



Bulk carrier arrived at Kavkaz for bunkering of 2000 MT Heavy Fuel Oil (HFO), filling two storage tanks up to full capacity.

When calculating the maximum amount of bunkers to take the Chief Engineer applied a density of 0.98 kg/l. According to Quality Certificate provided by bunker barge before supply the density of HFO delivered was 0.9346 kg/l.

|                                                    |                                |
|----------------------------------------------------|--------------------------------|
| Наименование топлива<br>Grade supplied             | <b>MTY - 380<br/>(IFO-380)</b> |
| Плотность при 15°C, кг/л<br>Density at 15 °C, kg/l | <b>934,6</b>                   |

When both intended tanks had become full with some amount leaking into Overflow tank the vessel had to stop bunkering, having no more space available for the whole ordered amount.

As a result the vessel received 90 MT less bunkers against the planned quantity.

The described scenario is a quite typical situation at ports of Novorossiysk, Taman, Kavkaz or Tuapse in the past 6 months.

While the low density fuel oil creates no problem on vessels with sufficient space in bunker tanks, where the space is limited by the maximum stemmed quantity the short-supply situation is unavoidable.

It would be advisable to clarify the likely density of HFO delivered with Suppliers, Traders or Brokers when ordering bunkers, so that the risk of short-supply is avoided.