

Senate Standing Committee on Foreign Affairs, Defence and Trade

Budget Estimates – 6 May 2016

ANSWER TO QUESTION ON NOTICE

Department of Defence

Topic: Submarines – Process of Manufacturing Steel

Question reference number: 1

Senator: Conroy

Type of question: asked on 6 May 2016, Hansard page 28

Date set by the committee for the return of answer: 14 September 2016

Question:

Rear Adm. Sammut: We will work out the design specifications of the steel, because it is particular to the design of the submarine, and those specifications will be determined during the design phase. We can expect it, though, to be a submarine grade steel, yes.

Senator CONROY: Has Arrium ever produced submarine grade steel?

Rear Adm. Sammut: Not to my knowledge.

Senator CONROY: Or BlueScope?

Rear Adm. Sammut: I understand that BlueScope may, in fact, provide the source material for Bisalloy. I am not to be quoted on that; that is my broad understanding.

Mr Gillis: Senator, that is correct. I was talking with the CEO of Bisalloy recently. He sources from BlueScope.

Senator CONROY: Arrium have never produced? Do they have the capacity to produce the tensile strength that you need?

Rear Adm. Sammut: Not the tensile strength that we need. Whether they can provide the source material, I am unsure of.

Senator CONROY: If you could help me understand the difference between the source and—

Rear Adm. Sammut: There is further work that needs to be done to steel, once it is produced to a certain standard, to harden it. Now, I am not a metallurgist or a mechanical engineer—

Senator CONROY: Dr Zelinsky has arrived. He may be able to help us.

Rear Adm. Sammut: But there are a number of processes that are undertaken, such as tempering and quenching the steel, which makes it harder and more capable—sorry, a higher strength of steel that is used in submarine hulls.

Senator CONROY: I am not sure that steel tempering is your specialty, Dr Zelinsky, but—I am happy for you to take it on notice—just for the interest of the committee, what would be that process? Is there someone at the back who could just give us an explanation of what you would have to do?

Dr Zelinsky: I will take that on notice. I am not a steel metallurgist, but we employ very good ones who have considerable knowledge.

Answer:

Submarine pressure hulls are typically made from high strength quenched and tempered steels. At a broad level, the processing route for these steels can be considered a two stage process.

Stage 1 is steelmaking which involves the production of green-feed plate. In Australia, specifically BlueScope, green-feed plate is produced by the blast furnace route. Consequently the raw materials used are iron ore, coke and limestone, and, to a lesser extent, high-quality scrap metal. The chemical composition of the steel, the cleanliness of the steel with respect to detrimental inclusions, and plate thickness are defined in Stage 1. Stage 1 is critical as it sets the foundation for the quality of the steel, and it facilitates the successful heat treatment of the steel in Stage 2. For the Collins Class submarines, Stage 1 was completed by BlueScope (formerly BHP Steel).

In Stage 2, the green-feed plate is heat treated using the quenching and tempering process. This process involves heating the plate to a high enough temperature that will then allow a preferred steel microstructure to form during rapid water quenching. In the as-quenched condition, the steel will have a higher than required strength and it will not be suitably tough, ie, it will be unable to resist fast fracture in its intended application. Subsequently, a tempering treatment is carried out at a temperature that will result in the desired combination of properties (strength, toughness and ductility) and preserve the predominant microstructure formed during the quenching process. For the Collins Class submarines, Stage 2 was completed by BISALLOY Steels (formerly Bunge).

Senate Standing Committee on Foreign Affairs, Defence and Trade

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ANSWER TO QUESTION ON NOTICE

Department of Defence

Topic: Enterprise Agreement – 1 July 2014

Question reference number: 2

Senator: McEwen

Type of question: asked on 6 May 2016, Hansard page 38

Date set by the committee for the return of answer: 14 September 2016

Question:

Senator McEWEN: So what I want to know is what was the dollar value of that three per cent and then the two per cent?

Mr Richardson: The dollar value depends upon the salary you are on.

Senator McEWEN: I understand that. I mean the dollar value overall to the Department of Defence? What have you avoided in having to pay in wages increases?

Mr Richardson: The chief financial officer might have the precise detail on that.

Senator McEWEN: You must have known, when you made the offer, how much that was going to cost Defence?

Mr Richardson: Yes, but I do not have it in my head.

Mr Prior: I do not have that in my head either. I do not have that detail with me. We could certainly seek to get that.

Senator McEWEN: Can you make a rough stab in the dark. Mr Richardson: We can get you that very—

Senator McEWEN: There is five per cent that has not been paid from 1 July 2014. What is that as a proportion of the Defence—

Mr Richardson: No. We are not going to stab in the dark. We will give you a precise figure.

Senator McEWEN: Can you do that before half past 12?

Mr Richardson: We could pretty much be able to do that. If not, we can give your office a ring and give it to you. That is readily available.

Answer:

Senator McEwan asked for the cost of a new Enterprise Agreement had it been operational from 1 July 2014. Defence does not capture this cost, that is, there is no Agreement, therefore costs cannot be estimated.

However, Defence can advise that the estimated cost of the proposed Enterprise Agreement that was put to a staff vote late April 2016 was \$285 million over the Forward Estimates. The offer comprised a pay rise of 3% in year one, 2% in year two and 1% in year three.

Senate Standing Committee on Foreign Affairs, Defence and Trade

Budget Estimates – 6 May 2016

ANSWER TO QUESTION ON NOTICE

Department of Defence

Topic: Supply Ships – IOC Dates

Question reference number: 3

Senator: Xenophon

Type of question: asked on 6 May 2016, Hansard page 41

Date set by the committee for the return of answer: 14 September 2016

Question:

Senator XENOPHON: I understand the commercial considerations. But, in terms of the supply ships, one aspect that was put to me is that, even if the hulls were built in Spain, a lot of the blocks and modules superstructure work could have been done at Techport. So I am just trying to understand what communications, what discussions, there were between Defence SA and Defence in respect of that.

(...)

Air Chief Marshal Binskin: As it has been said before, Navy is wearing significant risk in this capability at the moment. Anything we can do to reduce that risk is important to us to be able to deliver capability that the government and the people of Australia expect.

Senator XENOPHON: Just so that I can understand this, the ships are being brought forward to 2019 instead of 2021-22. Does that mean delivery date or in-the-water date?

Air Chief Marshal Binskin: We did have that before, but we will clarify that for you again now. It is important.

Senator XENOPHON: I think it was delivery. I understand for the first part of it, for 2019 and 2022, for delivery. But for the 2021-22 earlier date, did that mean delivery or in the water?

Air Chief Marshal Binskin: What we have been using before is: what is in the water; then you will have material release; then you will have IOC—in service.

Vice Adm. Barrett: The dates I was referring to were IOC—from my memory. I will confirm those and pass them to you. The point I was making is: there has been a significant bringing forward of those dates from what was originally expected.

Answer:

The first Auxiliary Oiler Replenishment (AOR) is expected to achieve Initial Operational Capability (IOC) in February 2021. The second AOR is expected to achieve IOC in July 2021.

Senate Standing Committee on Foreign Affairs, Defence and Trade

Budget Estimates – 6 May 2016

ANSWER TO QUESTION ON NOTICE

Department of Defence

Topic: Pacific Patrol Boats – Acquisition and Sustainment Costs

Question reference number: 4

Senator: McEwen

Type of question: asked on 6 May 2016, Hansard page 42

Date due for tabling: 14 September 2016

Question:

Mr Gillis: The plan in the contract is for the maintenance to be undertaken in Cairns and that that would be the primary source, and Austal has a subcontractor for that work. I think the reference of some work in Austal as the builder, if there was some maintenance, there may be a requirement to do some minor stuff. But the reality of Pacific patrol boats and the size of them and the size of our nation and the location that we are actually deploying these vessels is such that the logical place to do the deeper maintenance in Australia would be in Cairns and also into the region. There is a considerable amount of work that needs to be done in the region, collocated with where the ships are deployed.

Senator McEWEN: What do you mean by 'in the region'—apart from Cairns?

Mr Gillis: When the ship is operating out of Fiji—

Senator Payne: Our neighbours, the countries through the region.

Senator McEWEN: I know that. So some of them are going to be able to do deep maintenance?

Mr Baxter: There are varying levels of maintenance that will be conducted. Routine, low-level maintenance will be conducted in the nation which operates the ship in the Pacific. For deeper level maintenance the principal place for that to occur will be Cairns.

Senator McEWEN: Are you saying that the majority of the \$400 million in sustainment work over the life of these vessels will be done in Cairns?

Senator Payne: Yes.

Senator McEWEN: Is there any portion of the \$400 million being done in the regions, as you say?

Mr Gillis: The fact that these ships are deployed into the region means a layer of maintenance work is going to have to be done in country. So, of the expenditure, the contractor will actually be required to provide support and training to the Pacific Islands and to the islanders to maintain their vessels and to support them in maintaining the vessels. A proportion of that would come back into Cairns, and that is where we would be doing the deeper maintenance and the heavier work.

Senator McEWEN: Is the financial support to assist our neighbour countries to undertake the maintenance of these vessels coming out of that \$400 million mentioned in the press release?

Mr Gillis: Yes. It is actually a part of that contract.

Senator McEWEN: How much of the \$400 million is it?

Mr Gillis: I would probably have to take that one on notice in respect of the breakdown between each of the nations and what would actually be required in respect of the lower level maintenance and of the higher level maintenance.

Senator McEWEN: Alternatively, can you answer it this way: how much of the \$400 million will go to Cairns?

Air Chief Marshal Binskin: We will take that on notice. There is also a lot in the sustainment costs of the vessels in the program. That sustainment cost will factor in a lot of the regional maintenance that we are talking about here. So rather than get misquoted and mixed up here, we will take this on notice to provide you with the breakdown.

Answer:

The majority of the \$400m sustainment funding will be expended in Cairns. Until the vessels have been entered into service and we have a better understanding of their tempo, Defence is not able to provide a precise amount.

The Cairns component will include:

- All nominated refits (deep maintenance conducted on each vessel every six years); and
- Half of the core services expenditure (maintenance planning and warehousing support).