1/3/66 DNS to RFJ

Fletcher JONES AND STAFF PTY. LTD.

EXECUTIVE OFFICES: "PLEASANT HILL", WARRNAMBOOL, VICTORIA PHONE 8011

1st March, 1966.

Ralph Jones, Esq.,
Ralph Jones Investments Pty.Ltd.,
62 The Boulevard,
CHADSTONE. S.E.10

Dear Ralph,

Elevated Steel Tank

Thank you for your letter of 28th February. The drawings and photograph duly arrived and we have, to say the least, been most impressed with the seeming magnitude of the construction. We will have a look at your various suggestions about the locating of the tower, but I thought that, in the meantime, I should pass on to you the result of Charlie's measurements, as requested in your letter of 17th February.

As I expected, the highest sprinkler is in the Office, which is a few feet higher than the Canteen. This sprinkler is 28'1½" above the floor level of the machine room, and the latter is 6'8¾" above the floor of the sprinkler pump room, making a total height of 34'10¼", which seems to indicate that maybe we could have our tower 20' below the height originally proposed if, as I surmise, it has been designed on the assumption that the highest sprinkler is 55' above the level of the sprinkler pump room.

35
3
38
15
53
14
67

I thought I should pass this information on immediately in case it is significant to you, as it seems to me, in my ignorance.

Best wishes,
Yours sincerely,

53

13 10¾

D.N.Symons
Administrative Director

010

4/3/66 REJ to DR P.E. Lush

Dr. P. E. Lush,
104 Jeffrey Street,
ARMIDALE N.S.W.

4th March, 1966.

Dear Peter,

I wonder if you are in a position to give me some assistance with the mathematical stress analysis of an elevated steel tank in the near future.

The purpose of this letter is to ask this question now so that if you are agreeable you can plan accordingly.

At this stage we have not decided on the type of tank but it will be probably a sphere made from mild steel about 24 feet in diameter, and the bottom 100 feet from the ground. The means of support will be either a tripod, or by a ring girder around the mid-height, in turn supported by columns.

I have written to the American Water Works Association and they have kindly supplied me with a bibliography for the mathematical analysis. The following are the references recommended:

"Theory of Plates and Shells by S. Timoshenko, 1st edition, 1940, published by McGraw-Hill Book Company, New York, N.Y. Section 73 beginning p. 356 contains formulas for the calculation of membrane stresses in symetrically loaded shells with a vertical axis of revolution."

(I have a copy of the latest edition, but I expect you will have no trouble getting this).

"Stresses in Shells by Wilhelm Flugge, 2nd printing, Springer-Verlag Berlin, Gottingen and Heidelberg, 1962. Contains design formulas for many types of shells and loadings."

(I haven't tried very hard to get a copy of this yet.)

The A.W.W.A. specification also gives valuable clues as to the usual methods of analysis - I can tell you about this later.

/...

011

Please let's know how you are placed in regard to the above as soon as possible. Of course it is a paying proposition but we can talk about that later.

I believe Harold Mourer was at your place the other day. We had him for tea last weekend and enjoyed him very much.

Kindest regards to you and Gwen.

Yours sincerely,

10/3/66 RFJ to DNS

10th March, 1966.

Mr. D.N. Symons
Fletcher Jones & Staff Pty. Ltd.
Box 100,
WARRNAMBOOL, VIC.

Dear Neil,

Thank you for your letter of 8th March.

I have just written to Mr. Brooke of Timken suggesting a meeting Tuesday or Wednesday.

As I would like to be fully informed before meeting Mr. Brooke, I wonder if you would be kind enough to return the correspondence between Timken and yourselves. I will be happy to return this to you again after the meeting.

I believe that I enclosed this with the various drawings sent by Timken so that you could check if we had the complete set of documents. This was in view of the fact that F.J. had said that there were "pages and pages" of specifications.

If these have been misplaced (i.e. the specifications), would you please let me know? It is not important that I see them, but perhaps it would be a good idea if I knew that Timkens had indeed sent them to you, before I see Mr. Brooke. We can then be prepared to handle the subject in a diplomatic manner if the matter is mentioned.

Thanks for the suggestion that I contact J.F. Thomson if desired, and for the information pertaining to their claims that they designed it. At this stage I do not anticipate that it will be necessary to contact them.

Humes appear to be most interested in this work and had on file cuttings of all the other elevated tanks built in Australia, and appear anxious to break into the field. They have built several ground level spherical tanks and have the dies for pressing the plate for a sphere of approximately the size required. I am still following up other leads and will make a complete report later.

However one thing seems clear - all Firms contacted so far would prefer to

012

leave the concreting of the base to a local contractor and if this was included in the main contact, they would prefer to sub-contract it. Hence I have asked them to leave out this part of the work from their preliminary estimate.

I wonder if you would be able to get a local price for the base? Perhaps Charlie could work out a price himself, or would have contacts who could.

To help in this direction, I will prepare a schedule of quantities - cubic yards of concrete, tons (?) of reinforcement, square feet of formwork etc., which will facilitate such an estimate.

Failing this, I could do it myself, but it won't be very accurate.

Kind regards,

Ralph.

~~10/3/66 RFJ to DNS~~

10/3/66 RFJ to TIMKEN

10th March, 1966.

Mr. Brooke
Chief Engineer
Australian Timken Pty. Ltd.
BALLARAT, VIC.

Dear Mr. Brooke

We have been engaged by Fletcher Jones & Staff Pty. Ltd. to design an elevated water tank for their factory at Warrnambool.

Preliminary designs have been completed and we are at present investigating the cost aspect before proceeding further. We desire to leave "no stone unturned" regarding this important matter.

It was my suggestion that if a meeting could be arranged between us, it would be most helpful at this stage. Mr. Fletcher Jones has been most impressed with the assistance that you have already given him, and I would appreciate the opportunity to follow up some of the information passed on to Mr. Jones a little more closely without taking up too much of your time.

We understand that Mr. Neil Symons, Administrative Manager of Fletcher Jones & Staff P/L has spoken to your General Manager, Mr. North, and has been assured that you will be very happy to see me.

I would be prepared to travel to Ballarat especially for this purpose and would suggest a time early next week if this is convenient. Perhaps next Tuesday or Wednesday morning would be suitable.

If this letter reaches you tomorrow, could I suggest that at our expense you send a telegram in view of the Public Holiday on Monday? This would be appreciated.

Looking forward to meeting you.

Yours sincerely,

Ralph F. Jones.

012A

21/3/66 RFJ to DNS
+ Timkin Rpt. 21/3/66

Mr. D. N. Symons,
Administrative Manager,
Fletcher Jones & Staff Pty. Ltd.,
Box 100,
WARRNAMBOOL Vic.,

21st March, 1966.

Dear Neil,

Elevated Water Tower

Further to my letter of 18th March, the cost of the concrete footings should be included in the list.

The maximum load on each footing is about 130 tons and this includes wind loads and floor loads due to possible future extensions.

You would probably need no more than a total of 5 cubic yards of concrete for the footings. Allow also 5 cubic yards of excavation, i.e. a hole no more than 5'-6" x 5'-6" square x 1'-6" deep under each column.

This is of course a relatively minor item but if not mentioned you might be wondering about it.

Humes price also includes a tank inside the sphere. This is a necessary structural part of our design.

Perhaps a contingency item also should be included at this stage although we feel that the price should be fairly realistic.

Enclosed is my report on Australian Timkens fire fighting set-up.

Kind regards,

Yours sincerely,

Ralph Jones.

R.F.J./a.d.

013