6   Calculated Value of Attained EEDI

6.1   Basic data

Type of Ship	Capacity DWT	Speed Vref (knot)	CARGO TANK CAPACITY (m3)
gas carrier	7138.75	13.41	7521.741

6.2   Main engine

MCR_{ME} (kW)	Shaft Gen.	P_{ME}(kW)	fc
2640.00	No	1980	1

Type of Fuel	C_{FME}	SFC_{ME} (g/kWh)
Diesel/Gas Oil	3.206	179.6

6.3   Auxiliary engines

P_{AE}(kW)	Type of Fuel	C_{FAE}
132	Diesel/Gas Oil	3.206

SFC_{AE} (g/kWh)
212.1

6.4   Ice class

N/A

6.5   Innovative electrical energy efficient technology

N/A

6.6   innovative mechanical energy efficient technology

N/A

6.7   Calculated value of attained EEDI

$$EEDI = \frac{\left(\prod_{j=1}^{M} f_j\right)\left(\sum_{i=1}^{nME} P_{ME\,(i)} \cdot C_{FME\,(i)} \cdot SFC_{ME\,(i)}\right) + \left(P_{AE} \cdot C_{FAE} \cdot SFC_{AE}\right)}{f_i \cdot f_C \cdot f_l \cdot Capacity \cdot V_{ref} \cdot f_w}$$

$$+ \frac{\left\{\left(\prod_{j=1}^{nPTI} f_j \cdot \sum_{i=1}^{nPTI} f_{PTI(i)} - \sum_{i=1}^{neff} f_{eff(i)} \cdot P_{AEeff(i)}\right) C_{FAE} \cdot SFC_{AE}\right\} - \left(\sum_{i=1}^{neff} f_{eff(i)} \cdot P_{eff(i)} \cdot C_{FME} \cdot SFC_{ME}\right)}{f_i \cdot f_C \cdot f_l \cdot Capacity \cdot V_{ref} \cdot f_w}$$

$$EEDI = \frac{1 \times (1980 \times 3.206 \times 179.6) + (132 \times 3.206 \times 212.1)}{1 \times 1 \times 1 \times 7138.75 \times 13.41 \times 1}$$

$$= \quad 12.8$$

Attained EEDI :   12.8 g-CO_2/ton mile

6.8　Reference line value

a=　　　　1120
DWT=　　7138.75
c=　　　　0.456

Reference line value = a × DWT^{-c}
　　　　=　　　19.587

Reference line value:　　　19.6　g-CO$_2$/ton mile

6.9　Reducion factor

phase: 3
Reducion factor X = 6.423 %

Required EEDI = (1-X/100) × Reference line value
　　　　15.812

※ This ship can be correspond with phase 3　(This ship's EEDI value = 12.£g-CO$_2$/ton mile)

Phase	Required EEDI	JUDGEMENT
Phase 1	18.3 g-CO$_2$/ton mile	○
Phase 2	17.1 g-CO$_2$/ton mile	○
Phase 3	15.8 g-CO$_2$/ton mile	○