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NO.

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08 AUG, 2019

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EU MRV, IMO DCS □□ □□ □□ □

XML, BDN Summary, Collect data Summary

LAB021

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0.1	2019.08.08		□□□	

1. BDN Summary

선박연료유수급현황

BDN SUMMARIES

IMO Number	9390707
정보수집년도 Calendar year	2019

운항일자 Date of Operation (yyyy-mm-dd)	연료유 종류 / 질량(톤) Fuel Oil Type/Mass (Metric tons)									비고 Description
	경유/가스오일 DO/GO	경질중유 LFO	중질중유 HFO	프로판 LPG(P)	부탄 LPG(B)	액화천연가스 LNG	메탄올 Methanol	에탄올 Ethanol	기타 Other(Cf)	
1) 연료유 수급량 (Bunker Q'ty supplied)										
2019-01-06	148.5		495.4							
2019-02-09	148.5		495.5							
2019-03-11	148.1		495.6							
연간 수급량 소계 Annual Supply Amount	445.1	0	1486.5	0	0	0	0	0	0	

1) IMO NO : General data □ □□ □
2) □□□□□□ : □□□가 Annual report □□ □ □□□ □□
3) □□□□ : Bunkering □□□ □□ □□
4) □□□ □□ : □□□□ □□□ □□
5) □□ □□□ □□ : □□ □

1. BDN Summary

2) 연료유 보유 잔량의 보정 Correction for the tank oil remainings **(정보수집기간 중 시작일과 종료일의 연료유 보유 잔량 차이)**										
2018-01-01	700.5	0	2000.5	0	0	0	0	0		
2018-12-31	600.5	0	1000.1	0	0	0	0	0		
② 연료유 보유 잔량 보정Correction for the tank oil remainnings	100	0	1000.4	0	0	0	0	0	0	The difference in the amount of the remaining tank oil at the beginning/end of the data collection period.
3) 연료유 사용량의 보정 Other corrections **(예시 : 연료유 육상 양육양, 증발가스(BOG) 사용량 등)**										
2018-12-12	-10.5	0	-100.5	0	0	0	0	0		보정사유 : ex) Transfed Q'ty to offshore reception facility for tank inpection in dock
③ 연간 보정량 소계 Annual other corrections	-10.5	0	-100.5	0	0	0	0	0	0	
연간 연료유 사용량 Annual Fuel Consumption										
연간 연료유 사용량 Annual Fuel Consumption (①+②+③)	534.6	0	2386.4	0	0	0	0	0	0	

2) □□□ □□□ □□

- □□ □□ □□□□ □□□
- Export □ □□□ □□

3) □□□ □□□□ □□

- □□ (de-bunkering □)
- □□□□ – (□□□□) □ □□□ .

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- 1+2+3 □

1. BDN Summary

● 작성 예시

① 운항일자 Date of Operations (yyyy-mm-dd)	② 연료유 종류 / 질량(톤) Fuel Oil Type/Mass (Metric tons)									③ 비고 Descriptions
	경유/가스오일 DO/GO	경질중유 LFO	중질중유 HFO	프로판 LPG(P)	부탄 LPG(B)	액화천연가스 LNG	메탄올 Methanol	에탄올 Ethanol	기타 Other(Cf)	
1) 연료유 수급량 (Bunker Q'ty supplied)										
2019-01-06	148.5		495.4							
2019-02-09	148.5		500.5							
2019-03-11	148.1		1020.9							
④										
④ 연간 수급량 소계 Annual Supply Amount	445.1	0	2016.8	0	0	0	0	0	0	
2) 연료유 보유 잔량의 보정 Correction for the tank oil remainings (정보수집기간 중 시작일과 종료일의 연료유 보유잔량 차이)										
2018-01-01	700.5	0	2000.5	0	0	0	0	0		
⑤ 2018-12-31	600.5	0	1000.1	0	0	0	0	0		
⑤ 연료유 보유잔량 보정 Correction for the tank oil remainings	100	0	1000.4	0	0	0	0	0	0	The difference in the amount of the remaining tank oil at the beginning/end of the data collection period.
3) 연료유 사용량의 보정 Other corrections (예시 : 연료유 육상 양육량, 증발가스(BOG) 사용량 등)										
2018-12-12	-10.5	0	-100.5	0	0	0	0	0		보정사유 : ex) Transfed Q'ty to offshore reception facility for tank inpection in dock
⑥										
⑥ 연간 보정량 소계 Annual other corrections	-10.5	0	-100.5	0	0	0	0	0	0	
연간 연료유 사용량 Annual Fuel Consumption										
⑦ 연간 연료유 사용량 Annual Fuel Consumption (①+②+③)	534.6	0	2916.7	0	0	0	0	0	0	

● 작성 방법

항 목	작성(입력) 방법
❶ 운항일자	"yyyy-mm-dd" 순으로 입력
❷ 연료유 종류/질량(톤)	숫자 입력(소수점 첫째자리까지)
❸ 비고	설명 입력(필요 시)
❹ 연간 수급량 소계	연료수급일자별 수급량 입력 시 자동계산
❺ 연료유 보유 잔량 보정	시작일과 종료일 잔량을 입력 시 자동계산
❻ 연간 보정량 소계	• 연료유 양육 시 양육량을 마이너스(-)값으로 입력 (소수점 첫째자리까지) • LNG 화물의 BOG 등을 연료로 사용하는 경우 해당 LNG 사용량을 플러스(+)값으로 입력
❼ 연간 연료유 사용량	자동 계산

• "**선박연료유 수급현황**"에 포함되는 정보를 자체 전자보고시스템으로 관리하는 경우, 자체 전자보고시스템에서 출력한 자료를 "업로드" 하는 것으로 대체 가능합니다.

2. THE COLLECTED DATA Summary

선박운항정보현황
THE COLLECTED DATA SUMMARIES

IMO Number	
정보수집연도 Calendar year	

운항기간		운항거리 Distance travelled (n.m)	운항시간 (시간:분) Hours Underway (hh:mm)	연료유 종류/질량(톤) Fuel Oil Type/Mass (MT)								
Date from (yyyy-mm-dd)	Date to (yyyy-mm-dd) * 1일 단위로 데이터를 기재하는 경우 이 행은 공란으로 둡니다.			경유/가스오일 DO/GO	경질중유 LFO	중질중유 HFO	프로판 LPG(P)	부탄 LPG(B)	액화천연가스 LNG	메탄올 Methano	에탄올 Ethanol	기타 Other "연료 명칭" 입력란 (해당되는 경우) "Cf" 입력란 (해당되는 경우)
2019-01-01		100	11:30	10.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-02		200	24:00	10.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-03		50	06:00	10.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-04		200	24:00	10.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-05		210	25:00	10.5	210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-06		200	24:00	10.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-07		100	11:10	10.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-08		50	06:00	10.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-09		190	23:00	9.5	190.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

1) IMO NO : General data □ □□ □

2) □□□□ : leg □□□ □□□□ □□□□ max □□ 999 □□□ 1000 □□□ □□□ □□ leg □ □□□ □□□□ □ .

- **Noon at sea 가 30 □ □□ □□□□ LEG 가 □□□ 30 □□ □□ □□, 31 □□□ – Dep. s/by □□ □□□ □□□□ □□□□ □□□□ □□ □□ □□□ □□ .**

2. THE COLLECTED DATA
Summary

● 작성 예시

❶ 운항기간		❷ 운항거리 Distance travelled (n.m)	❸ 운항시간 (시간:분) Hours Underway (hh:mm)	❹ 연료유 종류/질량(톤) Fuel Oil Type/Mass (MT)								
Date from (yyyy-mm-dd)	Date to (yyyy-mm-dd) * 1일 단위로 데이터를 기재하는 경우 이 형태로 공란으로 둡니다.			경유/가스오일 DO/GO	정질중유 LFO	중질중유 HFO	프로판 LPG(P)	부탄 LPG(B)	액화천연가스 LNG	메탄올 Methanol	에탄올 Ethanol	기타 Other "연료 명칭" 입력란 (해당되는 경우) / "CF" 입력란 (해당되는 경우)
2019-01-01		100	11:30	10.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-02		200	24:00	10.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-03		50	06:00	10.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-04		200	24:00	10.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-05		210	23:30	10.5	210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-06		200	24:00	10.0	200.0	300.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-07		100	11:10	10.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-08		50	06:00	10.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-09		190	23:00	9.5	190.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-10		100	09:40	10.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-11		150	11:30	10.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-12		130	13:50	10.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-01-13		145	15:40	9.5	190.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.		.	.	.	.	.	.	.	.	.	.	.
.		.	.	.	.	.	.	.	.	.	.	.
.		.	.	.	.	.	.	.	.	.	.	.
2019-12-30		350	23:00	0.0	250.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0
2019-12-31		300	24:00	28.0	150.0	350.0	0.0	0.0	0.0	0.0	0.0	0.0
❺ 연간 합계 Annual Total		2,475	250:50	157.5	2,240.0	900.0	0.0	0.0	0.0	0.0	0.0	0.0

● 작성 방법

항 목	작성(입력) 방법
❶ 운항기간	반드시 "yyyy-mm-dd" 형태로 입력
❷ 운항거리	정수로 입력
❸ 운항시간	반드시 "hh:mm" 형태로 입력
❹ 연료유 종류/질량(톤)	숫자 입력(소수점 첫째자리까지)
❺ 연간 합계	자동계산

- **"선박운항정보현황"**에 포함되는 정보를 자체 전자보고시스템으로 관리하는 경우, 자체 전자보고시스템에서 출력한 자료를 "업로드" 하는 것으로 대체 가능합니다.

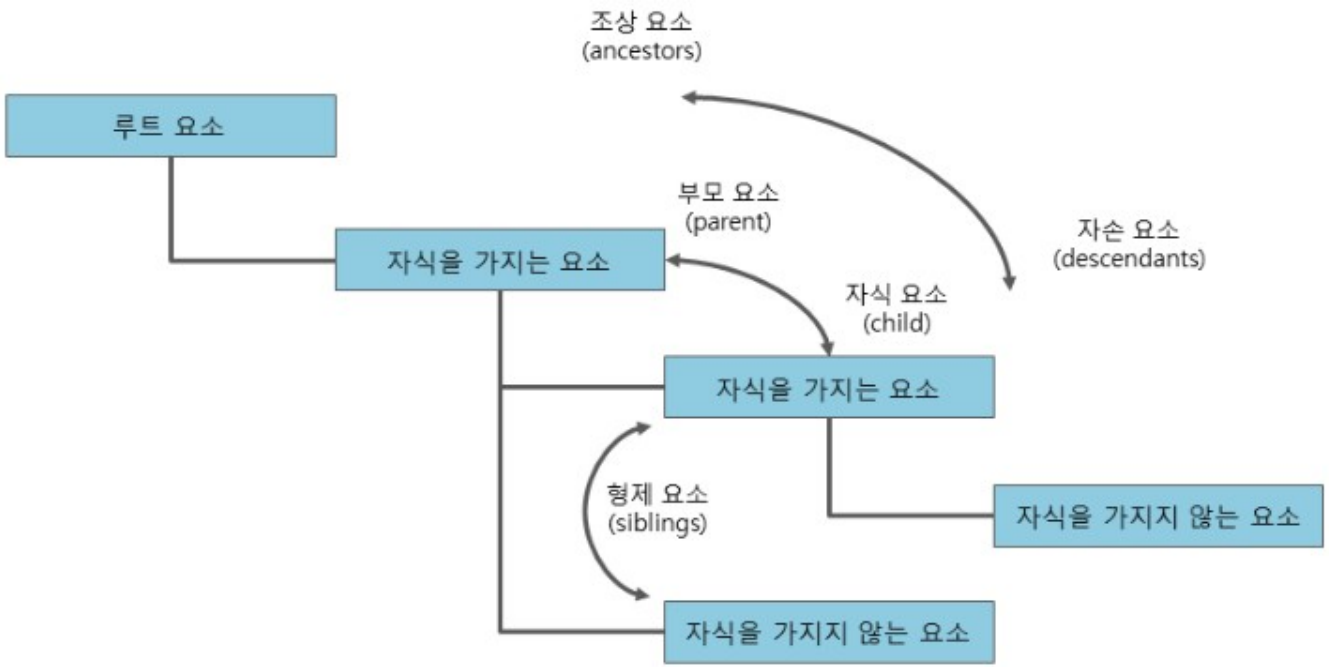
3. Data Report

• 작성 예시			• 작성 방법
❶ 시작일 Start date (yyyy-mm-dd)		2019-01-01	숫자를 직접 입력
❷ 종료일 End date (yyyy-mm-dd)		2019-12-31	숫자를 직접 입력
IMO number		9123348	7자리 숫자
❸ 선박용도 Ship type		Tanker	총 14종으로 구분된 ship type중에서 선택
총톤수 Gross tonnage		5,979	숫자를 직접 입력 ("5000 이상 정수" 입력)
순톤수 NT		4,123	숫자를 직접 입력("정수" 입력)
재화중량톤수 DWT		10,115	숫자를 직접 입력("정수" 입력)
선박에너지효율설계지수 EEDI (if applicable) ($gCO_2/t.nm$)		30.12345	숫자를 직접 입력 (소수점 다섯자리까지 입력 가능)
대빙등급 Ice class (if applicable)		IA	IA SUPER, IA, IB, IC 중 하나 선택
운항거리 Distance Travelled (n.mile)		999,999	숫자를 직접 입력("정수" 입력)
❹ 운항시간 Hours underway (hours)		7,300	숫자를 직접 입력 ("정수" 입력, 분 단위에서 반올림)
선박연료유 사용량 계측방법 Method used to measure Fuel oil consumption		1	1. BDN : method using BDNs 2. FlowMeter : method using flow meters 3. BunkerTankMonitoring : method using bunker fuel oil monitoring (3개 중 1개 선택)
기관출력 Power output (rated power) (kW)	주기관 합계출력 Main Propulsion Power	7,360	숫자를 직접 입력("정수" 입력)
	보조기관 합계출력 Auxiliary Engine(s)	901	숫자를 직접 입력("정수" 입력)
선박연료유 사용량 Fuel oil consumption (t)	경유/가스오일 Diesel/Gas Oil (C_f : 3.206)	500	숫자를 직접 입력("정수" 입력)
	경질중유 LFO (C_f: 3.151)	1,000	숫자를 직접 입력("정수" 입력)
	중질중유 HFO (C_f: 3.114)	12,000	숫자를 직접 입력("정수" 입력)
	액화석유가스(프로판) LPG(Propane) (C_f: 3.000)	0	숫자를 직접 입력("정수" 입력)
	액화석유가스(부탄) LPG (Butane) (C_f: 3.030)	0	숫자를 직접 입력("정수" 입력)
	액화천연가스 LNG (C_f: 2.750)	0	숫자를 직접 입력("정수" 입력)
	기타 Other(·····) (C_f :···)		연료명(영문) & C_f(소수점세자리)를 직접 입력

4. XML

XML
- XML □ □□□□ □□□□ □□□ □□□□ □□□□□□□ , □□□□ □□□□ □□□ □□□□ □□ □□
- EXtensible Markup Language □ □□□ , □□□ □□ □□□□ □□□□ □□□□ □□□□ □□□ □□□ □□ □□

XML □□
- □□ (tree) □□□ □□ □□
- □□□□ □□ (root) □□□□ □□□□ , □□□ □□ (child) □□□ □□□□ □□□
- XML □□ □□□ □□□□ □□ □□□ □□□□ □□ (child) □□□ 가□ □ □□



4. XML

XML □□ □□ □□

```
<?xml version="1.0" encoding="UTF-8"?>
<shop city=" □□ " type=" □□ ">
    <food>
        <name> □ </name>
        <sort> □□ </sort>
        <cost>3000</cost>
    </food>
    <food>
        <name> □□ </name>
        <sort> □□ </sort>
        <cost>2000</cost>
    </food>
</shop>
```

C22 – Company uploads data through XML files

Emissions.xml (Voyage_Emissions.xml(a single ship) + Port_Emissions.xml(a single ship) + Annual emission)

- **shipEmissions – □□ 25□ ships**

□□	□	Type	Notes
shipImoNumber	5003734	string	□□
voyageEmission	□□		0~40□
PortEmission	□□		0~40□
annualEmission	□□		0~2□

```
<?xml version="1.0" encoding="UTF-8"?>
- <emissions>
  - <shipEmissions shipImoNumber="">
      + <voyageEmission>
      + <portEmission>
      + <annualEmission>
    </shipEmissions>
</emissions>
```

Emissions xml □□ □
Annual report □ □□

- **shipEmissions - voyageEmission**

□□	□	Type	Notes
departurePortName	Piraeus	string	
arrivalPortName	Lisbon	string	
atd	01-01-2017 00:00:45	string	□□
ata	05-01-2017 00:00:45	string	□□
timeAtSeaNavigation	100	decimal	
timeAtSeaIce	20	decimal	
timeAtSeaAnchorage	500	decimal	
distanceTravelNavigation	1500	decimal	
distanceTravelIce	200	decimal	
additionalNotes	Additional Notes text	string	
departureCountryCode	GR	string	□□
departurePortCode	GRPIR	string	
arrivalCountryCode	PT	string	□□
arrivalPortCode	PTLIS	string	
voyageConsumption	□□		0~□□ □□ X
voyageCargoAndTransportWork	□□		0~□□ □□ X
voyageDirectMeasurement	□□		0~□□ □□ X

```
<voyageEmission>
    <departurePortName>Piraeus</departurePortName>
    <arrivalPortName>Lisbon</arrivalPortName>
    <atd>01-01-2017 00:00:45</atd>
    <ata>05-01-2017 00:00:45</ata>
    <timeAtSeaNavigation>100</timeAtSeaNavigation>
    <timeAtSeaIce>20</timeAtSeaIce>
    <timeAtSeaAnchorage>500</timeAtSeaAnchorage>
    <distanceTravelNavigation>1500</distanceTravelNavigation>
    <distanceTravelIce>200</distanceTravelIce>
    <additionalNotes>Additional Notes text Additional Notes text
        Additional Notes text Additional Notes text Additional Notes text
        Additional Notes text Additional Notes text Additional Notes text
        Additional Notes text</additionalNotes>
    <departureCountryCode>GR</departureCountryCode>
    <departurePortCode>GRPIR</departurePortCode>
    <arrivalCountryCode>PT</arrivalCountryCode>
    <arrivalPortCode>PTLIS</arrivalPortCode>
    + <voyageConsumption>
    + <voyageConsumption>
    + <voyageCargoAndTransportWork>
</voyageEmission>
```

※ □□ □□ □□ ~ □□ □□ □□, □□ □□□ 0~□□ 1□
※ Country Code, Port Code □ (Bulk data picklists-v1.1.xlsx □□)

C22 – Company uploads data through XML files

Emissions.xml (Voyage_Emissions.xml + Port_Emissions.xml)

- **shipEmissions - annualEmission**

□□	□	Type	Notes	□□
reportingPeriod	2017	int	□□	□□□ □□□□
fromDate	01-01-2017	string	□□	□□ □□
toDate	31-12-2017	string	□□	□□ □□
discriminateThroughIce	false	Boolean	□□	□□□□, □□□ □ : false
emissionsBetweenEuPort	1000	decimal		CO2 □□□
emissionsDepartEuPort	100	decimal		CO2 □□□
emissionsToEuPort	110	decimal		CO2 □□□
emissionsEuPortAtBerth	50	decimal		CO2 □□□
distanceRegularNav	500	decimal		□□ □□
distanceThroughIce		decimal		□□ □□□ □□□ □□ □□
timeRegularNav	99	decimal		□□ □□
timeThroughIce		decimal		□□ □□□ □□□ □□ □□
timeAtAnchorage		decimal		□□□ □□
annualConsumption	□□		**0~□□ □□ X**	
annualDirectMeasurement	□□		**0~□□ □□ X**	
annualCargoAndTransportWork	□□		**0~□□ □□ X**	

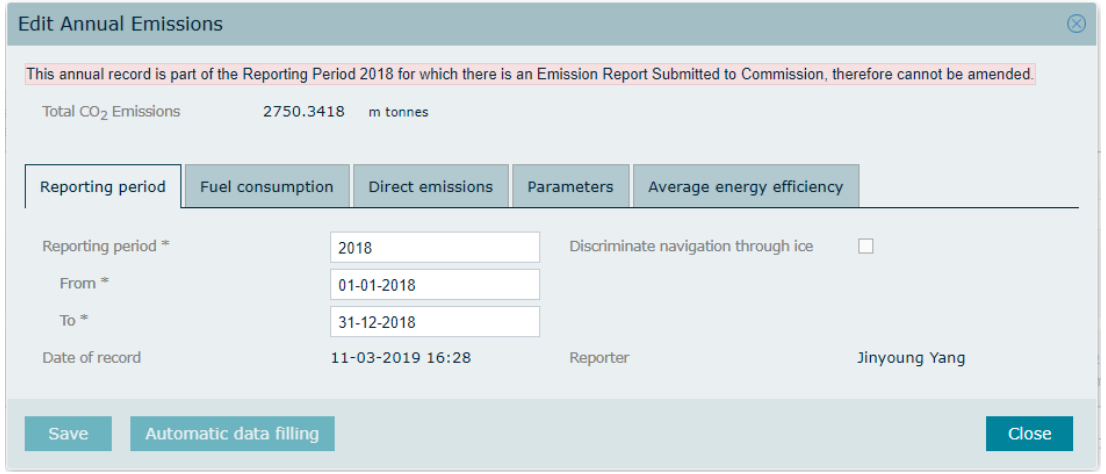
```
- <annualEmission>
    <reportingPeriod>2017</reportingPeriod>
    <fromDate>01-01-2017</fromDate>
    <toDate>31-12-2017</toDate>
    <discriminateThroughIce>false</discriminateThroughIce>
    <emissionsBetweenEuPort>1000</emissionsBetweenEuPort>
    <emissionsDepartEuPort>100</emissionsDepartEuPort>
    <emissionsToEuPort>110</emissionsToEuPort>
    <emissionsEuPortAtBerth>50</emissionsEuPortAtBerth>
    <distanceRegularNav>500</distanceRegularNav>
    <timeRegularNav>85</timeRegularNav>
    <timeAtAnchorage>99</timeAtAnchorage>
  + <annualConsumption>
  + <annualConsumption>
  + <annualConsumption>
  + <annualConsumption>
  + <annualConsumption>
  + <annualConsumption>
  + <annualConsumption>
  + <annualConsumption>
  + <annualConsumption>
  + <annualConsumption>
  + <annualCargoAndTransportWork>
  </annualEmission>
```

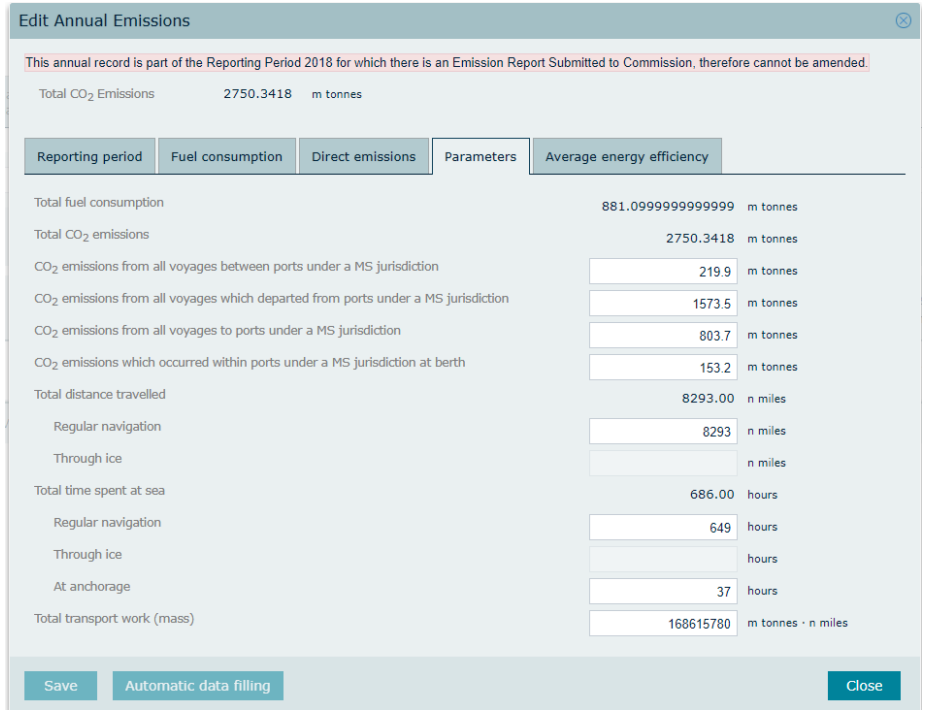
C22 – Company uploads data through XML files

Emissions.xml (Voyage_Emissions.xml + Port_Emissions.xml)

- **shipEmissions - annualEmission**

□□	□	Type	Notes	□□
reportingPeriod	2017	int	□□	□□□ □□□□
fromDate	01-01-2017	string	□□	□□ □□
toDate	31-12-2017	string	□□	□□ □□
discriminateThroughIce	false	Boolean	□□	□□□□ , □□□ □ : false
emissionsBetweenEuPort	1000	decimal		CO2 □□□
emissionsDepartEuPort	100	decimal		CO2 □□□
emissionsToEuPort	110	decimal		CO2 □□□
emissionsEuPortAtBerth	50	decimal		CO2 □□□
distanceRegularNav	500	decimal		□□ □□
distanceThroughIce		decimal		□□ □□□ □□□ □□ □□
timeRegularNav	99	decimal		□□ □□
timeThroughIce		decimal		□□ □□□ □□□ □□ □□
timeAtAnchorage		decimal		□□□ □□
annualConsumption	□□		**0~□□ □□ X**	
annualDirectMeasurement	□□		**0~□□ □□ X**	
annualCargoAndTransportWork	□□		**0~□□ □□ X**	





C22 – Company uploads data through XML files

Emissions.xml (Voyage_Emissions.xml + Port_Emissions.xml)

- **shipEmissions – annualEmission – annualConsumption (□□□□가□□□ □)**

□□	□	□□□□	Type	Notes	□□
fuelTypeCode	MDO	MDO ETHANOL MGO HFO LFO LNG LPG_BUTANE LPG_PROPANE METHANOL OTHER	string	□□	□□ □□
amount	10		decimal	□□	□□ □□ □□□
atBerth	true		Boolean	□□	□□ □ □□□ □□ , □□ □□□ TRUE
diffCriterionCode		ON_BALLAST ON_LADEN CARGO_HEATING DYNAMIC_POSITIONING PASSENGER_TRANSPO RT FREIGHT_TRANSPORT	string	0~ □□ □□ X Managed, based on ship type.	Ballast, Laden □ □□□ □□ □□ □□ □ □□ □□□□ □□ □□
emmissionFactor	1		decimal	□□	□□□ □□ □□□ □□

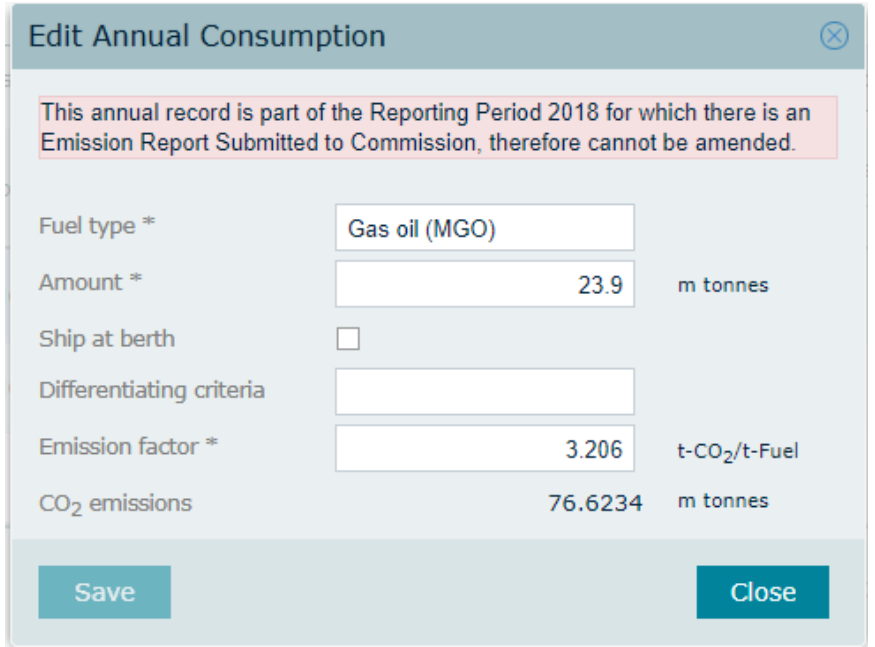
```
- <annualConsumption>
    <fuelTypeCode>MDO</fuelTypeCode>
    <amount>10</amount>
    <atBerth>true</atBerth>
    <emmissionFactor>1</emmissionFactor>
  </annualConsumption>
- <annualConsumption>
    <fuelTypeCode>ETHANOL</fuelTypeCode>
    <amount>20</amount>
    <atBerth>false</atBerth>
    <emmissionFactor>2</emmissionFactor>
  </annualConsumption>
- <annualConsumption>
    <fuelTypeCode>MGO</fuelTypeCode>
    <amount>30</amount>
    <atBerth>true</atBerth>
    <emmissionFactor>3</emmissionFactor>
  </annualConsumption>
```

```
- <annualConsumption>
    <fuelTypeCode>HFO</fuelTypeCode>
    <amount>40</amount>
    <atBerth>false</atBerth>
    <emmissionFactor>4</emmissionFactor>
  </annualConsumption>
- <annualConsumption>
    <fuelTypeCode>LFO</fuelTypeCode>
    <amount>50</amount>
    <atBerth>true</atBerth>
    <emmissionFactor>5</emmissionFactor>
  </annualConsumption>
- <annualConsumption>
    <fuelTypeCode>LNG</fuelTypeCode>
    <amount>60</amount>
    <atBerth>false</atBerth>
    <emmissionFactor>6</emmissionFactor>
  </annualConsumption>
```

```
- <annualConsumption>
    <fuelTypeCode>LPG_BUTANE</fuelTypeCode>
    <amount>70</amount>
    <atBerth>true</atBerth>
    <emmissionFactor>7</emmissionFactor>
  </annualConsumption>
- <annualConsumption>
    <fuelTypeCode>LPG_PROPANE</fuelTypeCode>
    <amount>80</amount>
    <atBerth>false</atBerth>
    <emmissionFactor>8</emmissionFactor>
  </annualConsumption>
- <annualConsumption>
    <fuelTypeCode>METHANOL</fuelTypeCode>
    <amount>90</amount>
    <atBerth>true</atBerth>
    <emmissionFactor>9</emmissionFactor>
  </annualConsumption>
- <annualConsumption>
    <fuelTypeCode>METHANOL</fuelTypeCode>
    <amount>100</amount>
    <atBerth>false</atBerth>
    <diffCriterionCode>DYNAMIC_POSITIONING</diffCriterionCode>
    <emmissionFactor>10</emmissionFactor>
  </annualConsumption>
```

C22 – Company uploads data through XML files

□□	□	□□□□	Type	Notes	□□
fuelTypeCode	MDO	MDO ETHANOL MGO HFO LFO LNG LPG_BUTANE LPG_PROPANE METHANOL OTHER	string	□□	□□ □□
amount	10		decimal	□□	□□ □□ □□□
atBerth	true		Boolean	□□	□□ □ □□□ □□ , □□ □□□ TRUE
diffCriterionCode		ON_BALLAST ON_LADEN CARGO_HEATING DYNAMIC_POSITIONING PASSENGER_TRANSPORT FREIGHT_TRANSPORT	string	0~ □□ □□ X Managed, based on ship type.	Ballast, Laden □ □□□ □□ □□ □□ □ □□ □□□□ □□ □□
emmissionFactor	1		decimal	□□	□□□ □□ □□□ □□



C22 – Company uploads data through XML files

Emissions.xml (Voyage_Emissions.xml + Port_Emissions.xml)

- **shipEmissions – annualEmission – annualDirectMeasurement(CO2 □□ □□□□ – □□)**

□□	□	Options/Rules	Type	Notes	□□
atBearth			boolean	□□	
diffCriterionCode		ON_BALLAST ON_LADEN CARGO_HEATING DYNAMIC_POSITIONING PASSENGER_TRANSPORT FREIGHT_TRANSPORT	string	0~ □□ □□ X Managed, based on ship type.	
co2Emissions			decimal	□□	

- **shipEmissions – annualEmission – annualCargoAndTransportWork**

□□	□	Options/Rules	Type	Notes	□□
transportWork	10		decimal	□□	Transportwork □
cargoFieldCode	CARGO_MASS_TRANSPORT_WORK_MASS	CARGO_MASS_TRANSPORT_WORK_MASS CARGO_VOLUME_TRANSPORT_WORK_VOLUME CARGO_DWT_TRANSPORT_WORK_DWT NO_OF_PASSENGERS_TRANSPORT_WORK_PAX CARGO_MASS_TRANSPORT_WORK_FREIGHT	string	□□	□□□ □□ CARGO_MASS_TRANSPORT_WORK_MASS : MT CARGO_VOLUME_TRANSPORT_WORK_VOLUME : CBM CARGO_DWT_TRANSPORT_WORK_DWT : DWT NO_OF_PASSENGERS_TRANSPORT_WORK_PAX : PASSENGER

```
- <annualCargoAndTransportWork>
    <transportWork>10</transportWork>
    <cargoFieldCode>CARGO_MASS_TRANSPORT_WORK_MASS</cargoFieldCode>
  </annualCargoAndTransportWork>
```

C22 – Company uploads data through XML files

Emissions.xml (Voyage_Emissions.xml + Port_Emissions.xml)

- **shipEmissions – annualEmission – annualCargoAndTransportWork**

□□	□	Options/Rules	Type	Notes	□□
transportWork	10		decimal	□□	Transportwork □
cargoFieldCode	CARGO_MASS_TRANSPORT_WORK_MASS	CARGO_MASS_TRANSPORT_WORK_MASS CARGO_VOLUME_TRANSPORT_WORK_VOLUME CARGO_DWT_TRANSPORT_WORK_DWT NO_OF_PASSENGERS_TRANSPORT_WORK_PAX CARGO_MASS_TRANSPORT_WORK_FREIGHT	string	□□	□□□ □□ CARGO_MASS_TRANSPORT_WORK_MASS : MT CARGO_VOLUME_TRANSPORT_WORK_VOLUME : CBM CARGO_DWT_TRANSPORT_WORK_DWT : DWT NO_OF_PASSENGERS_TRANSPORT_WORK_PAX : PASSENGER

```
- <annualCargoAndTransportWork>
    <transportWork>10</transportWork>
    <cargoFieldCode>CARGO_MASS_TRANSPORT_WORK_MASS</cargoFieldCode>
  </annualCargoAndTransportWork>
```