Quick and Fair settlement in Speed and Consumption Claims

Maritime Arbitration
Analyzing the current state of Arbitration in London

November 22\textsuperscript{nd}, 2007

Weathernews Inc.
ABSTRACT

There has been a lot of misinterpretation and misunderstanding concerning the determination of ship performance speed amongst weather routing companies with many parties involved; these include vessel owners, charterers and their legal counsel. Much of this stems from the fact that the capability of the vessel under good weather conditions is difficult to assess.

The writer contends that it is now high time for industry professionals and legal counsel to confirm that the use of “weather factors” is at odds with English law and that the only acceptable method of calculating ship performance speed is that of a “fair weather analysis” with weather observations in the vessel’s vicinity confirmed by several independent or governmental sources in comparison with the Master reported weather. As new technology has recently allowed for this to occur, Weathernews Inc. proposes the above solution for all sailings automatically with a view to reducing disputes and hence it is new verifiable report being a valuable Alternate Dispute Resolution (ADR) tool.

Furthermore, the writer propose new way of dispute settlement with “Demonstrated Capability Speed” report; that is, the performance speed of any vessel in all levels of associated wind/wave conditions respectively except heavy weather conditions where voluntary speed down may take place for safety. In particular, Weathernews Inc. asserts that certain vessel types can and do overperform on warranted speed & consumption outside of the typical “≤BF4 and/or DSS3” envelope. A “one size fits all” weather definition is often not realistic and nowadays lacks commercial sense; simply, when you are able to accurately verify the vessel’s capability speed in all levels of weather.
We hope we know something about Operators’ concerns

Before voyage: Voyage planning
    Port operation planning

During voyage: Optimum route selection
    Speed and bunker consumption monitoring
    Port operation scheduling

After voyage: Port operations
    Profit/loss evaluation
    Performance evaluation
    Bunkering planning
    Next voyage planning and goes on ....
Total Fleet Management Service

**OSR : Optimum Ship Routeing**
- Fuel Routeing
- ETA Routeing
- Quickest Arrival Routeing
  * Oceanrouteing
  * Coastal Routeing
  * Near sea Routeing
  * Polar Routeing
- Onboard System “BRIDGE”

**OPO : Optimum Port Operation**
- Go / No-go Port Operation
  for Anchoring, Berthing, Cargo handling

**OSO : Optimum Ship Operation**
- Position Monitoring
- Voyage Tracking
- Vessel Performance Monitoring
- FMS.Web
- FMS.Mail
- FMS.Mobile

**OSA : Official Ship Auditing**
- PAR : Preliminary Auditing Report
- CAR : Confirmed Auditing Report
- Auditing Service

<table>
<thead>
<tr>
<th></th>
<th>For Masters</th>
<th>For Shore-side Operators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before Arrival</strong></td>
<td>OSR</td>
<td>OSO</td>
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<tr>
<td></td>
<td>Optimum Ship Routeing</td>
<td>Optimum Ship Operations</td>
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<tr>
<td><strong>After Arrival</strong></td>
<td>OPO</td>
<td>OPA</td>
</tr>
<tr>
<td></td>
<td>Optimum Port Operations</td>
<td>Official Performance Auditing</td>
</tr>
</tbody>
</table>
Suppose ...

You have a problematic vessel

What the hell happened out there?

Shore-side operator

ETA: Delayed by 3 days
Speed: 1-2 knots below the C/P
Bunker: Over-consuming
During voyage

SBA (Speed and Bunker Analysis) Charts in FMS.MAIL categorizing each day either good weather day or bad weather day and estimating time loss and over (under)-consumption based on charter party stipulation.
During voyage

**FMS.Web** initiating alerts of the followings for entire fleet under our service by graphics and tables for quick understanding of business risks.

- ETA delay
- Under-performance
- Fuel over-consumption
- Heavy weather (Winds, Waves)
- Off-recommended route
During voyage

**FMS.Web** allowing operators to analyze each vessel in detail by viewing speed, consumption and weather conditions encountered by respective vessel.
After voyage

**Voyage Evaluation Report** analyzing the vessel’s performance speed with time loss and over (under)-consumption calculated based on your reported charter party terms and conditions for your reference.

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<table>
<thead>
<tr>
<th>Voyage Evaluation Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vessel Name:</td>
</tr>
<tr>
<td>Prepared for:</td>
</tr>
<tr>
<td>DEPARTURE:</td>
</tr>
<tr>
<td>ARRIVAL:</td>
</tr>
<tr>
<td>September 10, 2007 23:30 (GMT)</td>
</tr>
<tr>
<td>Voyage No:</td>
</tr>
<tr>
<td>Voyage Type:</td>
</tr>
<tr>
<td>Cargo/On deck:</td>
</tr>
<tr>
<td>Hold:</td>
</tr>
<tr>
<td>Ship Type:</td>
</tr>
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</table>

**SERVICE TYPE**
- [ ] Ocean routing with or without Onboard Routing System
- [ ] Performance Monitoring
- [ ] Heavy Weather Advisory

**SERVICE WITH**
- [ ] Performance Speed Evaluation
- [ ] Speed & Bunker Analysis
- [ ] Route Comparison Analysis

**VOYAGE SUMMARY**
- Route selection: The vessel sailed along the recommended route.
- Schedule: Required ETA scheduled before departure: N/A
- Actual Time of Arrival: September 25, 2007 18:30 (GMT)
- Voyage Log: Speed Performance
  - Visakhapatnam to Hazira: 13.52 MT P.O. Under-consumed 5.68 MT D.O. Over-consumed
  - Bunker Performance: N/A

**ROUTE COMPARISON ANALYSIS**
- No comparison is provided.
After voyage

**FMS.DB** archives historical Voyage Evaluation Report values to be analyzed for continuous fleet performance analysis and discussions among owners, charterers and yourself. It could be utilized in future voyage planning.
Auditing Q&A in Official Performance Auditing service is conducted when any questions and/or requests on our analysis arise. Weather comparison between the master’s reports and our analysis is provided with other verified weather observations by satellites and nearby vessel reports to confirm validity.

Satellite wind observations and nearby vessel wind / wave / swell observations.

Weather comparison table
Total Fleet Management Service

- Voyage Evaluation Report with good weather analysis
- Auditing Q&A for performance dispute
- Evaluated performance data is archived in ship performance database
- Charter Party terms input for Voyage Evaluation Report. The data will be archived in vessel DB for future voyage evaluation
- Mid-Voyage Report
- Real-time Vessel Performance Monitoring with good weather analysis on FMS applications
- Oceanrouteing or Performance Monitoring
Weathernews being ... 

Listed on Tokyo Stock Exchange and

Applying Arbitration Standards
Weathernews, at a glance

http://weathernews.com/tfms

The World's Largest Full-Service Weather Company
Conflicting standard in ship performance evaluation among Weather Routing Company

(a) Appreciating a good weather analysis: Find good weather days based on good weather definition (winds, seas, current) and calculate good weather performance speed taking into account average speed and current factor

(b) Appreciating WMO (World Meteorological Organization) wave height definition (DSS)

(c) “Time loss” even when there are “no good weather days”

(d) “Over-consumption” by multiplying time loss and charter party fuel
Good Weather Analysis

**The Gas Enterprise** [1993] LMLN 357

The first step in the exercise was to find the average speed for each passage in accordance with sub-clause 4 during periods when the weather was force 4 or less. That established the speed (and consumption) of which the vessel was capable during the passage in question and therefore determined whether or not the owners were in breach. …

Once the speed of which the vessel was capable in fair weather had been established for each passage, the warranty took effect. If the speed was less than the warranted speed or if the consumption of bunkers was greater than the warranted consumption for that speed, the charterers were entitled to recover compensation over the whole of the passage in question, not just that part of the passage which was performed in good weather.
What is often referred terminology as “Performance Speed”?

For many Arbitrators

Mathematically averaged speed under good weather conditions defined in charter party is often understood as ship’s capability speed
What is often referred terminology as “Performance Speed”? 

For many Weather Routing Companies

Performance Speed is simply to dead reckon the vessel’s position under the calm sea conditions. No bearing on the fair assessment of capability speed.
Is this the best way?

**Good Weather Speed Evaluation**

(1) Good Weather Analysis: Find good weather days based on good weather definition (winds, seas, current) and calculate good weather “performance speed” taking into account average speed and current factor (The M/V Didymi, The M/V Gas Enterprise)

(2) Daily noon position basis analysis

(3) WMO (World Meteorological Organization) wave height definition (DSS)

(4) No time lost evaluation when there are “no good weather days”
Is this the best way?

Speed and Bunker Analysis

(1) Entire voyage period evaluation using good weather analysis (The M/V Didymi, The M/V Gas Enterprise)

(2) “Allowed Time” and “Allowed Consumption” applied based on charter party definition

(3) Speed “about” : 0.5 knot unless otherwise specified

(4) Bunker “about” : 5% in over-consumption evaluation

0% in fuel saving evaluation

unless otherwise specified
Reflecting some expressed legal council / arbitrators’ view ...

Comparing the Master’s reports vs. WNI analysis, with satellite wind and WMO ships reports

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME (GMT)</th>
<th>REPORTED POSITION</th>
<th>REPORTED CONDITIONS</th>
<th>WNI ANALYZED CONDITIONS</th>
<th>WMO REPORTS</th>
<th>SATELLITE</th>
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<tr>
<td></td>
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<td>WIND</td>
<td>WAVES</td>
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<td>NE</td>
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<td>6/2</td>
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<td>NW</td>
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</table>

* * indicates observation data is not available.
Reflecting some expressed legal council / arbitrators’ view ...

Weather charts showing satellite wind observations and nearby ship reports

The Vessel
An Idea ...

**Recommended Clause to be inserted in Charter Party**

Take into account the external factors such as *winds*, *waves/swells* and *currents* in;

a) Assessing “good weather days”

b) Calculating “good weather speed”
An Idea ...

Arbitration and Mediation Seminar during Weathernews Global Content Fair, May 2008

Tokyo

Makuhari Messe
PROPOSITION

“Demonstrated Capability Speed”

(DCS) Assessment Report

used for

- Enhanced Performance Speed analysis [owners]

- Realistic voyage planning (operators)
"Demonstrated Capability Speed"

New performance evaluation technology taking account weather conditions up to BF5 or 6 based on ship specific RPM vs. Speed Correlation Analysis, which allows us to assert over-performance on warranted speed & consumption outside of the typical “≤BF4 and/or DSS3” envelope.

\[ n^2 = P_1 v^2 + (P_2 + P_3 \cos (d)) h^2 \]

- \( n \): RPM
- \( v \): Vessel Speed
- \( d \): Relative Wave Direction
- \( h \): Wave Height

| \( P_1 \) | \( 0.033 \) |
| \( P_2 \) | \( 0.0168 \) |
| \( P_3 \) | \( 0.007 \) |

RPM: 70

Ship Type: Bulker
HP: 13,600
LOA: 185m
BEAM: 32m
Mean Wind Force and Wave Height (January)

Pacific

North Pacific Mean Winds (knots)

North Pacific Mean Wave Height (m)

Atlantic

North Atlantic Mean Winds (knots)

North Atlantic Wave Height (m)