requirement to build the hoists to an ISO classification of M5, resulting in 3,200 hours of operational life over 30 years (R4, tab 45 at 374). Konecranes requested the Navy's interpretation of whether Konecranes' luffing hoist design met that contractual requirement, whether the Navy required greater than 3,200 hours and 30 years of operational life (including up to 15,000 hours), and whether a luffing hoist drum meeting the M5 requirement would meet the Navy's intended usage of the crane (R4, tab 45 at 374-75; tr. 3/80-81, 4/5).

On July 30, 2020, the Navy's contracting officer answered a separate inquiry from Konecranes' counsel about the usage and load information for the luffing hoist drum (R4, tab 52). The Navy agreed with Konecranes that the load spectrum was L3 (heavy), but the Navy now asserted it expected a workload of 25,000 hours over 30 years "[d]ue to the level luffing configuration" (R4, tab 52 at 392; tr. 3/81, 5/54-55). The Navy asserted that for a "non-level luffing design," the Navy would have only required a lower 6,300-hour usage requirement (R4, tab 52 at 392; tr. 5/55). The Navy believed that a level-luffing crane would require three-to-four times more luffing usage than a non-level luffing crane (tr. 6/95).

On August 3, 2020, Konecranes responded that the newly suggested 25,000-hour requirement meant that the Navy was seeking a standard that "greatly exceeds the Contract's Technical Specification's minimum requirement of M5" for the 25-ton cranes (R4, tab 53 at 395). Konecranes explained that the 25,000-hour requirement meant the crane would need to meet an M8 classification, which was greater than what the Navy required from Konecranes in delivering 140-ton and 175-ton cranes in other contracts (R4, tab 53 at 395; tr. 5/56-59 (Navy lead engineer on Contract acknowledging it would result in M8 classification and that 140-ton and 175-ton cranes usually required minimum of M7)). Konecranes looked at the changing hours-requirement as a "moving target" (tr. 1/170).

Also on August 3, 2020 (as noted above), the Navy acknowledged Konecranes had resolved the brake shoe issue – one of the two remaining reasons given by the Navy for refusing shipment of crane 53 (R4, tab 160; *see also* tabs 40, 49). However, on August 6, 2020, the Navy again disapproved Konecranes' request to ship crane 53 based on the "[d]eficient luffing hoist drum" (R4, tab 55; tr. 3/85).

On August 5, 2020, the parties had a conference call to determine the best path forward to resolve this issue (R4, tab 96 at 543-44). That resulted in Konecranes providing the Navy with a requested memo laying out several options to move forward; Konecranes recommended the use of a flame-hardened drum using stronger ASTM A830 grade 1037 steel, which would meet the Navy's heightened M8 "new usage requirements" resulting in 12,500 usage hours (R4, tab 56 at 403-04; tr. 1/175-78, 2/79-80). On August 13, 2020, the Navy chose that option and requested pricing from Konecranes (R4, tab 58; tr. 3/89-90, 4/10-11). On September 4 and 11, 2020, Konecranes provided proposals for replacing the luffing drums with flame-hardened drums on all four cranes for $6.3 million (R4, tabs 60, 65 at 433; tr. 4/14-15). Konecranes also advised of the need to move forward quickly because the costs for the barge to transport the cranes would increase $33,333.33 per week after September 24, 2020 (R4, tab 65 at 430; tr. 3/91-92). Alternatively, it would cost $328,656 to demobilize the transportation company (R4, tab 65 at 433; tr. 3/91).

The Navy balked at the cost of the flame-hardened drums, finding it "much higher than we anticipated," and counteroffered $895,552 for the four new luffing drums, which Konecranes did not accept (R4, tab 82; tr. 6/36-37). With the impasse, the Navy stated it would instead provide a contracting officer's final decision on the contract interpretation issue; Konecranes stated it would file a monetary claim for delay costs and demobilize the barge to mitigate costs (R4, tab 82 at 471; tr. 3/92, 111, 4/20-21).

On October 30, 2020, the Navy issued its contracting officer's final decision on the contract interpretation issue (R4, tab 95). The Navy squarely blamed Konecranes for a deficient design and that "the burden is on the Contractor to develop and propose a solution that will meet the contract requirements" (R4, tab 95 at 519). The Navy labeled the crane 53 luffing drum as "defective," recounted the "unacceptable damage due to corrugation," and rejected Konecranes' solution of changing the wire rope on the luffing drum (R4, tab 95 at 519-25). The Navy asserted that Konecranes had provided no "calculations or technical justification" to demonstrate the luffing drum would even last 3,200 hours (R4, tab 95 at 527). Moreover, "the 'minimum' ISO 4301 M5 classification requirement provided in the contract requires that no-less than M5 can be used, but certainly does not limit the designer to provide a higher classification if design conditions necessitate" (R4, tab 95 at 530). Because Konecranes' design used only the minimum M5 classification in the Contract and would have an operational life of 3,200 hours, the Navy asserted that Konecranes' design failed to meet the 30-year operational life (R4, tab 95 at 529-31). The Navy concluded that Konecranes was at fault and "in light of FAR 52.212-4(a), the Government expects that the replacement of the nonconforming supplies will come at no increase in contract price" (R4, tab 95 at 533). Thus, the Navy asserted that Konecranes must replace the luffing drums with flame-hardened drums the parties had previously discussed, but the Navy would not pay for it (R4, tab 95 at 532-33).

As part of its analysis, the Navy blamed the deficient design and the 3,200-hour operational life, in part, on Konecranes' "significant error" in calculating the luffing hoist line pull radial bearing pressure (R4, tab 95 at 527-28). As noted above, the Navy engineering staff had previously dismissed the calculation error as the problem (R4, tab 136). Indeed, the Navy had agreed to adopt the European commercial standard as requested by Konecranes but initially failed to formally modify the contract as an "oversight" (R4, tab 100; tr. 1/100-01, 3/28-29, 6/127-28). Now that problems arose with the damaged luffing drum and Konecranes had submitted a claim, the Navy withheld issuing the promised modification out of concern that it would weaken the Navy's litigation position even though the Navy's engineers "do not like this from an ethical perspective" (R4, tab 144 ("I think it would be worthwhile to put it in our back pocket for later as it might be useful."); tr. 6/132-33, 5/91-92, 3/51 (Contracting officer: "So we just felt uncomfortable signing, issuing a modification, not understanding what the impact to our potential litigation would be."); R4, tab 108

(Navy contract specialist noted that revisions relating to the European standard were "removed from the proposed modification due to their connection to [Konecranes'] claim"). The Navy has not pressed this factual assertion on appeal.

The contracting officer's decision also stated that Konecranes did not comply with industry standards regarding "wire rope radial bearing pressure and fleet angle for the luffing hoist drum" (R4, tab 95 at 528; tr. 5/17-18). However, as the Navy acknowledged internally, the Contract does not include any specifications for wire rope radial bearing pressure and fleet angle (R4, tabs 136 ("This portal crane spec has no fleet angle requirements."), 157 ("[W]e have no basis to disapprove the submittal for the radial [bearing] pressure"); tr. 3/93-95, 5/96-97). Moreover, Konecranes' design met industry standards for radial bearing pressure (tr. 1/115-21, 2/28-29, 56-60; R4, tab 164; ex. A-18 at 53-54); and fleet angle (tr. 1/146-48 (noting that the luffing drum would have a fleet angle of 2.9 degrees, which was below the 4 degrees suggested by industry standards), 2/32-33 (same)). The Navy has not pursued this factual assertion on appeal.

The Navy also asserted that, during the June 2020 shop test, Konecranes' project manager "specifically prohibited the Government personnel from inspecting the drum" on crane 53 to allow the Navy to assess whether the buffing and polishing had worked before Konecranes attached the new Python rope (R4, tab 95 at 525; Rexin dep. at 70; Bowen dep. at 107). However, Konecranes had invited the Navy's lead quality control representative to look at the drum on crane 53 before attaching the new Python rope, but the Navy representative declined to come (tr. 2/145-46; ex. A-12).[4]

On January 27, 2021, Konecranes appealed the Navy contracting officer's final decision denying Konecranes' contract interpretation claim to this Board.

[4] The Navy asserts that Konecranes has never allowed Navy personnel to inspect the luffing drum on crane 53 after it replaced the wire rope (gov't br. at 3 (citing Bowen dep. at 10-11)). However, the deposition cited refutes this assertion, with the Navy inspector acknowledging he attended the crane 53 inspection and "during that time I looked at the luff hoist drum" (Bowen dep. at 9-10). Moreover, between July 2020 and August 2021, the Navy had four to eight Navy engineers on-site for two days every two weeks to inspect all the cranes and did so without interference from Konecranes' personnel because of COVID protocols (tr. 2/124-26, 6/134-35 (Navy Crane Center Director of Acquisition and Engineering acknowledging that "we may have had the opportunity at least to look at the drum")).

IV. *Konecranes' Second Certified Claim Seeks Monetary Delay Damages*

On October 5, 2020, Konecranes submitted a certified claim for $2,737,838 for "costs it has and continues to incur as a direct result of government-caused delays during the design approval and inspection process, as well as government-caused delays resulting from the government's change in the requirements contrary to the Contract's Technical Specification[s]" (R4, tab 83 at 472, 491).[5] Konecranes asserted that "the Navy has revealed that its intended requirement for the luffing hoist drum is in fact a classification of M8" (for a 30-year usage of 15,000 or 25,000 hours) instead of an M5 classification in the Contract's specifications (R4, tab 83 at 479, 486). Konecranes asserted that the Navy's conflicting requirements and superior knowledge about the unstated M8 requirement rendered performance impossible (R4, tab 83 at 487).

On December 4, 2020, the contracting officer issued a final decision denying Konecranes' delay damages claim (R4, tab 96). Referencing its October 30, 2020 contracting officer's final decision, the Navy noted that the alleged delays were the "direct result of the Government's disapproval of [Konecranes'] Request to Ship . . . Crane 53 due to a defective luffing hoist drum" (R4, tab 96 at 545-46). The Navy stated that it had "not created an impossible performance scenario; nor ha[d] it changed contract requirements" (R4, tab 96 at 546). The Navy continued its assertion that Konecranes failed to accurately assess the Contract's "requirement to design the crane with an anticipated 30-year life" and "to assess what materials would be needed to meet that requirement" (R4, tab 96 at 546).

On March 3, 2021, Konecranes appealed the contracting officer's final decision denying the delay damages claim to this Board.

V. *Konecranes Continues Performance and Finishes Constructing the Four Cranes*

Notwithstanding the on-going disputes and appeals, Konecranes was contractually obligated to keep building all four cranes (tr. 3/203-04; R4, tab 19 at 326 (delivery order for crane 53 to Bangor); exs. A-15 at 3 (delivery order for crane 54 to Bangor), -16 at 3 (delivery order for crane 51 to Bremerton), -17 at 3 (delivery order for crane 52 to Bremerton)). Based on the Contract's delivery schedule, Konecranes only anticipated needing "space to build two cranes at any given time" at the Alaska Marine Lines site (tr. 3/183, 1/78). However, the Navy's refusal to allow Konecranes to ship crane 53 (and then crane 54) meant that Konecranes needed to lease additional land from

[5] The claim also sought $8,323.56 for costs incurred due to the Navy's alleged delays in conducting the technical review of Konecranes' crane design (R4, tab 83 at 491). Konecranes does not appear to be pursuing this aspect of its claim on appeal.

the Alaska Marine Lines site to build all four cranes (tr. 3/184 ("taking up substantially more space . . . because we had now parts of four jibs [cranes] on the site, but we didn't have anything shipped"), 4/58-59). Between August 2020, through August 2021, Alaska Marine Lines increased the monthly rental rate from $9,800 to $25,250 to account for the additional space (R4, tab 64 at 425; ex. A-6 at 3 (noting the increased costs from August 2020 through August 2021); tr. 3/184). Konecranes informed the Navy's contracting officer regarding the increased rental costs (tr. 3/190-91).

On January 25, 2021 (before filing either notice of appeal), Konecranes provided a report to convince the Navy that the 6 x 36 rope was the root cause of the luffing drum damage and that replacing it with the Python rope solved the problem (R4, tabs 113-14 at 645; tr. 1/133, 2/63-64, 3/101, 124, 4/26). Konecranes tested the luffing drum on crane 54, which had been initially run for 10 hours using the 6 x 36 rope and, like crane 53's luffing drum, had also suffered some damage prior to rope replacement (R4, tab 114; tr. 2/66; 3/210-11). Konecranes buffed out the drum on crane 54, replaced the 6 x 36 rope with Python rope, operated the crane's luffing hoist drum for an additional 107 hours, and found "no abnormal contact marks" (R4, tab 113 at 581-82; tr. 1/132-33, 2/63-64). After conducting this test, the drum grooves showed no damage or wear:

Tail side 25-29 180° 10 hours	Tail side 25-29 180° 24mm 10 hours	Tail side 25-29 180° 26mm 10 hours

Tail side 25-29 180° 117 hours	Tail side 25-29 180° 24mm 117 hours	Tail side 25-29 180° 26mm 117 hours

(R4, tab 113 at 583; tr. 1/133-40, 2/66-70)

On February 26, 2021, the Navy responded by reiterating the Navy's interest "in attempting another negotiation for the upgraded drums" and ignoring the report (R4, tab 114 at 645; tr. 3/111-12). Indeed, Navy engineers did not review the report (Bowen dep. at 117; tr. 5/102). Throughout March and April 2021, the parties exchanged correspondence and held a meeting regarding the new technical specifications for upgraded flame-hardened drums resulting in a proposed modification to the Contract with the new technical specifications (R4, tabs 116-18, 124-25).

As the parties again discussed upgrading to flame-hardened material for the drums, Konecranes again attempted in April 2021 to convince the Navy that the Python rope solved the problem with the luffing drums on cranes 52-54 (R4, tab 126; tr. 1/141, 2/211).[6] Konecranes tested crane 52's luffing drum for 50 hours to show there was no damage or wear with the Python rope (R4, tab 126 at 730, 734; tr. 2/208). Unlike cranes 53-54 that had used the 6 x 36 rope, crane "52 was a brand new drum and it never had the 6 x 36" rope on it (tr. 1/142; R4, tab 126 at 730). Konecranes then compared the grooves of the luffing drums on cranes 52- 54 (R4, tab 126 at 730,

[6] The Navy asserts that the Board should not treat the January and April test reports as "expert reports," asserting that they were Konecranes' "internal" reports that should not be credited as expert testimony (gov't br. at 14). Konecranes acknowledges the documents are not expert reports, but it notes it is providing this information as permissible factual "empirical evidence" and, contrary to the Navy's assertion, Konecranes provided the reports to the Navy during contract performance to demonstrate that changing the type of wire rope corrected the problem (app. reply br. at 13-14). Indeed, the Konecranes engineers that prepared the reports testified about them during the hearing (tr. 1/132-40, 2/60-72, 2/197-217). The Navy's objection seems to go to the weight of evidence and not admissibility, given that the parties stipulated to the admission of all Rule 4 tabs into evidence (including the two reports) (Pre-Hearing Stips. (Apr. 1, 2022); Order (Apr. 13, 2022) (admitting Rule 4 tabs as evidence); tr. 1/8-10). The Board will assess and weigh the reports and accompanying testimony as factual testimony, given that it was based on the personal perceptions of the engineers that prepared the reports during construction of the cranes under the Contract. *Hanley Indus., Inc.*, ASBCA Nos. 54315, 56383, 08-2 BCA ¶ 33,932 at 167,915-16, *appeal dismissed*, 345 F. App'x 572 (Fed. Cir. 2009). Even if we believed the reports were hearsay (and, here we do not, because the engineers that prepared the reports in the ordinary course testified per FED. R. EVID. 803(6)), the Board may admit such evidence even without a hearsay exception so long as we believe the evidence is reliable. *Hamp's Constr. LLC*, ASBCA No. 62257, 24-1 BCA ¶ 38,514 at 182,710, *appeal filed*, No. 24-1528 (Fed. Cir.).

762-72; tr. 2/213-14). The testing (including pictures of the drum grooves) showed no peening, corrugation, or other wear to these drums after use of the Python rope (R4, tab 126 at 762-72; tr. 1/143-44, 161-62, 2/213-14, 231).

As pictured, the Navy inspectors spent some time physically inspecting the luffing drum on crane 52 at the time one of Konecranes' engineers was preparing the April 2021 report (R4, tab 123; tr. 2/192-96). "[U]sually, it's just a quick visual inspection. It does not take long" (tr. 2/194-96).

The Navy's inspection team provided no feedback regarding the April 2021 drum report until the December 2021 mediation.[7] A Navy engineer (that was one of

[7] To the surprise of the presiding judge who was unaware of the substance of the mediation proceedings, both parties introduced and discussed a document from the mediation, without objection (tr. 5/27-29 (Navy introducing Ex. G-1 without Konecranes objection), 2/216-31 (Konecranes witness discussing issues raised in mediation including Ex. G-1 without Navy objection). Guided (but not bound) by FED. R. EVID. 408, the Board generally will not admit evidence "to prove or disprove the validity or amount of a disputed claim or to impeach by a prior inconsistent statement" regarding the consideration, conduct, or

the inspectors) critiqued the report as useless, claiming that Konecranes' surface measurement tools of crane 52 would not have picked up scrubbing or peening damage to the depth (.005 inches) that was found on crane 53 (Bowen dep. at 112-13; ex. G-1 at 1). However, Konecranes measured deeper (250 micro inches or .00025 inches) and would have picked up any such damage if it was present (tr. 2/205, 222 (noting that .005 inches was "approximately 20 times larger than what the surface roughness meter was measuring")). The Navy engineer criticized the report for providing the data graphically instead of attaching the underlying data and doubted whether Konecranes had prepared any type of regression analysis (ex. G-1 at 2). In fact, Konecranes had conducted a regression analysis to compile and graphically present the data, but did not include the underlying data in the report (and the Navy never requested it) (tr. 2/228).

Moreover, in its response to the April 2021 report, the Navy discounted the test's 50 usage hours on crane 52 (which included lowering the boom to its horizontal maintenance position four times) as insufficient to show that similar damage to crane 53 would not occur (ex. G-1 at 1). But, by placing the boom in the horizontal maintenance position four times (the annual number of times it would be placed in that position), Konecranes demonstrated how the Python rope and luffing drum performed for the equivalent of a year at that stress and in that position (tr. 2/221-22). And, "if that damage is going to occur, you would expect to see it on Crane 52 after our testing with the new wire rope" after 50 hours given that damage was seen "after a rather short quick period of time on Cranes, 53 and 54" with the 6 x 36 rope (tr. 2/218). Indeed, while still asserting that the "the hoist design is flawed" and pointing to some wear in the maintenance zone of the drum, the Navy engineer admitted the "new wire rope is likely to lessen the rate of wear as compared to the original 6x36 wire rope"

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statements made during settlement negotiations or mediation sessions. FED. R. EVID. 408(a); Jt. Mediation Agreement ¶ 7 (Oct. 13, 2021) ("The admissibility, in any further proceedings before the Board, of statements made or documents used in connection with the ADR proceeding will be guided by Federal Rule of Evidence 408."); ASBCA Rule 10(c) & Addendum II, ¶ 5. However, the parties can choose to jointly waive any confidentiality protections from a Board mediation, as they have done here regarding this document. *AeroVironment, Inc.*, ASBCA Nos. 58598, 58599, 16-1 BCA ¶ 36,337 at 177,175 (considering mediation statements that raised new issues where neither party objected); *cf. also* 5 U.S.C. § 574(b)(2) ("A party to a dispute resolution proceeding shall not voluntarily disclose or through discovery or compulsory process be required to disclose any dispute resolution communication, unless . . . all parties to the dispute resolution proceeding consent in writing."); 3 CHARLES ALAN WRIGHT & ARTHUR M. MILLER, FED. PRACTICE & PROCEDURE § 5315 (2d ed. Apr. 2023 update) ("[T]he protections of Rule 408 can be voluntarily waived.").

(ex. G-1 at 2). Also, the Navy Crane Center's Director of Acquisition and Engineering admitted that the luffing drums "were showing no damage" after the testing (tr. 6/143).

In May 2021 (while initially ignoring Konecranes' April 2021 report), the Navy offered $2.48 million to Konecranes to replace the luffing drums with flame-hardened drums using the proposed modification the parties had been negotiating (tr. 3/113-14). Konecranes counter-offered $3.015 million, but also requested a new contract line item number to provide for costs caused by the Navy's delay (tr. 3/114-15). The Navy rejected the counter-offer (tr. 3/114-15).

After Konecranes completed all four cranes in August 2021, it had to maintain the Alaska Marine Lines site. To give Konecranes an "incentive to leave," Alaska Marine Lines increased the monthly rental rate to $37,925 per month starting in September 2021 (tr. 3/187-88; R4, tab 127 at 785; ex. A-6 at 3 (noting the increased costs starting in September 2021). Konecranes informed the Navy's contracting officer regarding the increased rental costs (tr. 3/190-91).

Other than the luffing drum dispute, crane 53 has been ready for shipment since August 2020 (tr. 4/31; R4, tab 55; tr. 3/85). Crane 54 has been ready for delivery and only needs the shop test (tr. 1/203). A government-witnessed shop test cannot occur on crane 54, until crane 53 has been shipped (tr. 3/104, 4/59, 5/103). By August 2021, cranes 51-52 were completed, but the Navy had neither approved the design nor conducted the shop test on those cranes (although Navy Crane Center inspectors saw Konecranes conduct the tests on those crane's luffing drums and observed no damage) (R4, tab 123, tr. 1/203, 206, 4/35, 114; 6/143). As the construction site is currently configured, cranes 53-54 must be shipped before cranes 51-52 (tr. 3/104, 4/58-59).

In November and December 2021, the parties entered alternative dispute resolution by mediation with the prior presiding judge.[8] The mediation was unsuccessful so the Board re-assigned the appeal and it proceeded to a six-day hearing.

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[8] The Navy introduced evidence through direct, leading questioning of Navy witnesses regarding its settlement offers during the Board's mediation and Konecranes' rejection of those offers (tr. 3/118-20, 6/47-54). Aside from this evidence being less convincing given Navy counsel's leading its own witnesses to obtain this testimony, Konecranes has objected to this evidence as irrelevant under FED. R. EVID. 408 (app. reply br. at 12-13). Indeed, as noted above, the mediation agreement states that "admissibility in any further proceedings before the Board, of statements made or documents used in connection with the ADR proceeding will be guided by Federal Rule of Evidence 408." Jt. Mediation Agreement ¶ 7 (Oct. 13, 2021). We sustain the objection on a related ground. Our rules state: "[A]ll discussions in connection with such [mediation] proceedings between the parties and the Neutral are confidential and, unless otherwise specifically agreed

During the hearing, Konecranes presented delay damages for periods for which it had documented costs and estimated future costs:

Delay Costs from July 2020 – January 2021	
TYPE OF COSTS	AMOUNT
Transportation July 2020 – Oct. 2020	$824,999.98
Yard Costs Aug. 2020 – Aug. 2021	1,059,734.24
Crane Maintenance Costs July 2020 – Aug. 2021	584,865.05
Long Term Storage Preparation Costs Aug. 2021 – Sept. 2021	385,972.65
TOTAL DAMAGES with General & Administrative (15.2%), Overhead (31.6%), and Markup (16%)	$4,862,696.31

Estimated Future Costs Caused by Delays	
TYPE OF COSTS	AMOUNT
Estimated Future Yard Costs Caused by Delays: Jan. 2022 – Aug. 2023	$921.186.51
Estimated Future Crane Maintenance Costs Feb. 2022 – Sept. 2022	540,247.95
Yard Remobilization Costs	1,918,522.72
Future Costs for New Transportation Schedule	3,352,408.00
TOTAL DAMAGES with General & Administrative (15.2%), Overhead (31.6%), and Markup (16%)	$11,464,410.01

(Ex. A-6 at 1; tr. 4/45-51). Konecranes used general and administrative and overhead rates approved by the Defense Contract Audit Agency (tr. 4/47-50). The markup or profit derives from the agreed-upon rate for change orders between Konecranes and the Navy under this Contract (tr. 4/50). Based on the parties' discussions, Konecranes

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by the parties, inadmissible as evidence in any pending or future Board proceeding involving the parties or matter in dispute." ASBCA Rules, Addendum II, ¶ 5; *see also* FED. R. EVID. 408 advisory committee's note to 2006 amendment (stating that "Rule 408 excludes compromise evidence even when a party seeks to admit its own settlement offer or statements made in settlement negotiations" because "protections of Rule 408 cannot be waived unilaterally").

also provided its potential costs ($1,162,083.10) based on a change proposal to modify the Alaska Marine Lines site to allow delivery of cranes 51-52 before cranes 53-54 (ex. A-6 at 1; tr.4/52-53, 57-59). Also, as noted in the table, some of the costs labeled as "July 2020 through January 2021" includes costs through September 2021 based on bills Konecranes "paid to that point" (ex. A-6 at 2-5; tr. 4/45-46).

The Navy still needs and wants the four cranes built by Konecranes (tr. 6/56-57). However, regardless of the outcome of this litigation, the Navy intends to replace the luffing drums with flame-hardened drums (tr. 6/56).

DECISION

I. *Standard of Review*

Under the CDA and Board Rule 10, the Board proceeds *de novo* and weighs evidence based on the written and testimonial record from a hearing, unbound by any findings of a contracting officer's final decision. *Dep't of Transp. v. Eagle Peak Rock & Paving, Inc.*, 69 F.4th 1367, 1374-76 (Fed. Cir. 2023); 41 U.S.C. § 7103(e); ASBCA Rule 10(c), (d). By statute and rule, our hearings are "informal," but not chaotic to avoid unfairness or prejudice. 41 U.S.C. § 7105(g)(1); ASBCA Rule 10(c) ("Hearings shall be as informal as may be reasonable and appropriate under the circumstances."). Konecranes, as the proponent of the claims, bears the burden of proof by a preponderance of the evidence. *Peter Bauwens Bauunternehmung GmbH & Co. KG*, ASBCA No. 44679, 98-1 BCA ¶ 29,551 at 146,497, *aff'd*, 194 F.3d 1338 (Fed. Cir. 1999).

II. *Konecranes Complied with the Plain and Unambiguous Meaning of the Contract's Specifications*

The Navy asserts that the Contract's specifications were patently ambiguous regarding the number of usage hours that could meet the 30-year life requirement of the luffing drums (gov't br. at 7-9). Because Konecranes failed to inquire with the Navy regarding these allegedly ambiguous specifications, the Navy asserts that the Navy's interpretation should govern this appeal and, thereby, Konecranes failed to meet the contractual requirement for the luffing drums (*id.*). Konecranes points to the plain meaning of the Contract's specifications and asserts the Contract is unambiguous (app. reply br. at 6-10). We hold that the Contract is unambiguous and Konecranes properly provided luffing drums consistent with the plain meaning of the Contract's specifications.

"Contract interpretation begins with the language of the written agreement." *NOAA Md., LLC v. Adm'r of Gen. Servs. Admin.*, 997 F.3d 1159, 1165 (Fed. Cir. 2021)

(quoting *NVT Techs., Inc. v. United States*, 370 F.3d 1153, 1159 (Fed. Cir. 2004)); *FlightSafety Int'l, Inc.*, ASBCA No. 62659, 23-1 BCA ¶ 38,245 at 185,709, *on appeal*, No. 23-1700 (Fed. Cir.). If unambiguous, the plain meaning of a contract controls. *Boeing Co. v. Sec'y of Air Force*, 983 F.3d 1321, 1326 (Fed. Cir. 2020); *Hercules, Inc. v. United States*, 292 F.3d 1378, 1380-81 (Fed. Cir. 2002) ("In contract interpretation, the plain and unambiguous meaning of a written agreement controls." (internal citation omitted)). "A contract term is unambiguous if there is only one reasonable interpretation." *Premier Off. Complex of Parma, LLC v. United States*, 916 F.3d 1006, 1011 (Fed. Cir. 2019) (quoting *C. Sanchez & Son, Inc. v. United States*, 6 F.3d 1539, 1544 (Fed. Cir. 1993)). However, "[w]hen a contract is susceptible to more than one reasonable interpretation, it contains an ambiguity." *Metric Constructors, Inc. v. Nat'l Aeronautics & Space Admin.*, 169 F.3d 747, 751 (Fed. Cir. 1999); *Lebolo-Watts Constructors 01 JV, LLC*, ASBCA No. 59740 *et al*., 21-1 BCA ¶ 37,789 at 183,432, *aff'd*, 2022 WL 499850 (Fed. Cir. 2022). "'To show an ambiguity it is not enough that the parties differ in their respective interpretations of a contract term,' rather, both interpretations must be reasonable." *Premier Off.*, 916 F.3d at 1011 (quoting *Metric*, 169 F.3d at 751). To show a patent ambiguity, which we construe against the non-drafting party, the drafting party must show an "obvious, gross, [or] glaring" ambiguity so substantial as to impose a "duty to inquire" before contract formation. *States Roofing Corp. v. Winter*, 587 F.3d 1364, 1372 (Fed. Cir. 2009) (internal quotations omitted); *Vectrus Sys. Corp.*, ASBCA No. 61651, 22-1 BCA ¶ 38,066 at 184,817 (stating a "patent ambiguity" is "'sufficiently glaring to trigger' a reasonable contractor to inquire before submitting a bid" (internal citations omitted)).

The Navy asserts that two provisions of the Contract specifications taken together render the Contract patently ambiguous. First, the Contract states: "The entire crane shall be designed with a minimum 30 year life" (R4, tab 128 at 796). Second, the Contract states: "The crane shall have minimum ISO 4301 group classifications of A5 for the crane as a whole and M5 for hoists, luff, slew and travel" (R4, tab 128 at 796). As discussed above, Konecranes designed the crane, including the luffing drums by relying on the ISO standard for A5 for the crane and M5 for the luffing drum (R4, tabs 34, 54 at 400-01; tr. 2/16-17). The ISO standard results in an expected crane life of 3,200 hours of use over 30 years (R4, tabs 34, 54 at 400-01; tr. 2/16-17). Konecranes followed the plain meaning of the Contract's specifications, including the explicitly incorporated ISO standard. Konecranes interpreted the Contract reasonably and, thus, its interpretation controls unless the Navy has identified some contractual ambiguity. *Premier Off.*, 916 F.3d at 1011.

Attempting to create ambiguity, the Navy emphasizes the term "minimum" in these Contract specifications, particularly the ISO A5/M5 classification, and asserts that Konecranes should have known it needed to provide a luffing drum that met a higher classification standard that resulted in a higher number of usage hours (gov't br. at 8-9; R4, tab 95 at 530). However, the Navy's position is unreasonable. Let us be

clear: satisfying a minimum requirement constitutes satisfying the requirement. Even the Navy's witnesses agreed.

The Navy contracting officer and Navy engineers acknowledged they were pressing a weak position and agreed with Konecranes' position that the Contract only required delivery of an M5 classified luffing drum (R4, tab 150; tr. 3/73-75). As noted above, the Navy Crane Center's director of the design division recognized that requiring anything more than "'a luff drum that meets the M5 minimum requirement, as specified', it will mean we are directing them to provide something that is outside of the original contract, and ultimately, and equate to an REA [request for equitable adjustment]" from Konecranes (R4, tab 150 at 4733; tr. 6/110-11, 3/73-74). The Navy's contracting officer agreed: "You're right, which means we lose this battle. This further supports that we do not have a strong position to get anything more than another M5 drum" (R4, tab 150 at 4733; tr. 3/74-75; *see also* tr. 6/112 (Navy Crane Center Director of Acquisition and Engineering: "[A]t this point, after the deficiency, that we didn't want to specify a specific M class, because that was really the determination of the designer, and that we couldn't, per the contract, specify anything other than the minimum requirement of M5.")). When the Navy wanted a higher M classification for the 140-ton and 175-ton cranes Konecranes built for the Navy, the Navy required a higher M7 classification (tr. 5/59, 2/12). The Navy understood that the Contract required Konecranes to provide a luffing drum at an M5 classification, which Konecranes did. There was no ambiguity, much less an obvious, gross, or sufficiently glaring ambiguity that would trigger Konecranes' duty to inquire before contract formation. *States Roofing*, 587 F.3d at 1372; *Vectrus*, 22-1 BCA ¶ 38,066 at 184,817.

The Contract did not place Konecranes on notice that the Navy expected the luffing drum to perform beyond 3,200 hours over 30 years – the number of hours expected using the ISO standard incorporated in the Contract's specifications. As the Navy admits, the Contract "did not provide any usage information or hourly information to the contractor in the RFP" (R4, tab 143 at 4628; tr. 6/103-05, 5/47-48). Thus, Konecranes correctly relied on the ISO standard in the Contract.

Only after learning about the damaged luffing drum on crane 53 in June 2020 – well into performance and after the Navy approved Konecranes' crane design – did the Navy attempt to derive the number of usage hours it expected. However, the Navy's hours estimates were pure fiction based on (1) a lack of understanding of the ISO standard the Navy chose to put in the specifications and (2) a lack of familiarity with commercial level-luffing cranes. The Navy Crane Center had never done a commercial items procurement for cranes before (tr. 1/43, 6/78-79, 101). The Navy's engineers were uncertain regarding how the commercial ISO standard's M classifications related to usage hours for drums (R4, tab 148 at 338-39; tr. 5/59-61, 3/60-61). And, the Navy had no level-luffing cranes, so the Navy operators and engineers that provided hours

usage estimates had no knowledge whether a level-luffing crane would require more luffing usage to move loads than the non-level luffing cranes the Navy had (tr. 5/62, 6/63, 81-82, 89). Indeed, the Navy engineers believed that for a non-level luffing crane, the Navy would have only required usage of 6,300 hours (R4, tab 52 at 392; tr. 5/55). The Navy believed incorrectly that a level-luffing crane's luffing drum would require three to four times more usage than a non-level luffing crane's luffing drum, resulting in the unrealistic 15,000, 18,000, or 25,000 hour estimates (tr. 6/95).[9]

Nearly the opposite is true. A level-luffing crane will use the luffing drum less than a non-level luffing crane and, thus, impose less stress and usage on the luffing drum (tr. 2/19-21, 3/215-16). Instead of using the luffing mechanism to move the boom up and down to load supplies, the level-luffing crane relies more heavily on a separate main hoist and whip hoist (or auxiliary hoist) with a separate hoist steel drum and ropes to raise and lower the hook to place loads into a submarine (R4, tab 128 at 796-97; tr. 3/215-17). The 3,200-hour usage expected under the ISO standards for an M5 classification makes sense with the design of a level-luffing crane.

Ultimately, Konecranes built its cranes, including its luffing drums, to the ISO standard in the Contract's specifications. In retrospect, the Navy asserts it did not get what it wanted. But, it got what it contracted for. *Pro. Mgmt. Consulting Servs., LLC*, ASBCA Nos. 61861, 62173, 20-1 BCA ¶ 37,638 at 182,751 ("While [the agency] clearly demonstrated that it did not get what it wanted from [the contractor] in the SOP manual, it did not demonstrate by a preponderance of the evidence that it did not receive what it contracted for."). Thus, because Konecranes constructed the cranes

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[9] Konecranes also asserts that the Navy had superior knowledge and failed to disclose its actual usage hours requirements through a higher M classification in the Contract's specifications (app. br. at 49-51). *See ECC Int'l, LLC*, ASBCA No. 58993 *et al*., 22-1 BCA ¶ 38,073 at 184,896. Indeed, there is good reason to believe that, consistent with the superior knowledge doctrine, the usage hours would have been vital information that would have avoided costly delays, the Contract's specifications misled Konecranes by failing to include a higher M classification, Konecranes had no duty to inquire regarding the unambiguous specifications (as noted above), and the Navy failed to provide this information until well into performance. *Hercules, Inc. v. United States*, 24 F.3d 188, 196 (Fed. Cir. 1994), *aff'd on other grounds*, 516 U.S. 417 (1996). However, here the superior knowledge claim "is a prop we do not need." *Broad Ave. Laundry & Tailoring v. United States*, 681 F.2d 746, 751 (Ct. Cl. 1982). As we found above, the Navy did not determine it wanted a higher-level M classification with higher usage hours at contract formation. The Navy only reached that conclusion during performance, fumbling unnecessarily to change contractual requirements resulting in compensable delays (as discussed more below) (tr. 5/24).

based on the Contract's plain and unambiguous specifications, we sustain Konecranes' appeal of the contract interpretation claim (ASBCA No. 62797).

III. *The Navy Is Liable for Delay Damages*

"A contractor seeking to prove the government's liability for a delay must establish the extent of the delay, the contractor's harm resulting from the delay, and the causal link between the government's wrongful acts and the delay." *Essex Electro Eng'rs, Inc. v. Danzig*, 224 F.3d 1283, 1295 (Fed. Cir. 2000); *States Roofing Corp.*, ASBCA No. 54860 *et al*., 10-1 BCA ¶ 34,356 at 169,661. As to causation, "a contractor has the burden of demonstrating that the specific delays were due to government-responsible causes, that the overall completion was delayed as a result, and that any government-cause[d] delays were not concurrent with delays within the contractor's control." *Fox Constr. Inc.*, ASBCA No. 55265 *et al*., 08-1 BCA ¶ 33,810 at 167,379.

Konecranes asserts that the Navy had no basis to reject delivery of crane 53 (and the remaining cranes) because the luffing drums conformed to the Contract's requirements after Konecranes installed the Python rope on the luffing drums (app. br. at 42-49). Also, Konecranes asserts that the Navy's refusal to allow shipment of the cranes and demand that Konecranes use a stronger steel for the luffing drums, resulted in delays based on a constructive stop-work order (app. br. at 45; app. reply br. at 12). The Navy asserts that it properly denied Konecranes' repeated requests for delivery based on the initial damage to the luffing drum and that Konecranes bears responsibility for any delays because it did not act in good faith by refusing to accept the Navy's proposed price for upgrading the luffing drums (gov't br. at 9-11, 13). As discussed below, Konecranes proved that changing the wire rope corrected any defects to the luffing drum and the Navy should have accepted delivery of the cranes. The Navy's refusal to accept delivery resulted in compensable delays. The Navy extended the delays by demanding an unnecessary change to the Contract's technical requirements.

A. *Konecranes Proved that the Drums Met the Contract's Specifications and, thus, the Navy Had No Basis to Refuse Delivery of the Cranes*

The Navy refused to allow Konecranes to ship crane 53 (and the three other cranes) because it determined that the luffing drum failed to conform to the Contract's specifications (R4, tab 95 at 519-25, 533 (citing FAR 52.212-4); gov't br. at 13). Notably, the Navy based this assessment on the initial damage to the crane 53 luffing drum, refusing to credit Konecranes' corrective action that changed the 6 x 36 rope to Python rope (*see generally* R4, tabs 95-96). However, Konecranes has proved by a preponderance of the evidence that the luffing drums meet the Contract's

specifications and its corrective action of changing the rope fixed the initial problem of corrugation, peening, and other wear to the drums.

The Contract states, "The Contractor shall only tender for acceptance those items that conform to the requirements of this contract" (R4, tab 1 at 36 (quoting incorporated full text of FAR 52.212-4(a) – CONTRACT TERMS AND CONDITIONS – COMMERCIAL ITEMS (MAY 2014)). The Contract also states the Navy "reserves the right to inspect or test any supplies or services that have been tendered for acceptance" and "may require repair or replacement of nonconforming supplies . . . at no increase in contract price" (R4, tab 1 at 36 (FAR 52.212-4(a)).

"When the Government rejects work as being not in compliance with its specifications, the Boards of Contract Appeals have held that the burden is upon the Government to demonstrate that fact." *Sw. Welding & Mfg. Co. v. United States*, 413 F.2d 1167, 1176 n.7 (Ct. Cl. 1969); *Ensign-Bickford Aerospace & Def. Co.*, ASBCA No. 57929, 16-1 BCA ¶ 36,533 at 177,969 ("Unless the government proves that it properly rejected these lots, appellant is entitled to an equitable adjustment."). We have explained this anomaly of the government bearing the burden for a contractor claim "as a variation of the implied warranty of specifications seen in impossibility and defective specifications cases and characterized it as the government 'putting in issue the sufficiency of its own specifications.'" *Northrop Grumman Corp.*, ASBCA No. 52178 *et al*., 05-2 BCA ¶ 32,992 at 163,525 (quoting *Sw. Welding*, 413 F.2d at 1183), *aff'd*, 206 F. App'x 991 (Fed. Cir. 2006). In assessing these "inspection and rejection cases," we focus on whether the evidence demonstrates that a product fails "to meet contract requirements." *Ensign-Bickford*, 16-1 BCA ¶ 36,533 at 177,970, 177,974; *Yardney Tech. Prods., Inc.*, ASBCA No. 53866, 09-2 BCA ¶ 34,277 at 169,333. Regardless of which party bears the burden of proof, Konecranes proved by a preponderance of the evidence that the luffing drums complied with the Contract's specifications after changing the wire rope and should not have been found defective with the new rope.

The Navy rejected the luffing drum, in part, on its determination that the 3,200 hours expected from the M5 classification would not meet the 30-year requirement of the Contract (R4, tabs 96 at 546, 95 at 529-31; gov't br. at 5, 7-9). As discussed above, however, Konecranes' design met the 30-year requirement, because Konecranes designed the crane based on the M5 classification standard incorporated in the Contract. The Navy cannot refuse acceptance based on a heightened classification standard not incorporated in the unambiguous terms of the Contract. *Sw. Welding*, 413 F.2d at 1185 (requiring equitable adjustment where contractor complied with the contract requirements, but the government demanded more by effectively "questioning the sufficiency of its own specifications"); *Yardney Tech.*, 09-2 BCA ¶ 34,277 at 169,333 ("To justify rejection of the contractor's product, the government must

show that the inspection or test used did not impose a higher or more stringent requirement, or standard of performance, than the contract required.").

The Navy also rejected the cranes based on the initial damage to the luffing drum on crane 53 and refused to allow Konecranes to ship the cranes, claiming that Konecranes had failed to remedy the damage (gov't br. at 13; R4, tabs 95 at 519-25, 529-31, 39 at 363; tr. 3/33-34, 64). The Navy relied on the Contract's specifications, which state: "Material shall be free from defects and imperfections that might affect the serviceability and appearance of the finished product. All material shall be new and unused." (R4, tab 128 at 810). And, "[a]ll shop test identified deficient items shall be resolved prior to shipment of the crane, unless authorized by the Contracting Officer" (R4, tab 128 at 838).

Konecranes remedied the problem, but the Navy refused to accept Konecranes' solution. Initially, the luffing drum on crane 53 showed significant damage that matched the helix of the 6 x 36 wire rope after only 80 hours of use (ex. A-9 at 1-2; tr. 5/10-11; R4, tab 139 at 184). Konecranes identified the problem as the 6 x 36 wire rope, which Konecranes replaced with Python rope; the stronger rope's smoother surface solved the problem of corrugation, peening, and scrubbing that had been evident on the luffing drum of crane 53 and crane 54 (after even less use) (R4, tab 21; tr. 2/38-40, 3/22-23). As discussed in detail above, Konecranes provided the Navy with two reports to demonstrate that the luffing drums showed no damage (such as corrugation, peening, or scrubbing) after 50 or 100 hours using the Python rope (R4, tabs 113, 114 at 645; tr. 1/133, 2/63-64, 3/101, 124, 4/26; R4, tab 126 at 762-72; tr. 1/143-44, 161-62, 2/213-14, 231). Navy engineers acknowledged that the luffing drums showed less wear and no damage after lengthy testing with the Python rope (ex. G-1 at 2; tr. 6/143). The Navy's speculative concerns (while understandable after the initial damage to the luffing drum on crane 53), cannot overcome the objective evidence that the drums showed little wear or damage after Konecranes' corrective action of replacing the rope. *Ensign-Bickford*, 16-1 BCA ¶ 36,533 at 177,973 ("Subjective standards do not pass muster as adequate justification for the government's rejection of contracted items.").

Notwithstanding evidence that Konecranes had successfully remedied the problem, the Navy asserts that Konecranes still bears some of the blame for the Navy's refusal to allow shipment. The Navy contends that Konecranes denied the Navy an opportunity to inspect the luffing drum on crane 53 (and the other cranes) to assess whether Konecranes had solved the problem by replacing the 6 x 36 rope with Python rope (gov't br. at 3, 13). Indeed, the government can demonstrate it properly rejected a product if a contractor refuses to allow the government to re-test and re-inspect the product. *See Gooch Pkn. Co.*, VABCA No. 1387, 80-2 BCA ¶ 14,559 at 71,765-66. However, as we have found above, the facts do not support this allegation. First, in June 2020, Konecranes had invited the Navy's lead quality control representative to

look at the drum on crane 53 after it had been buffed out to remove the damage and before attaching the new Python rope, but the Navy representative declined to come (tr. 2/145-46; ex. A-12). Second, between July 2020 and August 2021, the Navy had four to eight Navy engineers on-site for two days every two weeks to inspect all the cranes and did so without interference from Konecranes' personnel because of COVID protocols (tr. 2/124-26, 6/134-35). Third, the Navy's inspectors were present while Konecranes tested the luffing drums for Konecranes' reports to prove the Python rope resolved the issue and would not damage the drum (tr. 2/192-94; R4, tab 126). As pictured above, the Navy inspectors carefully looked at the drum on crane 52 at the time one of Konecranes' engineers was preparing the April 2021 report that showed the luffing drums were compliant using the Python rope (R4, tab 123; tr. 2/192-96). Thus, the Navy had the opportunity to inspect the cranes, including the luffing drums, to determine whether Konecranes' solution of changing the wire rope fixed the problem.

Ultimately, the Navy erred by failing to accept shipment of the cranes. The evidence demonstrates that Konecranes' corrective action of changing the wire rope resulted in a luffing drum (and cranes) that complied with the Navy's contractual requirements. Thus, the Navy did not have a basis for rejecting the cranes after Konecranes implemented its corrective action.

B. *The Navy Breached its Implied Duty to Reasonably Inspect*

The Navy acted unreasonably in refusing to accept the cranes. Konecranes asserts the Navy's actions in refusing shipment and demanding contract changes made it impossible for Konecranes to perform and, thus, constituted a constructive stop-work order (app. br. at 17, 45-49; app. reply br. at 12). The Navy asserts it is an unproven constructive suspension of work (gov't br. at 9-11). Notably, Konecranes' claim and brief both rely on Board decisions relating to constructive suspensions of work or stop-work orders (R4, tab 83 at 487 (citing *Piland Corp.,* ASBCA No. 22560, 78-2 BCA ¶ 13,503 at 66,163 (constructive suspension while government considered changes); *Structural Restoration Co.,* ASBCA Nos. 8747, 8756, 65-2 BCA ¶ 4,975 at 23,473 (analyzing claim as a constructive suspension of work where there was no "formal stop work order"); *Utilities Contracting Co.,,* ASBCA No. 9723, 65-1 BCA ¶ 4,582 at 21,913 (analyzing a "notice of substantial change in method of performance by the Government" constituted a constructive suspension of work)); app. br. at 46-47 (same)). However, the Contract does not include a Stop-Work Order, Government Delay of Work, or Suspension of Work clause. Instead, because we cannot incorporate these clauses by operation of law in a commercial items contract, we find that the Navy breached its implied duty not to interfere by unreasonably inspecting the cranes. There can be no "constructive" suspension or stop-work order if there is no clause to base it on. It becomes a breach.

1. *We Will Not Incorporate a Stop-Work Order, Government Delay of Work, or Suspension of Work Clause by Operation of Law Because This is a Commercial Items Contract*

For our Board "to incorporate a clause into a contract under the *Christian* doctrine, it generally must find (1) that the clause is mandatory; and (2) that it expresses a significant or deeply ingrained strand of public procurement policy." *K-Con, Inc. v. Sec'y of Army*, 908 F.3d 719, 724 (Fed. Cir. 2018) (discussing and citing *G.L. Christian & Assocs. v. United States*, 312 F.2d 418 (Ct. Cl. 1963) and *Gen. Eng'g & Mach. Works v. O'Keefe*, 991 F.2d 775, 779 (Fed. Cir. 1993)). Here, the Suspension of Work, Government Delay of Work, and the Stop-Work Order clauses are not mandatory for commercial items contracts and, thus, we will not incorporate any of these clauses into the contract by operation of law.

In particular, the Contract does not incorporate a Suspension of Work, Government Delay of Work, or Stop-Work Order clause. The parties' briefs do not provide a cite to these contractual provisions and we have been unable to find them in the Contract, including modifications and delivery orders (*see* R4, tabs 1, 4-20; exs. A-15 to -17). The Contract explicitly included the Contract Terms and Conditions – Commercial Items clause, but that clause does not include any form of the Suspension of Work, Government Delay of Work, and Stop-Work Order clauses (R4, tab 1 at 35-40 (incorporating FAR 52.212-4)). Notably, the FAR implements the congressional requirement that commercial items contracts "shall, to the maximum extent practicable, include only those clauses" required by law or "consistent with customary commercial practice." FAR 12.301(a) (implementing 41 U.S.C. § 3307(e)(2)(B)); *CGI Fed. Inc. v. United States*, 779 F.3d 1346, 1352 (Fed. Cir. 2015); *SWR, Inc.*, ASBCA No. 56708, 15-1 BCA ¶ 35,832 at 175,218; *see also generally* 10 U.S.C. § 3453(b)(5). So, given the policy preference to limit the number of standard FAR contract clauses in a commercial items contract, we should not be surprised that there is no explicit suspension, delay, or stop-work provision to hang the parties' "constructive" hat on.

Instead, we must assess whether any of these clauses is mandatory and must be incorporated by operation of law under the *Christian* doctrine. *K-Con*, 908 F.3d at 724. Only fixed-price construction or architect-engineer contracts, not commercial items contracts, require the Suspension of Work clause. FAR 42.1305(a). The Government Delay of Work clause would permit similar suspension of work for a fixed-price supply contract. FAR 42.1305(c). However, the Government Delay of Work clause is "optional," not required, for commercial supply contracts such as this one. *Id.*; *see also Palmer & Sicard, Inc.*, ASBCA No. 23485, 81-1 BCA ¶ 15,029 at 74,364 (refusing to incorporate Government Delay of Work clause by operation of law into commercial items contract). Similarly, a contracting officer "may" include the Stop-Work Order clause in supply contracts, but it is not mandatory even for non-commercial items contracts. FAR 42.1305(b)(1); *cf. also SWR*, 15-1 BCA

¶ 35,832 at 175,235 (discussing a commercial items contract where the parties expressly included FAR 52.242-15, STOP-WORK ORDER (AUG 1989)). Thus, because none of these clauses are mandatory in a commercial items contract, we will not incorporate them by operation of law under the *Christian* doctrine.

2. *The Breach of the Implied Duty Not to Interfere Regarding Inspections*

In the absence of a contract provision allowing the government to unilaterally stop or delay a contractor's performance, any government caused delay constitutes a breach of the government's implied duty not to interfere with a contractor's performance. *F2M, Inc.*, ASBCA No. 49719, 97-2 BCA ¶ 28,982 at 144,331. The implied duty not to interfere derives from the implied duty of good faith and fair dealing, assuring that one party cannot destroy the other party's reasonable expectations regarding the fruits of a contract. *Metcalf Constr. Co. v. United States*, 742 F.3d 984, 991 (Fed. Cir. 2014) (noting that the implied duty of good faith and fair dealing includes "the duty not to interfere with the other party's *performance* and not to act so as to destroy the *reasonable expectations* of the other party regarding the *fruits of the contract*") (quoting *Centex Corp. v. United States*, 395 F.3d 1283, 1304 (Fed. Cir. 2005) (emphasis added)). "An implied duty of good faith and fair dealing exists in government contracts and applies to the government just as it does to private parties." *Agility Pub. Warehousing Co. KSCP v. Mattis*, 852 F.3d 1370, 1383-84 (Fed. Cir. 2017).

Any implied duty derives from the explicit terms of a government contract. *Metcalf*, 742 F.3d at 991 ("The implied duty of good faith and fair dealing is limited by the original bargain: it prevents a party's acts or omissions that, though not proscribed by the contract expressly, are inconsistent with the contract's purpose and deprive the other party of the contemplated value."); *Amatea/Grimberg JV*, ASBCA No. 60426 *et al*., 23-1 BCA ¶ 38,366 at 186,329 ("This duty is not free-floating but is tied to the explicit terms of the contract."), *on appeal*, No. 23-1700 (Fed. Cir.). Here, as we concluded above, the Navy unreasonably inspected Konecranes' cranes pursuant to the inspection provisions of the Contract Terms and Conditions – Commercial Items clause and Contract's specifications (R4, tab 1 at 36 (FAR 52.212-4(a)). The Navy's unreasonable inspection and ensuing delays resulted in a breach of the implied duty not to interfere. *Gardner Displays Co. v. United States*, 346 F.2d 585, 588-89 (Ct. Cl. 1965) (concluding that the government's "dilatory and inconclusive inspection and approval procedures . . . exceeded reason" and resulted in a breach of the implied duty not to hinder contractor performance); *Military Aircraft Parts*, ASBCA No. 60009, 16-1 BCA ¶ 36,388 at 177,411 (finding breach of implied duty where the contractor's first article "met all contract requirements" and the agency's disapproval was "unreasonable").

Ultimately, because we have found the Navy breached the implied duty, we must next turn to whether the Navy's breach solely caused the delays or whether Konecranes is responsible for any concurrent delays.

C. *Konecranes Did Not Create a Concurrent Delay When Negotiating the Potential Contract Modification*

The Navy states that Konecranes bears some responsibility for the delay because Konecranes refused to bargain in good faith to change the Contract's requirements to upgrade the luffing drums to a stronger steel (gov't br. at 10-11, 13). Konecranes asserts that the Navy solely caused the delay by refusing to reasonably inspect and accept shipment of the cranes, which complied with the Contract's specifications (app. br. at 45, 51-53; app. reply br. at 12-13). Konecranes asserts it was not obligated to accept an offer for a contract modification that did not fully compensate it for any changes, including on-going delays (app. reply br. at 12-13). As we have found and concluded above, the Navy caused delays by refusing to reasonably inspect and accept shipment of the cranes. As we discuss below, Konecranes bargained in good faith during the failed negotiations for a contract modification to upgrade the drums. There is no concurrent delay. The Navy solely caused the delay.[10]

The Contract permits only bilateral modifications to change the terms and conditions of the Contract. FAR 52.212-4(c) (incorporated at R4, tab 1 at 36) ("Changes in the terms and conditions of this contract may be made only by written agreement of the parties."). Because the Contract does not permit the Navy to make unilateral changes, any unilateral constructive change arguably would have resulted in a separate breach of contract. *Hawaii CyberSpace*, ASBCA No. 54065, 04-2 BCA ¶ 32,744 at 161,946 n.1 ("Since this contract includes the FAR 52-212-4 Contract Terms and Conditions—Commercial Items clause, which does not include a Changes clause authorizing unilateral changes, the question could be raised whether appellant's claims should be analyzed as claims for constructive changes or claims for breach of contract."), *appeal dismissed sub nom.*, *Blackman v. Roche*, 133 F. App'x 743 (Fed. Cir. 2005). Necessarily, the Navy had to negotiate with Konecranes to change the terms of the Contract.

[10] Notably, the Navy's briefing has not asserted a concurrent delay for July 2020, where the Navy rejected delivery of crane 53 based on both the luffing drum and a brake shoe paperwork issue (R4, tabs 40, 49). In any event, Konecranes offered testimony that the brake shoe paperwork issue should not have prevented delivery of the crane and viewed it as a Navy "delay tactic" to give the Navy more time to resolve the luffing drum issue (tr. 1/157, 3/153-54). And, even though the brake shoe paperwork was not approved until August 3, 2020, Konecranes could have still delivered crane 53 by the August 22, 2020 delivery date (R4, tab 19 at 327-28).

Here, the Navy's desire for harder drums constituted a proposed change to the terms and conditions of the Contract. As noted above, Konecranes built the luffing drums using a type of steel the Navy explicitly incorporated into the Contract's specifications – ASTM A572, grade 50 steel (R4, tab 128 at 810-11; tr. 1/53-54, 107, 2/13). After the damage to the luffing drum and the Navy's incorrect assessment that the damage stemmed from a soft luffing drum, the Navy wanted a drum made of stronger steel than set forth in the Contract's specifications – ASTM A830, grade 1037 steel (R4, tab 56 at 403; tr. 1/175-78, 2/79-80; R4, tab 58; tr. 3/89-90, 4/10-11).

The Navy asserts Konecranes did not negotiate in "good faith" regarding the proposed upgrade to stronger steel drums and, thus, bears some of the blame for the delays (gov't br. at 13). Essentially, the Navy is asserting an affirmative defense that Konecranes committed a prior, partial material breach of the implied duty of good faith and fair dealing. The Navy did not issue a contracting officer's decision on this point. However, the affirmative defense of prior material breach is a common-law affirmative defense, which is not subject to a contracting officer's final decision because it neither seeks payment of money nor the adjustment of contract terms. *Securiforce Int'l. Am., LLC v. United States*, 879 F.3d 1354, 1362-63 (Fed. Cir. 2018), *overruled, in part, on other grounds*, *ECC Int'l Constructors, LLC v. Sec'y of Army*, 79 F.4th 1364, 1372-73 (Fed. Cir. 2023); *Frazier Invs., Inc.*, ASBCA No. 63001, 23-1 BCA ¶ 38,313 at 186,044.

As noted above, this Contract like all government contracts, includes an implied duty of good faith and fair dealing. *Agility*, 852 F.3d at 1383-84. "Under an existing contract each party, though free to refuse to negotiate a modification, is bound, once negotiations have begun, by a duty of good faith and fair dealing imposed by the contract." 1 E. ALLAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 3.26 (3d ed. 2004); RESTATEMENT (SECOND) OF CONTRACTS § 205 cmt. c (1981) (stating that the implied duty of good faith and fair dealing applies "[i]n cases of negotiation for modification of an existing contractual relationship"). Indeed, the implied duty requires reasonable decision-making by a party when considering the other party's request for contract modification. *See Relyant LLC*, ASBCA No. 59809, 18-1 BCA ¶ 37,085 at 180,539 (stating that "the proper inquiry regarding the duty often boils down to questions of 'reasonableness'" of a party's actions); *see also Dawson & Douglas Inc. v. Dep't of Agriculture*, CBCA 6304, 21-1 BCA ¶ 37,816 at 183,638 ("The implied duty of good faith and fair dealing requires the Government to use reasonable decisionmaking when considering a contractor's request for a contract modification.").

Here, there is no evidence that Konecranes unreasonably negotiated regarding the Navy's proposed change to the terms and conditions of the Contract. The Navy mainly points to Konecranes' refusal to accept the Navy's offer for a contract

modification to upgrade the drums.[11] However, the evidence does not bear out any unreasonableness in the contract modification negotiations. Indeed, Konecranes worked with the Navy to develop the specifications for the modification and the parties exchanged counteroffers, including pricing for upgrading the drums (R4, tabs 116-18, 124-25; tr. 3/113-15). However, the Navy rejected Konecranes' counteroffer, because Konecranes wanted the contract modification to include a line item to pay Konecranes for its on-going delay costs (tr. 3/113-15). The parties could not come to a final agreement to modify the Contract. We discern no impropriety by Konecranes in its negotiating the potential contract modification, but refusing to take a bad deal, and, thus, we reject the Navy's assertion of a prior material breach of the implied duty of good faith and fair dealing.

To reiterate, the failed negotiations to upgrade the luffing drum did not cause the delay – the Navy's refusal to accept the cranes during the inspection process caused the delay. As discussed above, Konecranes was prepared to deliver cranes, including the luffing drums, that met the Contract's specifications. The Navy had no contractual basis to refuse delivery and acceptance of the cranes once Konecranes changed the wire rope on the luffing drums and corrected that problem. The Navy caused the delay by refusing to allow delivery of the cranes and demanding steel

[11] Normally, such settlement negotiations would be protected by FED. R. EVID. 408(a), which guides but does not bind our Board. *Cheyenne River Sioux Tribe v. United States*, 806 F.2d 1046, 1050 (Fed. Cir. 1986) ("An unaccepted offer of settlement ordinarily is not admissible evidence to show either the existence or amount of liability."); *Linda Rugina Co.*, ASBCA Nos. 62207, 62334, 20-1 BCA ¶ 37,578 at 182,462 ("[A]n offer to settle a claim is not admissible to prove the validity (or amount) of a disputed claim."). Yet, Konecranes never objected to our consideration of the pre-mediation settlement negotiations, likely because allegations of bad faith and undue delay are an exception to consideration of such evidence per FED. R. EVID. 408(b). *Milhouse v. Travelers Comm. Ins. Co.*, 982 F. Supp. 2d 1088, 1105 n.10 (C.D. Cal. 2013) (stating that Rule 408 "allows evidence of settlement negotiations to be admitted where offered not to prove liability, but to refute a claim of undue delay or bad faith"), *aff'd*, 641 F. App'x 714 (9th Cir. 2016). However, as we discussed in the Findings of Fact above, we will not admit settlement discussions from the Board mediation as evidence unless both parties consent. ASBCA Rules, Addendum II, ¶ 5 ("[A]ll discussions in connection with such [mediation] proceedings between the parties and the Neutral are confidential and, unless otherwise specifically agreed by the parties, inadmissible as evidence in any pending or future Board proceeding involving the parties or matter in dispute.").

drums stronger than required by the Contract. The Navy could have ended any delay by simply accepting a compliant product.

Indeed, the Navy prolonged this process by knowingly raising tangential issues that delayed and complicated resolution through a contract modification. For example, the Navy had agreed to modify the Contract to add a commercial European safety standard, but reneged when Konecranes filed its first claim, even though the Navy's engineers believed it was unethical (R4, tab 144; tr. 6/132-33, 5/91-92, 3/51; R4, tab 108). Also, Navy engineers did not think the miscalculation that prompted the change to the European safety standard was related to the damaged luffing drum, but the contracting officer cited it as a basis in her final decision anyway (R4, tabs 136; 95 at 527-28). The Navy raised concerns regarding the fleet angle of the wire rope and radial bearing pressure on the drum (including in the contracting officer's final decision) (R4, tab 95 at 528; tr. 5/17-18), even though the Navy recognized that the Contract included no such requirements (R4, tabs 136, 156; tr. 3/93-95, 5/96-97). Also, the contracting officer's final decision demanded that Konecranes pay for the upgraded drums, even though the Navy was changing the type of steel required for the luffing drums and, even now, recognizes that the parties needed to negotiate a modification to upgrade the drums (R4, tab 95 at 533). Given that the Navy pushed for this change and it delayed and frustrated Konecranes' performance, the Navy remains liable for the delay. *See Piland Corp.*, ASBCA No. 22560, 78-2 BCA ¶ 13,503 at 66,163 (finding government liable where agency opted to change a contract's terms and it resulted in delaying performance).

Ultimately, Konecranes' actions in attempting to negotiate a contract modification were not unreasonable and the basis for the delay. The Navy's actions in refusing to allow Konecranes to ship the contractually compliant cranes caused the delay. The Navy must compensate Konecranes for these delays.

IV. *Konecranes May Recover Delay Damages Through the Hearing*

Konecranes has built the cranes, it still intends to deliver them, and the Navy still wants them. Where there is a breach, typically the non-breaching party may elect to allege a total breach, resulting in contract termination, or treat it as a partial breach, electing to enforce the contract and recover damages as incurred for any delays. *Scott Timber Co. v. United States*, 692 F.3d 1365, 1379 (Fed. Cir. 2012) ("At the time of the alleged breach, Scott was entitled to elect one out of two options: (1) treat the suspensions as a total breach, seek to rescind the contract, and sue for damages including the costs of replacing the contracted-for timber; or (2) treat the suspensions as a partial breach, accept the government's delayed performance, and sue for damages caused by that delay."). Here, Konecranes diligently performed the contract all the way up to delivery and its claim and appeal do not seek to end the Contract but seek

only to recover damages resulting from the delays caused by the Navy.[12] Thus, we have a partial breach of an on-going contractual relationship.

"A non-breaching party who accepts delayed performance may still claim damages for partial breach because of the delay." *Raytheon Co.*, ASBCA No. 61859, 20-1 BCA ¶ 37,630 at 182,689. Like any other breach claim, the injured party must prove its damages were reasonably foreseeable, substantially caused by the breach, and shown with reasonably certainty. *Ind. Mich. Power Co. v. United States*, 422 F.3d 1369, 1373 (Fed. Cir. 2005). Konecranes' damages were reasonably foreseeable. And, as noted above, Konecranes demonstrated the Navy substantially caused (indeed, solely caused) the delays resulting in damages.

The breach's partial nature places limitations on what damages an injured party can show with reasonable certainty. Partial breach damages "compensate the injured party only for the loss it suffered as the result of the delay or other defect in performance that constituted the breach, not for the loss of the return of performance." *Yankee Atomic Elec. Co. v. United States*, 536 F.3d 1268, 1280 (Fed. Cir. 2008) (quoting E. ALAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 8.15 (2d ed. 2000)). The injured party may recover damages for nonperformance only until trial. *Shell Oil Co. v. United States*, 7 F.4th 1165, 1172 (Fed. Cir. 2021). "Because of its highly speculative nature, a claimant may not recover, at the time of the first suit for partial breach, prospective damages for anticipated future nonperformance resulting from the same partial breach." *Ind. Mich.*, 422 F.3d at 1376.

As noted above, Konecranes has presented its damages in three categories: (1) delay costs from July 2020 through January 2021, which actually includes costs through September 2021 (ex. A-6 at 2-5; tr. 4/45-46); (2) estimated future costs caused by delays, which includes some damages prior to the hearing (ex. A-6 at 6-12; tr. 4/46); and (3) a proposed new scope of work to alter the work site to deliver cranes 51-52 before cranes 53-54 (ex. A-6 at 1; tr. 4/52-53, 57-59). Notably, Konecranes

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[12] The Disputes clause only required Konecranes "to proceed diligently with performance of the contract, pending final resolution of any dispute arising under the contract" but not for a dispute "relating to" a contract such as a breach (R4, tab 1 at 36 – 52.212-4(d)). "[A] material breach has the effect of freeing the contractor of its obligations under the contract, including its obligations under the disputes clause." *Alliant Techsys., Inc. v. United States*, 178 F.3d 1260, 1276 (Fed. Cir. 1999). Nevertheless, Konecranes' actions were more conservative, because if a contractor mistakenly believes there is a breach (rather than a remedy "arising under" the contract), then that would leave the contractor subject to default termination if it does not diligently perform. *Id.* at 1277 (concluding that a contractor failed to show a breach justifying refusal to perform pending resolution of a claim brought under the Disputes clause).

increased the amount of damages from $2,737,838 in its claim to $17,489,189.42 in its presentation at the hearing (*Compare* R4, tab 83, *with* Ex. A-6). A claimant may increase the amount of a claim during litigation before the Board. *K- Con*, 778 F.3d at 1006 (noting that the standard for determining a "claim" does not impose "so rigid a standard as to preclude all litigation adjustments in amounts 'based upon matters developed in litigation'" (quoting *Tecom, Inc. v. United States*, 732 F.2d 935, 937-38 (Fed. Cir. 1984)). "An increase (or reduction) on appeal in the amount claimed does not constitute a new claim under the CDA as long as the nature of the claim and basic operative facts are essentially the same." *Raytheon Co.*, ASBCA No. 57743 *et al*., 17-1 BCA ¶ 36,724 at 178,847, *aff'd*, 940 F.3d 1310 (Fed. Cir. 2019). Konecranes continues to seek delay damages for the Navy's refusal to accept the compliant cranes and unnecessarily seeking to change the Contract's specifications. The claim is the same, but the damages amount has increased as the delay has continued. We now look at which damages Konecranes may recover.

A. *Konecranes Has Proven its Delay Damages for July 2020 through September 2021*

Konecranes has proven its delay damages for July 2020 through September 2021, which includes damages for (1) transportation delay, (2) yard costs, (3) crane maintenance, and (4) long term storage preparation costs. We discuss each category briefly.

First, because the Navy refused to allow Konecranes to ship crane 53 in July 2020, Konecranes incurred transportation-related costs. Konecranes incurred a daily barge rental charge of $4,500 between July 2, 2020 (when crane 53 was ready for shipment) and October 2, 2020 (when the lease for the barge ended) (ex. A-6 at 2-3; tr. 4/64-65). Konecranes had contracted with a company (Berard) to load the cranes onto the barge and incurred standby costs in July, August, and September 2020 (ex. A-6 at 2-3; tr. 4/66-67). Together with some project management and other related costs, Konecranes incurred costs of $824,999.98 (before general & administrative, overhead, and profit) (ex. A-6 at 1-3; tr. 4/67-68).

Second, because the Navy refused to allow Konecranes to ship any of the cranes and Konecranes remained contractually bound to continue building all four cranes, Konecranes incurred yard costs of $1,059,734.24 (before general & administrative, overhead, and profit) from August 2020 through August 2021, which included costs to relocate crane 53 to make space to build crane 52, build a runway extension to allow Konecranes to build crane 51, increased insurance for all four cranes, and increased rent for additional space at the site to hold all four cranes (ex. A-6 at 1, 3; tr. 4/68-78).

Third, because the Navy refused to allow Konecranes to ship the cranes, Konecranes incurred crane maintenance costs of $584,865.05 (before general &

administrative, overhead, and profit) from July 2020 through August 2021, including labor and material costs of cleaning, lubricating, and running the completed cranes to assure they remained in working condition and ready for delivery (ex. A-6 at 1, 4; tr. 4/79-85).

Fourth, because the Navy had refused to allow delivery of any of the four completed cranes by August 2021, Konecranes took steps to mitigate its damages by preparing and placing the completed cranes in long-term storage pending resolution of this dispute, including coating every surface to prevent rust and corrosion (ex. A-6 at 5; tr. 4/85-89). "Mitigation is appropriate where a reasonable person, in light of the known facts and circumstances, would have taken steps to avoid damage." *Ind. Mich.*, 422 F.3d at 1375; *Fluor Intercontinental, Inc.*, ASBCA Nos. 62550, 62672, 22-1 BCA ¶ 38,105 at 185,100. Konecranes incurred $385,973 in mitigation costs (ex. A-6 at 5; tr. 4/89).

All of these costs were incurred prior to the hearing, were foreseeable at the time of contracting, caused by the Navy, and are shown with reasonable certainty. Including Konecranes' general & administrative costs, overhead costs, and profit, we award damages of $4,862,696.31 for the delay through September 2021.

B. *Konecranes Cannot Recover Its Estimated Future Costs & New Scope of Work*

Konecranes seeks costs from January 2022 through August 2023 and for an additional scope of work (ex. A-6 at 1). However, these costs were estimated future costs that Konecranes had not expected to incur before the hearing in these appeals in April 2022. Indeed, Konecranes' president acknowledged that some of the figures for these future costs were "purely my guesstimation" or "guestimate[s]" (tr. 4/90, 103). As noted above, a claimant may not collect future costs beyond trial for a partial breach claim because such costs are speculative. *Shell Oil*, 7 F.4th at 1172; *Ind. Mich.*, 422 F.3d at 1376.

For example, the future costs are all speculative and are based on assumptions that have not yet come to pass. First, the estimated yard costs include such costs as expected rent of the Alaska Marine Lines site from September 2022 through August 2023, costs of restoring the Alaska Marine Lines site to its original condition where a runway was extended to build all four cranes on site, and rental costs to remove the runway extension (ex. A-6 at 6; tr. 4/50, 89-94). As Konecranes' president acknowledged, these constitute "future costs that we have yet to incur" (tr. 4/50).

Second, Konecranes provided estimated crane maintenance costs, assuming Konecranes began preparing to ship cranes in February 2022 and began to ship the cranes in October 2022 (ex. A-6 at 7; tr. 4/51, 94). Konecranes' president

acknowledged that these "remain future costs until we can have agreement on when we get [to] ship" (tr. 4/51).

Third, Konecranes provided estimated remobilization costs to prepare the Alaska Marine Lines site (ex. A-6 at 9). Konecranes demobilized the site to mitigate its damages (as noted above) (tr. 4/51). These estimated costs are to "remobilize the site in order to get the cranes back to a ready state so that we can finish the project" (tr. 4/51). When asked, Konecranes' president acknowledged he did not "know with certainty" that these costs were correct because it was an "estimate" (tr. 4/101).

Fourth, Konecranes provided estimated new transportation costs (ex. A-6 at 10). These are "all the new costs that would be incurred to deliver" the cranes to Naval Base Kitsap (tr. 4/51). These costs had not yet been incurred by the hearing.

Fifth, Konecranes provided estimated costs to modify the yard at the Alaska Marine Lines site to allow shipment of cranes 51 and 52 before crane 54 (ex. A-6 at 11-12; tr. 4/57-59). This was just a "projected proposal" that was discussed between the Navy and Konecranes (tr. 4/105). The parties have not agreed to this proposal and it is unclear if they will agree to it. These costs are speculative at this time.

Ultimately, while Konecranes cannot currently recover these estimated future costs, it may submit new claims seeking the costs as actually incurred. "The partial breach doctrine makes clear that damages that could not have been sought in a prior action because they had not yet accrued may be sought in a subsequent action." *Shell Oil*, 7 F.4th at 1173.

CONCLUSION

We sustain Konecranes' appeal of the contract interpretation issue (ASBCA No. 62797). Konecranes' appeal seeking delay damages is sustained in the amount of $4,862,696.31 plus any CDA interest from the time it submitted its claim, October 5, 2020, until paid (ASBCA No. 62827). Konecranes is not precluded from submitting additional claims to recover any delay damages not sought in its sustained claim.

Dated: May 7, 2024

DANIEL S. HERZFELD
Administrative Judge
Armed Services Board
of Contract Appeals

(Signatures continued)

I concur

OWEN C. WILSON
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

I concur

J. REID PROUTY
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. 62797, 62827, Appeals of Konecranes Nuclear Equipment & Services, LLC, rendered in conformance with the Board's Charter.

Dated: May 7, 2024

PAULLA K. GATES-LEWIS
Recorder, Armed Services
Board of Contract Appeals