

Supplementary file for

## **Verification of Fuel Consumption and Carbon Dioxide Emissions under Sulfur Restriction Policy on Oceanographic Navigation**

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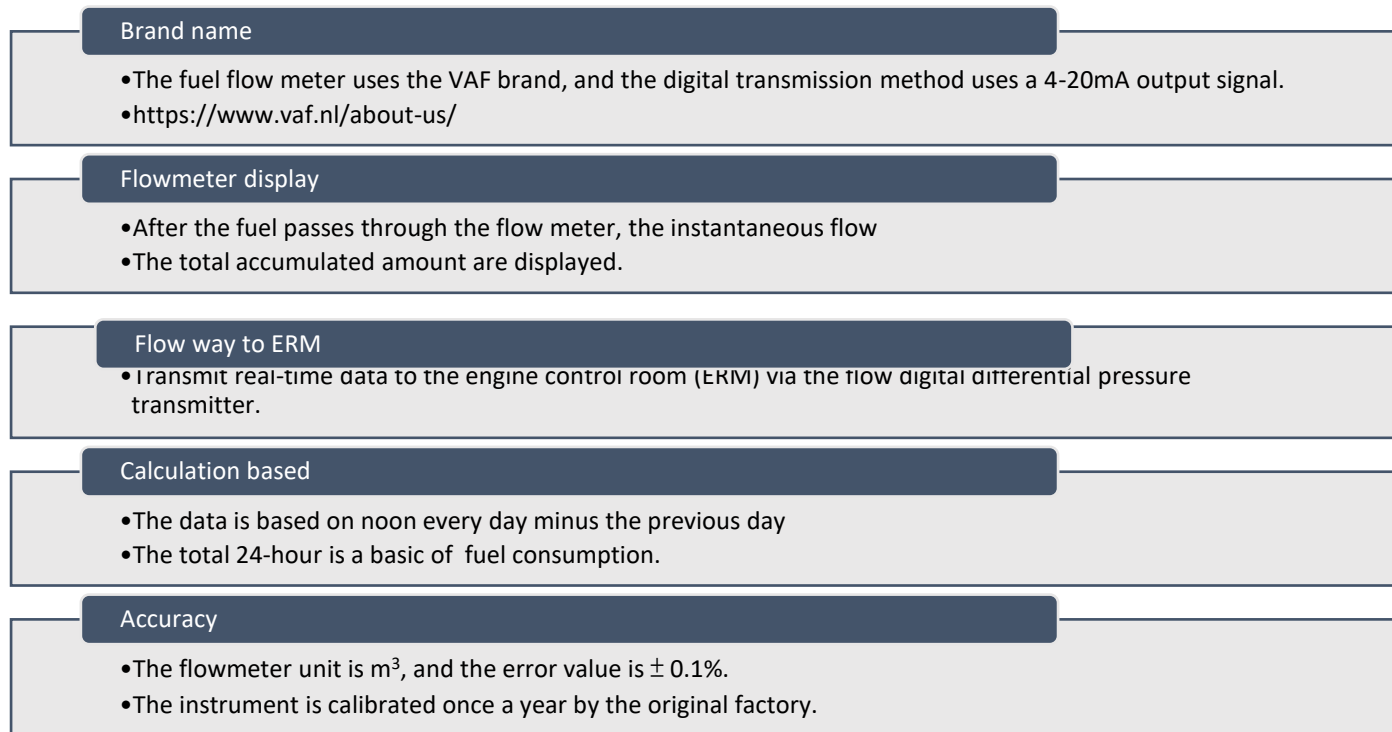


Figure S1. Flowchart of the acquired data in the procedure.



Figure S2 The gauge of measurement of fuel oil consumption on the board

Table S1 tabulates the accuracy in the engine operational test by the original factory (provider)

| OUTPUT% | RPM | FOC(MT) |
|---------|-----|---------|
| 12.70   | 47  | 31.51   |
| 13.70   | 48  | 33.88   |
| 14.80   | 49  | 36.26   |
| 15.80   | 50  | 38.63   |
| 16.73   | 51  | 40.6    |
| 17.65   | 52  | 42.58   |
| 18.58   | 53  | 44.55   |
| 19.50   | 54  | 46.52   |
| 20.53   | 55  | 48.79   |
| 21.55   | 56  | 51.06   |
| 22.58   | 57  | 53.33   |
| 23.60   | 58  | 55.6    |
| 25.20   | 59  | 59.04   |
| 26.80   | 60  | 62.47   |
| 28.40   | 61  | 65.91   |
| 29.73   | 62  | 68.86   |
| 31.05   | 63  | 71.81   |
| 32.38   | 64  | 74.75   |
| 33.70   | 65  | 77.7    |
| 35.70   | 66  | 82.07   |

|       |    |        |
|-------|----|--------|
| 37.70 | 67 | 86.43  |
| 39.70 | 68 | 90.79  |
| 41.45 | 69 | 94.5   |
| 43.20 | 70 | 98.22  |
| 44.95 | 71 | 101.93 |
| 46.70 | 72 | 105.64 |
| 48.68 | 73 | 109.83 |
| 50.65 | 74 | 114.03 |
| 52.63 | 75 | 118.22 |
| 54.60 | 76 | 122.41 |
| 57.63 | 77 | 128.85 |
| 60.66 | 78 | 135.28 |
| 63.70 | 79 | 141.72 |
| 66.30 | 80 | 148.43 |
| 68.90 | 81 | 155.14 |
| 71.50 | 82 | 161.85 |
| 74.10 | 83 | 168.56 |
| 78.06 | 84 | 178.68 |
| 82.03 | 85 | 188.79 |
| 86.0  | 86 | 198.91 |

Table S2. The raw data the voyages.

| Date      | Code                       | FO Option | Trip         | Temp seawater (°C) | 15°C Density | Temp of FO heating (°C) | Calibrated FO density | Lower heating value (LHV) | Oil consumption (Ton/day) | CO2 emission (Ton/day) | Output | RPM  | Ship Speed | Slip rate |
|-----------|----------------------------|-----------|--------------|--------------------|--------------|-------------------------|-----------------------|---------------------------|---------------------------|------------------------|--------|------|------------|-----------|
| 16-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 29                 | 0.9827       | 85                      | 0.937                 | 10,243                    | 134.8                     | 447.479                | 51.00% | 72.7 | 20.2       | 3.20%     |
| 17-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 26                 | 0.9827       | 85                      | 0.937                 | 10,243                    | 100.1                     | 332.290                | 46.20% | 72.8 | 20.2       | 3.00%     |
| 18-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 25                 | 0.9827       | 85                      | 0.937                 | 10,243                    | 109.5                     | 363.494                | 48.50% | 72.8 | 20.2       | 5.00%     |
| 19-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 23                 | 0.9827       | 85                      | 0.937                 | 10,243                    | 103.6                     | 343.908                | 47.90% | 72.7 | 20.2       | -3.00%    |
| 20-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 15                 | 0.9827       | 85                      | 0.937                 | 10,237                    | 110.3                     | 365.915                | 48.90% | 72.9 | 20.2       | 5.90%     |
| 21-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 11                 | 0.9833       | 85                      | 0.938                 | 10,237                    | 106.2                     | 352.314                | 49.10% | 73.2 | 20.3       | 4.90%     |
| 22-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 12                 | 0.9833       | 85                      | 0.938                 | 10,237                    | 106.3                     | 352.645                | 49.20% | 73.2 | 20.3       | 4.40%     |
| 22-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 13                 | 0.9833       | 85                      | 0.938                 | 10,237                    | 113.6                     | 376.863                | 50.40% | 73.1 | 20.3       | 3.90%     |
| 23-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 16                 | 0.9833       | 85                      | 0.938                 | 10,237                    | 108.1                     | 358.617                | 50.10% | 73.4 | 20.4       | 3.90%     |
| 24-Jul-20 | 1st(2020.7.11-2020.9.19)   | HFOWD     | Asia to C.A. | 20                 | 0.9833       | 85                      | 0.938                 | 10,237                    | 102.1                     | 338.712                | 47.10% | 73   | 20.3       | 5.80%     |
| 25-Sep-20 | 2nd (2020.9.20-2020.11.28) | HFOWD     | Asia to C.A. | 28                 | 0.9834       | 95                      | 0.931                 | 10,307                    | 83.646                    | 279.399                | 56.50% | 77.5 | 21.5       | 9.00%     |
| 26-Sep-20 | 2nd (2020.9.20-2020.11.28) | HFOWD     | Asia to C.A. | 28                 | 0.9834       | 95                      | 0.931                 | 10,307                    | 121.6                     | 406.174                | 56.70% | 78   | 21.7       | 9.60%     |
| 27-Sep-20 | 2nd (2020.9.20-2020.11.28) | HFOWD     | Asia to C.A. | 27                 | 0.9834       | 95                      | 0.931                 | 10,307                    | 143.6                     | 479.660                | 64.40% | 81.3 | 22.6       | 7.10%     |
| 28-Sep-20 | 2nd (2020.9.20-2020.11.28) | HFOWD     | Asia to C.A. | 25                 | 0.9834       | 95                      | 0.931                 | 10,307                    | 174.6                     | 583.208                | 79.40% | 87.9 | 24.4       | 4.60%     |
| 29-Sep-20 | 2nd (2020.9.20-2020.11.28) | HFOWD     | Asia to C.A. | 19                 | 0.9834       | 95                      | 0.931                 | 10,307                    | 181.6                     | 606.589                | 79.20% | 87.9 | 24.4       | 7.90%     |
| 30-Sep-20 | 2nd (2020.9.20-2020.11.28) | HFOWD     | Asia to C.A. | 14                 | 0.9834       | 95                      | 0.931                 | 10,307                    | 172.2                     | 575.191                | 78.50% | 87.8 | 24.4       | 7.80%     |
| 1-Oct-20  | 2nd (2020.9.20-2020.11.28) | HFOWD     | Asia to C.A. | 12                 | 0.9834       | 95                      | 0.931                 | 10,307                    | 117.5                     | 392.479                | 52.30% | 76.4 | 21.2       | 9.10%     |

|           |                            |       |              |    |        |    |       |        |         |         |        |      |      |        |
|-----------|----------------------------|-------|--------------|----|--------|----|-------|--------|---------|---------|--------|------|------|--------|
| 1-Oct-20  | 2nd (2020.9.20-2020.11.28) | HFOWD | Asia to C.A. | 12 | 0.9834 | 95 | 0.931 | 10,307 | 110.7   | 369.766 | 51.40% | 75.9 | 21.1 | 8.50%  |
| 2-Oct-20  | 2nd (2020.9.20-2020.11.28) | HFOWD | Asia to C.A. | 12 | 0.9834 | 95 | 0.931 | 10,307 | 113.6   | 379.452 | 50.00% | 75.9 | 21.1 | 5.70%  |
| 3-Oct-20  | 2nd (2020.9.20-2020.11.28) | HFOWD | Asia to C.A. | 16 | 0.9834 | 95 | 0.931 | 10,307 | 106.9   | 357.073 | 49.50% | 75.3 | 20.9 | 3.50%  |
| 5-Dec-20  | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 23 | 0.9834 | 95 | 0.931 | 10,083 | 183.988 | 601.204 | 63.40% | 77.7 | 21.6 | 18.40% |
| 6-Dec-20  | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 23 | 0.9834 | 95 | 0.931 | 10,083 | 145.2   | 474.460 | 67.50% | 81.9 | 22.7 | 8.10%  |
| 7-Dec-20  | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 23 | 0.9834 | 95 | 0.931 | 10,083 | 146.5   | 478.707 | 65.60% | 82.2 | 22.8 | 5.40%  |
| 8-Dec-20  | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 20 | 0.9834 | 95 | 0.931 | 10,083 | 175.9   | 574.776 | 80.00% | 87.7 | 24.4 | 3.80%  |
| 9-Dec-20  | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 17 | 0.9834 | 95 | 0.931 | 10,083 | 180.9   | 591.114 | 78.90% | 87.8 | 24.4 | 6.60%  |
| 10-Dec-20 | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 17 | 0.9834 | 95 | 0.931 | 10,083 | 171.5   | 560.398 | 78.20% | 87.4 | 24.3 | 5.30%  |
| 11-Dec-20 | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 15 | 0.9834 | 95 | 0.931 | 10,083 | 157.5   | 514.651 | 72.50% | 84.9 | 23.6 | 9.40%  |
| 11-Dec-20 | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 15 | 0.9834 | 95 | 0.931 | 10,083 | 126.4   | 413.028 | 56.50% | 78   | 21.7 | 5.10%  |
| 12-Dec-20 | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 16 | 0.9834 | 95 | 0.931 | 10,083 | 117.8   | 384.927 | 54.80% | 77.3 | 21.5 | 8.00%  |
| 13-Dec-20 | 3rd (2020.11.29-2021.2.6)  | HFOWD | Asia to C.A. | 18 | 0.9834 | 95 | 0.931 | 10,083 | 122.7   | 400.938 | 57.30% | 77.1 | 21.4 | 4.10%  |
| 6-Sep-20  | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 18 | 0.9834 | 95 | 0.931 | 10,307 | 104.5   | 349.056 | 46.20% | 73   | 20.3 | 6.40%  |
| 7-Sep-20  | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 14 | 0.9834 | 95 | 0.931 | 10,307 | 111.5   | 372.438 | 47.40% | 73   | 20.3 | 9.30%  |
| 9-Sep-20  | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 12 | 0.9834 | 95 | 0.931 | 10,307 | 107.9   | 360.413 | 45.70% | 73   | 20.3 | 5.50%  |
| 10-Sep-20 | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 11 | 0.9834 | 95 | 0.931 | 10,307 | 102     | 340.705 | 45.00% | 73   | 20.3 | 5.00%  |
| 11-Sep-20 | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 13 | 0.9834 | 95 | 0.931 | 10,307 | 110.2   | 368.096 | 46.80% | 73   | 20.3 | 7.50%  |
| 12-Sep-20 | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 16 | 0.9834 | 95 | 0.931 | 10,307 | 109.4   | 365.423 | 46.40% | 72.2 | 20   | 5.80%  |
| 13-Sep-20 | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 22 | 0.9834 | 95 | 0.931 | 10,307 | 106.3   | 355.069 | 45.00% | 73.1 | 20.3 | 2.60%  |
| 14-Sep-20 | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 24 | 0.9834 | 95 | 0.931 | 10,307 | 107.3   | 358.409 | 47.50% | 72.8 | 20.2 | 11.70% |
| 15-Sep-20 | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 25 | 0.9834 | 95 | 0.931 | 10,307 | 105.4   | 352.062 | 46.60% | 72.4 | 20.1 | 5.10%  |
| 16-Sep-20 | 1st(2020.7.11-2020.9.19)   | HFOWD | C.A. to Asia | 28 | 0.9834 | 95 | 0.931 | 10,307 | 97.6    | 326.008 | 42.90% | 71.2 | 19.8 | 7.30%  |

|           |                            |       |              |    |        |    |       |        |       |         |        |      |      |        |
|-----------|----------------------------|-------|--------------|----|--------|----|-------|--------|-------|---------|--------|------|------|--------|
| 15-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 23 | 0.9976 | 90 | 0.949 | 10,117 | 141.1 | 462.617 | 60.70% | 80   | 22.2 | 6.40%  |
| 16-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 23 | 0.9976 | 90 | 0.949 | 10,117 | 143   | 468.847 | 61.60% | 79.1 | 22   | 5.30%  |
| 17-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 21 | 0.9976 | 90 | 0.949 | 10,117 | 124.8 | 409.175 | 55.70% | 78.2 | 21.7 | 4.70%  |
| 19-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 23 | 0.9976 | 90 | 0.949 | 10,117 | 131.6 | 431.470 | 56.50% | 77.3 | 21.5 | 7.30%  |
| 20-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 24 | 0.9976 | 90 | 0.949 | 10,117 | 123.9 | 406.224 | 53.00% | 76.3 | 21.2 | 6.10%  |
| 21-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 23 | 0.9976 | 90 | 0.949 | 10,117 | 117.7 | 385.897 | 52.40% | 76.2 | 21.2 | 5.50%  |
| 22-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 24 | 0.9976 | 90 | 0.949 | 10,117 | 125.7 | 412.126 | 53.80% | 76   | 21.1 | 5.00%  |
| 23-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 25 | 0.9976 | 90 | 0.949 | 10,117 | 119.5 | 391.798 | 51.00% | 75.2 | 20.9 | 4.70%  |
| 24-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 24 | 0.9976 | 90 | 0.949 | 10,117 | 108.8 | 356.717 | 48.20% | 73.5 | 20.4 | 4.00%  |
| 25-Nov-20 | 2nd (2020.9.20-2020.11.28) | HFOWD | C.A. to Asia | 23 | 0.9976 | 90 | 0.949 | 10,117 | 105   | 344.258 | 44.40% | 71.9 | 20   | 5.80%  |
| 24-Jan-21 | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 20 | 1.001  | 95 | 0.949 | 10,116 | 163.7 | 536.658 | 69.70% | 83.4 | 23.2 | 3.00%  |
| 25-Jan-21 | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 20 | 1.001  | 95 | 0.949 | 10,116 | 160.4 | 525.840 | 68.50% | 83.9 | 23.3 | 2.70%  |
| 26-Jan-21 | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 19 | 1.001  | 95 | 0.949 | 10,116 | 153.3 | 502.564 | 68.20% | 83.6 | 23.2 | 3.20%  |
| 28-Jan-21 | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 19 | 1.001  | 95 | 0.949 | 10,116 | 156.4 | 512.726 | 59.40% | 82.3 | 22.8 | 4.40%  |
| 29-Jan-21 | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 22 | 1.001  | 95 | 0.949 | 10,116 | 167   | 547.476 | 63.50% | 82.1 | 22.8 | 4.50%  |
| 30-Jan-21 | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 23 | 1.001  | 95 | 0.949 | 10,116 | 159.1 | 521.578 | 63.00% | 83.6 | 23.2 | 4.30%  |
| 31-Jan-21 | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 24 | 1.001  | 95 | 0.949 | 10,116 | 161.8 | 530.429 | 61.50% | 81   | 22.5 | 5.30%  |
| 1-Feb-21  | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 22 | 1.001  | 95 | 0.949 | 10,116 | 170.5 | 558.950 | 64.80% | 82.8 | 23   | 3.50%  |
| 2-Feb-21  | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 22 | 1.001  | 95 | 0.949 | 10,116 | 122.5 | 401.592 | 48.40% | 75.2 | 20.9 | 2.80%  |
| 3-Feb-21  | 3rd (2020.11.29-2021.2.6)  | HFOWD | C.A. to Asia | 22 | 1.001  | 95 | 0.949 | 10,116 | 123.5 | 404.870 | 46.90% | 73.4 | 20.4 | 4.00%  |
| 5-Oct-21  | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 26 | 0.9771 | 85 | 0.932 | 10,305 | 155.1 | 517.961 | 56.10% | 80.7 | 22.4 | 13.70% |
| 6-Oct-21  | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 23 | 0.9771 | 85 | 0.932 | 10,305 | 146.3 | 488.574 | 60.70% | 85.7 | 23.8 | 10.80% |
| 7-Oct-21  | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 15 | 0.9771 | 85 | 0.932 | 10,305 | 152.8 | 510.281 | 60.80% | 85.7 | 23.8 | 10.30% |



|           |                            |       |              |    |        |    |       |        |       |         |        |      |      |        |
|-----------|----------------------------|-------|--------------|----|--------|----|-------|--------|-------|---------|--------|------|------|--------|
| 8-Oct-21  | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 13 | 0.9771 | 85 | 0.932 | 10,305 | 143.3 | 478.555 | 59.50% | 85.7 | 23.8 | 7.90%  |
| 9-Oct-21  | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 12 | 0.9771 | 85 | 0.932 | 10,305 | 133.6 | 446.162 | 55.70% | 79.1 | 22   | 10.60% |
| 9-Oct-21  | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 12 | 0.9771 | 85 | 0.932 | 10,305 | 151.7 | 506.607 | 62.90% | 85.4 | 23.7 | 7.80%  |
| 10-Oct-21 | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 13 | 0.9771 | 85 | 0.932 | 10,305 | 149.8 | 500.262 | 62.20% | 85.7 | 23.8 | 8.30%  |
| 11-Oct-21 | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 16 | 0.9771 | 85 | 0.932 | 10,305 | 147.4 | 492.247 | 61.20% | 85.6 | 23.8 | 9.50%  |
| 12-Oct-21 | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 20 | 0.9771 | 85 | 0.932 | 10,305 | 142.3 | 475.215 | 59.00% | 85.8 | 23.8 | 11.10% |
| 13-Oct-21 | 5th (2021.09.27-110.11.20) | VLSFO | Asia to C.A. | 21 | 0.9771 | 85 | 0.932 | 10,305 | 143.4 | 478.889 | 59.50% | 85.7 | 23.8 | 11.00% |
| 7-Dec-21  | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 24 | 0.9706 | 72 | 0.934 | 10,284 | 118.6 | 395.262 | 57.20% | 84.9 | 23.6 | 10.80% |
| 8-Dec-21  | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 22 | 0.9706 | 72 | 0.934 | 10,284 | 144.1 | 480.247 | 59.80% | 85.2 | 23.7 | 10.40% |
| 9-Dec-21  | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 23 | 0.9706 | 72 | 0.934 | 10,284 | 147.2 | 490.579 | 58.50% | 85.2 | 23.7 | 12.70% |
| 10-Dec-21 | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 24 | 0.9706 | 72 | 0.934 | 10,284 | 140.6 | 468.583 | 58.30% | 85   | 23.6 | 10.70% |
| 11-Dec-21 | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 24 | 0.9706 | 72 | 0.934 | 10,284 | 139.5 | 464.917 | 57.90% | 83.9 | 23.3 | 11.10% |
| 12-Dec-21 | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 23 | 0.9706 | 72 | 0.934 | 10,284 | 142.9 | 476.248 | 56.80% | 83.9 | 23.3 | 11.80% |
| 12-Dec-21 | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 22 | 0.9706 | 72 | 0.934 | 10,284 | 141.1 | 470.249 | 58.50% | 84   | 23.3 | 11.80% |
| 13-Dec-21 | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 22 | 0.9706 | 72 | 0.934 | 10,284 | 147.7 | 492.245 | 58.70% | 83.9 | 23.3 | 12.20% |
| 14-Dec-21 | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 23 | 0.9706 | 72 | 0.934 | 10,284 | 131   | 436.588 | 54.40% | 82.3 | 22.9 | 13.10% |
| 15-Dec-21 | 6th (2021.11.21-111.02.07) | VLSFO | Asia to C.A. | 23 | 0.9706 | 72 | 0.934 | 10,284 | 127.9 | 426.257 | 53.10% | 81.9 | 22.8 | 12.20% |
| 10-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 25 | 0.9784 | 85 | 0.933 | 10,290 | 139.9 | 466.550 | 53.40% | 81.4 | 22.6 | 8.80%  |
| 11-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 26 | 0.9784 | 85 | 0.933 | 10,290 | 132.9 | 443.205 | 52.80% | 80.4 | 22.3 | 10.40% |
| 12-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 26 | 0.9784 | 85 | 0.933 | 10,290 | 136.3 | 454.544 | 52.00% | 79.1 | 22   | 9.90%  |
| 14-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 26 | 0.9784 | 85 | 0.933 | 10,290 | 132.4 | 441.538 | 50.50% | 79   | 22   | 7.60%  |
| 15-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 26 | 0.9784 | 85 | 0.933 | 10,290 | 114.9 | 383.178 | 45.60% | 77.4 | 21.5 | 4.20%  |
| 16-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 25 | 0.9784 | 85 | 0.933 | 10,290 | 119.4 | 398.185 | 45.50% | 77.1 | 21.4 | 8.50%  |

|           |                            |       |              |    |        |    |       |        |       |         |        |      |      |        |
|-----------|----------------------------|-------|--------------|----|--------|----|-------|--------|-------|---------|--------|------|------|--------|
| 17-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 24 | 0.9784 | 85 | 0.933 | 10,290 | 126.1 | 420.528 | 48.10% | 78.9 | 21.9 | 6.80%  |
| 18-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 24 | 0.9784 | 85 | 0.933 | 10,290 | 114   | 380.176 | 44.90% | 76   | 21.1 | 5.60%  |
| 19-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 26 | 0.9784 | 85 | 0.933 | 10,290 | 128   | 426.864 | 48.80% | 79.6 | 22.1 | 6.20%  |
| 20-Nov-21 | 5th (2021.09.27-110.11.20) | VLSFO | C.A. to Asia | 25 | 0.9784 | 85 | 0.933 | 10,290 | 127.7 | 425.864 | 48.70% | 79.9 | 22.2 | 7.90%  |
| 29-Jan-22 | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 20 | 0.9706 | 72 | 0.934 | 10,284 | 155.7 | 518.907 | 59.40% | 84   | 23.3 | 10.60% |
| 30-Jan-22 | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 21 | 0.9706 | 72 | 0.934 | 10,284 | 148.5 | 494.911 | 59.00% | 83.6 | 23.2 | 13.10% |
| 31-Jan-22 | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 21 | 0.9706 | 72 | 0.934 | 10,284 | 156.6 | 521.906 | 59.80% | 81.7 | 22.7 | 14.80% |
| 1-Feb-22  | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 22 | 0.9706 | 72 | 0.934 | 10,284 | 150   | 499.910 | 59.60% | 82   | 22.8 | 14.60% |
| 2-Feb-22  | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 20 | 0.9706 | 72 | 0.934 | 10,284 | 152   | 506.576 | 58.00% | 79.4 | 22.1 | 16.70% |
| 3-Feb-22  | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 21 | 0.9706 | 72 | 0.934 | 10,284 | 151.7 | 505.576 | 60.30% | 80.7 | 22.4 | 14.70% |
| 4-Feb-22  | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 21 | 0.9706 | 72 | 0.934 | 10,284 | 162.7 | 542.236 | 62.10% | 84.1 | 23.4 | 11.90% |
| 5-Feb-22  | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 21 | 0.9706 | 72 | 0.934 | 10,284 | 156.9 | 522.906 | 62.40% | 85.4 | 23.7 | 10.20% |
| 6-Feb-22  | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 24 | 0.9706 | 72 | 0.934 | 10,284 | 153.4 | 511.242 | 58.60% | 83.3 | 23.1 | 8.50%  |
| 7-Feb-22  | 6th (2021.11.21-111.02.07) | VLSFO | C.A. to Asia | 17 | 0.9706 | 72 | 0.934 | 10,284 | 142.7 | 475.581 | 56.70% | 82.7 | 23   | 7.50%  |