

S.S. "CACIQUE".

This vessel was built in 1910 by Messrs. Short Bros., their yard No. 358, and is of the Shelter Deck type.

The decks are supported by three rows of pillars, a close spaced row being fitted at the centre line and wide spaced quarter pillars with ~~deep~~^{built} girders at the sides.

The decks abreast the hatchways overhang the deck girders by 3'6".

Damage has occurred to the decks, hatch coamings and beams in the neighbourhood of the hatchways on several occasions as follows:-

REPORT.DAMAGE.REPAIRS.

New York No.8415

28/7/10

The second deck on both sides of No.3 hatchway was set down, the girders, hatch coamings and half beams being deflected and a number of rivets sheared.

Repairs were carried out by repairing the beams, coamings & deck, and the Owners fitted 4½" diar.pillars at the sides of Nos.2 & 3 hatchways, extending from the tank top to the second deck and placed at the middle of the length of the hatchways.

Newport News No.1104. No.1 hatchway, coamings at the upper & second decks were reported to be set down.

10/2/17.

Temporary wood shores were fitted under the upper & second decks in way of the hatchway, permanent repairs being deferred.

Philadelphia No.2669. It was reported that damage had occurred & that repairs would be necessary as follows:-

13/10/17.

No.1 hatchway. Beams, coamings & girders set down at the 2nd and third decks.

It was arranged that the necessary repairs should be effected at New York.

No.3 Upper deck (port side). Similar damage occurred except to deck girders.

No.4 Upper & second decks. Similar damage but not to girders.

New York No.14477

10/11/17.

See Phil: Report.

The damage described in the previous report was made good, the decks, beams & girders being faired & reconnected as necessary, but no additional support for the decks was provided.

Manila No.625.

28/2/18

Further damage of a similar nature was reported in way of No.1 hatch at the upper & 2nd decks; the decks had sagged $3\frac{1}{2}$ " at the forward coamings of the hatchways & damage was also reported to the hatch side coamings. The pillars between the Shelter & Upper decks and between the second and third decks were bent and torn from their fastenings.

Temporary repairs were effected at these hatchways by fitting angle iron stanchions extending in the fore hold from the floors to the Shelter deck, and at No.4 hatchway from the tunnel top to the upper deck. These additional struts were all fitted at the forward coamings of the hatchways.

No. 4 hatchway. The upper & second decks had sagged at the forward coaming of this hatchway and the damage was generally similar to that at No.1

The plans of the pillar and girder arrangements, as approved in August 1909, have been examined, and it is to be observed that these arrangements do not represent the present practice of the Committee in regard to the support of the decks abreast of the hatchways in vessels having three rows of pillars.

The present practice of the Committee would require additional support of the decks to be provided either by:-

- (a) Reinforcing the deck girders abreast the hatchways, fitting reversed angles on the lower edges of the half beams extending from the hatch side coaming to about 2 ft. beyond the deck girders, and reinforcing the hatch end beams, or
- (b) Fitting additional pillars under the hatchway side coamings extending from the bottom of the vessel to the Shelter Deck.

It will be noticed that the damage reported from New York in 1910 which occurred to the lower deck at No.3 hatchway has not recurred, evidently owing to the additional pillars fitted by the Owners at the sides of the hatchway, and no trouble has been experienced at No.2 hatchway at the lower deck, presumably owing to the additional pillars provided at that time.

It is therefore submitted that the decks abreast the Nos 1 & 4 hatchways should be further supported by fitting



Lloyd's Register
Foundation

W598-0226 4/3

additional pillars, these pillars to be fitted in the line of the hatchway side coamings and that the additional pillars at all the hatchways should extend to the Shelter deck. The reinforcing of the deck girders, hatch end beams and decks in way of the hatchways in any other way than with pillars would be a very costly operation.

As this vessel is registered at New York and is frequently in that port, the New York Surveyors should be requested to confer with the Owners regarding the additional strengthening which it is now considered advisable to provide. The work if done at that port should be carried out to their entire satisfaction.

There is no information as to the manner in which the vessel has been loaded on either occasion.

C.F.
W. R. Grace & Co.
 7. 6. 18
W.R.G. *F.R.N.*

