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Conclusion regarding observations made during the voyage

1-5 hold

Engine & Boiler Space

Below

After Peak

See previous report as the Weather conditions were slightly more severe during that voyage.

1-1 hold

The recorded ^{Maximum} movements of the framing are not considered to be excessive and the slight defects in this hold are considered not to be due to weakness of the structure.

1-2 hold

The recorded Maximum movements of the framing are thought to be somewhat excessive.

The defects in this hold, however, in view of being on the Starboard side only ~~are~~ may have been caused through touching a quay wall.

Deep tank

The movements of the framing are small. This being probably accounted for by the fact that the frames are $10\frac{1}{2}$ inch angles and of greater strength and stiffness than those in the hold and engine and boiler space.

No defects were found in this tank.

1-4 hold

The ^{Maximum} movements of the framing are not excessive and no defects were found in this hold.

Range of Longitudinal Stress

Although the range of stress obtained from the use of the extensometer was in no case excessive the maximum being 4.1 tons during the outward passage, the results are considered of value in so far as they show the actual variation in range of stress throughout the length of the ship. The range of the stress in the upper deck stringer plate at the half length forward and aft was found in no case to exceed half the stress at amidships.

This stress was obtained in the upper deck stringer plate amidships on the port side ^(position C.) when the ship encountered a rough wave at the time. The stresses obtained in the upper deck stringer plate at amidships on the port side ^(position D) were always more than on the corresponding

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position on the Starboard Side (Port E). This is thought to be accounted for by the fact that the Stringer plate ^{on the Port Side} "was pierced for an air pipe close to the bottom the extension of position and the Ships Side thus causing a concentration of stress in this vicinity. With this exception the stresses on each side of the vessel were in close agreement generally in agreement.

The results are considered of value in so far as they show the actual variation in range of stress throughout the length of the ship. The range of stress in the upper deck stringer plate at the half length forward and aft was found to be the same found to exceed half the stress about amidships.

Boarding

During the outward passage the ~~vessel~~ ^{Ship} occasionally "pounded." ~~The impact of the vessel with the sea.~~ When this took place the impact of the vessel with the sea was accompanied by a loud report and relatively violent longitudinal "quivering" of the structure. ~~It is suggested that this quivering motion was more~~ ~~caused~~ ^{caused} ~~by~~ ^{by} ~~the~~ ^{the} ~~impact~~ ^{impact} ~~of the vessel with the sea~~ ^{than} ~~than~~ ^{than} ~~at any other time during the voyage.~~

It is suggested that this sudden impact of the ~~vessel~~ ^{forward end of the} ~~with the water~~ ^{when on the light condition} ~~will produce or high stress~~ ^{in the vessel structure amidships. and is probably} ~~the cause of~~ ^{these cases of} ~~damage to the strength deck at~~ ^{the forward end of the hull casing which sometimes} ~~an~~ ^{is reported} ~~when vessels are not~~ ^{are not} ~~fully loaded.~~ ^{fully loaded.} ~~in ships partially loaded.~~ ^{which are} ~~sometimes reported~~ ^{sometimes reported}



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