Q. **Re: Refurbishment of Marine Terminal at the Holyrood Thermal Generating Station (Tab 3)**

At page B-24, Appendix B, Hatch makes reference to a requisition which was forwarded to the loading arm manufacturer presently known as Emco Wheaton, along with a response. Please provide copies of this requisition and response from Emco Wheaton.

A. An e-mail, provided by Hatch, which outlines their correspondence with Emco Wheaton pertaining to the loading arm modifications, is attached.

FW: Loading Arm Retrofit
Saunders, Greg
to:
MatthewLeonard
09/27/2011 03:48 PM
Cc:
GPiercy
Show Details

1 Attachment

ATT3075001.gif

Matthew

Please read this email. I believe this is the best we have on the loading arms.

Regards,

Greg Saunders P.Eng.
Hatch St. John's, General Manager
Hatch Limited
The Bally Rou Building, Suite
280 Torbay Road, St. John's, NL
A1A 3W8
Ph: (709) 754-6933 {ext. 263}
Fax: (709) 754-2717
Cell: (709) 690 1932
e-mail: gsaunders@hatch.ca
web : www.hatch.ca

From: Careen, Anthony
Sent: Tuesday, September 27, 2011 3:29 PM
To: Saunders, Greg
Subject: FW: Loading Arm Retrofit

FYI

From: Roelof.vanderSleen@emcowheaton.com [mailto:Roelof.vanderSleen@emcowheaton.com]
Sent: Tuesday, March 08, 2011 6:22 PM
To: Smith, Nicki
Subject: Fw: Loading Arm Retrofit

Hello Nicki;
Have heard back from my sources.
Their concern is the age of the loading arm.
Such factors as unforeseen stresses that may have been applied to the arm, corrosion in the piping, and the fact that a lot of these arms were originally not designed for this length of service.

Adding additional length to the arms would result in more counterweights and thus additional loading on the base swivels.

The general consensus appears to be that it is not advised. You could probably raise the arm to a higher level as long as the same operating parameters were kept.

Regards
Roelof van der Sleen
Product Specialist III

Emco Wheaton Corp.
2480 Bristol Circle,
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"Smith, Nicki" <nicki.smith@hatch.ca>

2011-03-08 02:54 PM

To "roelof.vandersleen@emcowheaton.com" <'roelof.vandersleen@emcowheaton.com'>
cc
Subject RE: Loading Arm Retrofit

From: Smith, Nicki
Sent: Wednesday, March 02, 2011 3:30 PM
To: 'roelof.vandersleen@emcowheaton.com'
Subject: Loading Arm Retrofit

Hi Roelof,

As discussed today, the original loading arms were built by Continental Emsco Company and designed for maximum vessel size of 35,000 DWT. Today our client is offloading bunker C fuel oil from vessels that range from 40,000 - 53,000 DWT. The smallest vessel that docks for fuel offloading is larger than the original maximum vessel size the jetty and loading arms were designed for.

Could you review the attached documents (original design information and manufacture loading arm drawings) and confirm if it possible to retrofit the two loading arms to meet the current vessel sizes? Our client is merely asking us to perform a high level study to determine if the loading arms can be retrofitted and a total installed cost +/- 25%. At this time, we would only require a quick description of the modifications required along with budgetary pricing. The detailed engineering will follow after we present this loading arm study and get approval to proceed.

I have gathered the information on the current vessel sizing and updated the information on the lowest reach (heavy ship in LWL) and highest reach (light ship in HWL) required on the attached drawing "Marine Loading Arm Description" (red pen markups). I have also indicated the berthing line with the distance of ships' manifold to ships side (15 - 17'). Assume all the original conditions (ie. LWL, HWL, distance of jetty deck above LWL, drift) are still accurate.

As you will see in the attached, the new low point that the loading arm has to reach is now 25.4' above the LWL. In the original design, this value was 15'. We are planning to install a foundation to raise the loading arms base 10' higher to meet the new low elevation reach. Is there any possibility of adding an arm extension to reach the new high point that the loading arm has to reach at 60' above HWL?

Can you also review the possibility of adding a quick connect coupling for connecting to the ships flange? It appears that there is some spillage of fuel during disconnecting a light ship (due to the arm being over extended).

If possible, could we get an initial response on what modifications are required by this Friday? The client has asked for a quick turnaround, as they would like to proceed with the work asap.

Thanks,

Nicki Smith, P. Eng.
Mechanical Engineer/PDG

HATCH™

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