

cc: Mr. J. H. Schaefer
Mr. H. W. Kaley
Mr. O. B. Lewis
Dr. R. A. Kehoe

November 9, 1943

Your Ref: O/co

Mr. T. R. A. Bevan
The Associated Ethyl Company Limited
Artillery House, Artillery Row
London, S. W. 1, England

Dear Mr. Bevan:

We have given considerable thought to Development Report No. 8643 from Abadan relative to damaged drums in a shipment. This was submitted with your letter of September 14.

As your letter pointed out, these drums were 14-gauge and Abadan is in error in thinking that 12-gauge drums exclusively are used.

We have referred the report to our drum manufacturer and are pleased to advise you that they confirm that the metal thickness shown in the Abadan report comes within the tolerance permitted for 14-U.S. gauge. They are unable to trace the origin of this particular steel as it may have come from one of several mills. Therefore we cannot obtain the control analysis for the steel used in the fabrication of the drums.

We do know that there is a certain amount of variance in specifications of the steel, but we can assure you that all steel used conforms with the necessary specifications. Naturally sheet steel obtainable under war time conditions does not have the uniform analysis that we should like but we cannot be too critical as long as it meets the specifications for the gauge involved.

The drum manufacturer accordingly certifies that material was used which conformed with specifications, and certainly we cannot show that there was any inferiority in workmanship. We know that this cargo experienced very severe weather and we must therefore conclude that failure was the result of this rough voyage.

Abadan's report points out that only 20 drums from a consignment of 3000 failed. To them this may appear like an excellent average, and perhaps in view of the conditions, this may be so, since we have greater than 99% success in delivery. However to us it is very unsatisfactory because we must be governed not by percentages but by absolute numbers. One leaker in a thousand is just as bad and may be even worse than one in fifty or a hundred. Our aim is for perfection.

We can only conclude that this shipment met with very abnormal severity of exposure, as a consequence of which we just cannot expect 14-gauge drums to take the punishment that 12-gauge drums will. The Abadan report concludes that

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responsibility for the damage lay in bad stowage allowing the cargo to work loose on encountering high seas. From our point of view the stowage is bad because we have such a quantity of drums below deck. Every one must bear in mind that we not only do not recommend below deck stowage, but actually disapprove of it. Unfortunately under today's shipping conditions and with the quantities involved, we have no choice but cannot refuse to ship below deck. The risk of delivery is less than the consequence of non-delivery.

We have tried to do all we could by supervising the loading of the shipment. For the facilities available, the best method of stowage was adopted. Our inspector recalls this shipment vividly and remembers that case cargo had to be used to fill out the space, inasmuch as the drums did not completely fill the space. Our inspector felt that there was little chance of the case goods being broken up, but undoubtedly the rough seas did cause this to occur and once a single package works loose, then you can expect the pyramiding of this effect. We know of no practical way of overcoming this condition as long as below deck stowage must be used.

This is not intended to indicate that we are resigned to the possible consequences, and we are going to continue to give all the supervision we can in these loadings to avoid damage to drums of Fluid. Particular attention is paid to the possibility of contact of a drum with a sharp edge and dunnage is used to overcome this. We are trying to stow the cargo so that there will be no movement, and the best possibility of preventing damage.

Finally, on the top of page 4 of the Abadan report reference is made to the deposit of a close dark red oxide on the inside of the drums. My guess would be that this material was iron scale, particularly since the metal underneath was found to be covered with numerous small pits.

We appreciate having had the opportunity of studying this report. While I hope that future performance will be such that there will be no occasion for a report of this nature, at least if we have any bad experience, it would be very helpful to receive a first-hand report.

Yours truly

JWS
J. H. Behanfer

C:AB

Original by steamer
Copy by air mail

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