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Calculation of nitrogen oxides emissions

Nitrogen oxides (NOx) from the propulsion engines (applies to all ship types)

For ships with one engine, only row one needs to be filled in. If several engines with different specifications, all engines have to be filled inn Average NOx shall be calculated as described under.

				I	II	
Engine no.	Fabrication / type	Speed (n)	IMO NOx curve, K (2)	Power (kW)	NOx (1) (g/kWh)	I * II
1						
2						
3						
4						
5						
			Sum I =		**Sum I*II=**	
(1): Ref. EIAPP certificate or any other certificate for NOx emissions. (2): See calculation formula below.						

Calculation of IMO NOx curve, K:
n = speed [rpm]
If $n \geq 2000$ rpm; K = 9.8 g/kWh
If $130 \leq n < 2000$ K = $45 * n^{(-0.2)}$ g/kWh
If $n < 130$ rpm; K = 17.0 g/kWh

If engines have different NOx emmisions, calculated average NOx emmision is:

$$NOx_{average} = (Sum (I * II)) / (Sum I) =_____ g/kWh$$

NOx reduction measures	
☐ SCR (selective catalytic reduction)	Consumption of urea:
☐ HAM (humid air motor)	
☐ Water injection	Consumption of water:
☐ Water emulsion	Consumption of water:
☐ Optimised engines	
☐ Other (specify)	Describe measure:
Total fuel consumption under normal operation: [ton/day]	