How do you calculate loss following a 'triangle form' deviation?

Prokopios Krikris, Aug 24 2021

The background

The concept of 'deviation' has its origin centuries ago in multiple contexts.

Deviation may bring into play many terms of the charterparty and may take many forms e.g. slow steaming, suspension, and divergence from a usual route - 'a triangle form' as shown below, etc.

On the latter, deviation occurs when a ship diverges from the quickest and shortest route, thus possibly adding some extra time to the voyage[i] and/or or consumption.

Neither every divergence from the usual route adds time[ii], nor any slight increase in the distance steamed or in the sailing time amounts to deviation. While it can be a matter of luck which route turns out to be better,[iii]in many circumstances, it can be difficult to establish a single 'usual route'[iv].

When a ship justifiably deviates, charterers may raise an off-hire claim and/or bring a damages claim. The distinction between those two remedies potentially affects issues of liability and/or quantum e.g. the application of the 'least burdensome' rule in a damages claim. Also, reported cases show that charterers will attempt to place the ship off hire for the time lost by deviation and claim damages on top of that.[v] This potentially increases the owners' exposure to liabilities.

To bring clarity to the issue, the parties usually agree on the terms of the deviation either during the formation or during the performance of the contract. But charterparties are not works of art, and aside from agreeing on the liability aspect, quite often no standard methodology is agreed in calculating loss due to this form of deviation.

There is no hard rule established on how to calculate the loss. However, the complexities or the methods of calculating loss were discussed in some London Arbitration decisions[vi] that offer guidance on the point.

Absent any precedent or clear wording in the charterparty, various methodologies have been applied by the weather routing companies that either benefit the owners or the charterers, as the case may be.

The below example illustrates the various methodologies, as adopted in the market for this matter, either in the form of an off-hire or of a damages claim.

The different methodologies

Example: on a ballast voyage from Rizhao to Gladstone (4,212 nm), the ship diverged to Manila for crew change that increased the distance steamed (4,671 nm).

Figure 1: *It shows the direct route in blue line, and the actual route taken by the ship in brown color line*

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Method 1

This method compares the actual route and the direct route, and provides the deviation distance at 459nm. This method, to the benefit of the owners, does not include any underperformance claim on the deviation route. However, if good weather encountered on her route, the final result will depend on any underperformance claim raised by Charterers. What if there is no good weather?

- Extra time: 32.79 hours (or 1.37 days) i.e. 459 nm / 14 kt.
- Additional FO: 1.37 days x 24 mt or 32.88 mts and additional DO: 1.37 days x 0.1 mt or 0.14 mt.

The results are: 32.79 hours loss, 32.88 mt FO and 0.14 mt DO overconsumed. The stoppage at Manila of 5.50 hours excluded.

Method 2

This method compares the time to steam the direct route against the steaming time on the actual route, basis allowed CP speed “including about”. The results include any underperformance of the ship on her direct route and favors mostly charterers. This restricts the usual defences available to the owners in a separate underperformance claim, those defences would potentially reduce the total claimed amount.

- Direct route steaming basis 13.5 kts: 312 hours or 13.0 days
- Actual route steaming basis 13.5 kts: 354 hours or 14.8 days
- Theoretical consumption for direct route basis 24.0 mt FO & 0.1 mt DO per CP: 312 mt FO (13 days x 24 mt) / 1.3 mt DO(13days x 0.1mt)
- Consumption on vessel’s actual route: 362.43 mts FO & 1.48 mts DO

For reference: Actual distance is 4,671 nm, and direct distance is 4,212 nm.

The results are: 42.0 hours loss, 50.43 mt FO & 0.18 mt DO overconsumed. The time lost at Manila and bunkers consumed are excluded.

Method 3

It compares the time taken to transit the actual route and that of the direct route.

- Time spent on the actual route: 363 hours (including stoppage at Manila) - theoretical time spent on the direct route: 322.4 hours (13.06 kt)
  **The average speed of 13.06 kts attained on the actual route and applied to the direct route. This is a highly speculative approach*.
- FO Consumption on the actual route: 362.43 mt (adding 1.62 mt in Manila) - theoretical consumption on the direct route: 325.3 mt (24.22 mt per day)

- LSGO Consumption on the actual route: 4.72 mt (adding 0.32 mt in Manila) - theoretical consumption on the direct route: 4.0 mt

The results are: 35.1 hours loss, 35.51 mt FO & 0.4 mt DO overconsumed.

Had the double 'about' applied i.e. -0.5 kt on speed (13.5 kt) and +5% on consumption (25.2 mt), then the result would be: 51.13 hours loss & 35.09 FO mt overconsumption, being not in owners' favor.

Method 4

This method provides for a straight comparison between the actual time taken to perform the voyage and the time that would have theoretically spent to sail on the direct route.

Actual steaming time: 14 days 21 hrs 31 min, basis masters' arrival and departure reports.

- Time for direct route via Jomard Entrance: distance 4232 nm or 12.60 days. Speed of 14 kt applied, no 'about'.
- Actual bunkers consumed: 360.81 mt FO & 4.4 mt DO
- Consumption on the direct route: 12.6 days x 24 mt or 302.4mt, no 'about'.

The results are: 2.29 days (54.96 hours) loss, 58.41 mt FO & 4.4 DO overconsumed. This figure incorporates any underperformance on the actual route. What if there was bad weather on the actual route that resulted in lower average speed than CP speed? This would further complicate the assessment of loss.

Method 5

A port to port distance calculator used to support the two separate distances. The same minimum speed of 13.5 kt applied for each distance.

- Rizhao to Gladstone: 12.96 days transit time
- Rizhao - Manila - Gladstone: 14.15 days transit time
- Extra consumption: 1.19 days x 22.8 (24-5%) = 27.132 mt & 1.19 days x 0.095(0.1-5%) = 0.113 mt DO.

The results are: 1.19 days or 28.56 hours loss, 27.132 mt FO & 0.113 mt DO overconsumed.

The above does not include any underperformance claim on the actual voyage, and is more to the owners' favor subject to any potential underperformance claim established and same being properly defended.

Method 6

This was not applied here. One proposed way was to assess the vessel's performance on her notional voyage by applying performance models that factor in the weather, currents and other parameters affecting vessel's performance. Then, compare same with the actual performance on the route followed. For example, in cases of repudiation, London Tribunals[vii] have accepted as a way of calculating damages (not off-hire) consideration of the sailing time on the notional voyage, at a speed that allows for 'about' a half-knot margin and for weather and current. But each case will have to be decided in its context.

Such performance models have been improved and will likely provide an objective analysis of the expected weather conditions or of the theoretical performance speed and consumption overall, but this is not the end of the issue.

Not least because of the potential difficulty of finding the performance speed and consumption on the direct route (notional voyage), due to:

a) Imprecise calculation of the currents that would impact on vessel's sailing speed;
b) Imprecise calculation of a weather factor, which may not find favor in arbitration;
c) Full bad weather found, which makes it difficult to assess her theoretical performance;
d) Navigational hazards or steering corrections e.g. reduction of speed due to traffic, fog, etc.
e) Compliance with specific local regulations e.g. ballast exchange at some distance to shore that would affect her routing and actual distance steamed.
f) Steaming through high risk area of piracy, where owners have the right to adjust speed and course under certain circumstances, or wait for convoy hence performing at a different speed.

These could affect the sailing time to some incalculable degree, and the assessment of the loss. Hence, charterers will not easily discharge their burden.

Discussion

It appears that the way to calculate loss, following this form of deviation, is a troublesome issue.

Either the method 1 or the method 5 saves the parties from a time consuming discussion regarding the theoretical or speculative expected weather conditions that the ship would have encountered had she sailed on the direct route. Instead, the parties may focus on any underperformance claim that may be submitted separately and resolved as per established guidelines found in arbitration decisions. This provides more certainty on the point as the parties know where they stand.

So, it requires the parties to clearly agree on the exact methodology to apply for such type of deviation because of the frequent crew changes nowadays that may result in costly disputes, especially in a rising freight market.

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[i] The *Hill Harmony* [2001] 1 Lloyd's Rep 147(HL).

[ii] London Arbitration 10/05 (2004) 664 LMLN 4.

[iii] London Arbitration 29/80 (1980) 28 LMLN 3.

[iv] The *TS Singapore* [2009] EWHC 933 (Comm) para 33; See further The *Santa Isabella* [2019] EWHC 3152 (Comm), [2020] 1 Lloyd's Rep 603.

[v] London Arbitration 6/21.

[vi] London Arbitration 15/05 (2005) 670 LMLN 1; London Arbitration 10/05 (2004) 664 LMLN 4; London Arbitration 6/06 (2006) 687 LMLN 3; London Arbitration 13/97 (1997) 465 LMLN 2(2).

[vii] London Arbitration 17/07 (2007) 721 LMLN 4; London Arbitration 3/98 (1998) 479 LMLN 2.