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**08 AUG, 2019**

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## EU MRV, IMO DCS □□ □□ □□ □

XML, BDN Summary, Collect data Summary



# 1. BDN Summary

선박연료유수급현황										
BDN SUMMARIES										
IMO Number	9390707									
개보수일년도 Calendar year	2019									
운항일자 Date of Operations (yyyy-mm-dd)	연료유 종류 / 권량(톤) Fuel Oil Type/Mass (Metric ton)									비고 Description:
	경유/가스 오일 DO/GO	중유공류 LFO	중유공류 HFO	프로판 LPG(P)	부탄 LPG(B)	액화천연 가스 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							

- 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 (경보수검기간 중 시작일과 종료일의 연료유 보유잔량 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	
연료유 보유 잔량 보정 Correction for the tank oil remainings	100	0	1000.4	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	보정 사유 : ex) Transfed Q'ty to offshore reception facility for tank inspection in dock
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 (㉠+㉡+㉢)	534.6	0	2386.4	0	0	0	0	0	0

2) 연료유 보유 잔량

- 연료유 보유 잔량
- Export 연료유

3) 연료유 사용량

- 연료유 (de-bunkering 연료유)
- 연료유 - (연료유) 연료유

연료유 사용량

- 1+2+3 연료유

# 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·가스 오일 DO/GO	경질중유 LFO	중질중유 HFO	프로판 LPG(P)	부탄 LPG(B)	액화천연 가스 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 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 (경보수절기간 중 시작일과 종료일의 연료유 보유잔량 차이)										
2018-01-01	700.5	0	2000.5	0	0	0	0	0	0	
2018-12-31	600.5	0	1000.1	0	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	0	보정사유 : ex) Transferred Q'ty to offshore reception facility for tank injection in dock
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
1 운항일자	"yyyy-mm-dd" 순으로 입력
2 연료유 종류/질량(톤)	숫자 입력(소수점 첫째자리까지)
3 비고	설명 입력(필요 시)
4 연간 수급량 소계	연료수급일자별 수급량 입력 시 자동계산
5 연료유 보유 잔량 보정	시작일과 종료일 잔량을 입력 시 자동계산 <ul style="list-style-type: none"> <li>연료유 양육 시 양육량을 마이너스(-)값으로 입력 (소수점 첫째자리까지)</li> <li>LNG 화물의 BOG 등을 연료로 사용하는 경우 해당 LNG 사용량을 플러스(+)값으로 입력</li> </ul>
6 연간 보정량 소계	
7 연간 연료유 사용량	자동 계산

💧 "선박연료유 수급현황"에 포함되는 정보를 자체 전자보고시스템으로 관리하는 경우, 자체 전자 보고시스템에서 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 (vvvv-mm-dd)	Date to (yyyy-mm-dd) * 1일 단위로 데이터를 기재하는 두 이 항은 공란으로 됩니다.			경유/ 가스오일 DO/GO	경질중유 LFO	중질중유 HFO	프로판 LPG(P)	부탄 LPG(B)	액화천연 가스 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

1 운행기간		2	3	4 연료유 종류/질량(톤) Fuel Oil Type/Mass (MT)								
Date from (yyyy-mm-dd)	Date to (yyyy-mm-dd) * 다음 달의 데이터를 기재하는 것 을 의미하는 글자요소를 넣는다.	운행거리 Distance travelled (n.m)	운행시간 (시간:분) Hours Underway (hh:mm)	경유/ 가스오일 DO/GO	경질중유 LFO	중질중유 HFO	프로판 LPG(P)	무탄 LPG(B)	액화천연 가스 LNG	메탄올 Methanol	에탄올 Ethanol	기타 Other "연료 명칭" 입력한 (해당되는 경우) "C" 입력한 (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
5 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
1 운행기간	반드시 "yyyy-mm-dd" 형태로 입력
2 운행거리	정수로 입력
3 운행시간	반드시 "hh:mm" 형태로 입력
4 연료유 종류/질량(톤)	숫자 입력(소수점 첫째자리까지)
5 연간 합계	자동계산

🔹 "선박운항정보현황"에 포함되는 정보를 자체 전자보고시스템으로 관리하는 경우, 자체 전자 보고시스템에서 출력한 자료를 "업로드" 하는 것으로 대체 가능합니다.

# 3. Data Report

## • 작성 예시

① 시작일 Start date (yyyy-mm-dd)		2019-01-01
② 종료일 End date (yyyy-mm-dd)		2019-12-31
IMO number		9123348
③ 선박용도 Ship type		Tanker
총톤수 Gross tonnage		5,979
순톤수 NT		4,123
재화중량톤수 DWT		10,115
선박에너지효율설계지수 EEDI (if applicable) (gCO2/t.nm)		30.12345
대빙등급 Ice class (if applicable)		IA
운항거리 Distance Travelled (n.mile)		999,999
④ 운항시간 Hours underway (hours)		7,300
선박연료유 사용량 계측방법 Method used to measure Fuel oil consumption		1
기관출력 Power output (rated power) (kW)	주기관 합계출력 Main Propulsion Power	7,360
	보조기관 합계출력 Auxiliary Engine(s)	901
선박연료유 사용량 Fuel oil consumption (t)	경유/가스오일 Diesel/Gas Oil (C <sub>f</sub> : 3.206)	500
	경질중유 LFO (C <sub>f</sub> : 3.151)	1,000
	중질중유 HFO (C <sub>f</sub> : 3.114)	12,000
	액화석유가스(프로판) LPG(Propane) (C <sub>f</sub> : 3.000)	0
	액화석유가스(부탄) LPG (Butane) (C <sub>f</sub> : 3.030)	0
	액화천연가스 LNG (C <sub>f</sub> : 2.750)	0
	기타 Other(.....) (C <sub>f</sub> : .....)	

## • 작성 방법

숫자를 직접 입력
숫자를 직접 입력
7자리 숫자
총 14종으로 구분된 ship type중에서 선택
숫자를 직접 입력 (“5000 이상 정수” 입력)
숫자를 직접 입력(“정수” 입력)
숫자를 직접 입력(“정수” 입력)
숫자를 직접 입력 (소수점 다섯자리까지 입력 가능)
IA SUPER, IA, IB, IC 중 하나 선택
숫자를 직접 입력(“정수” 입력)
숫자를 직접 입력 (“정수” 입력, 분 단위에서 반올림)
1. BDN : method using BDNs 2. FlowMeter : method using flow meters 3. BunkerTankMonitoring : method using bunker fuel oil monitoring (3개 중 1개 선택)
숫자를 직접 입력(“정수” 입력)
숫자를 직접 입력(“정수” 입력)
숫자를 직접 입력(“정수” 입력)
숫자를 직접 입력(“정수” 입력)
숫자를 직접 입력(“정수” 입력)
숫자를 직접 입력(“정수” 입력)
연료명(영문) & C <sub>f</sub> (소수점세자리)를 직접 입력



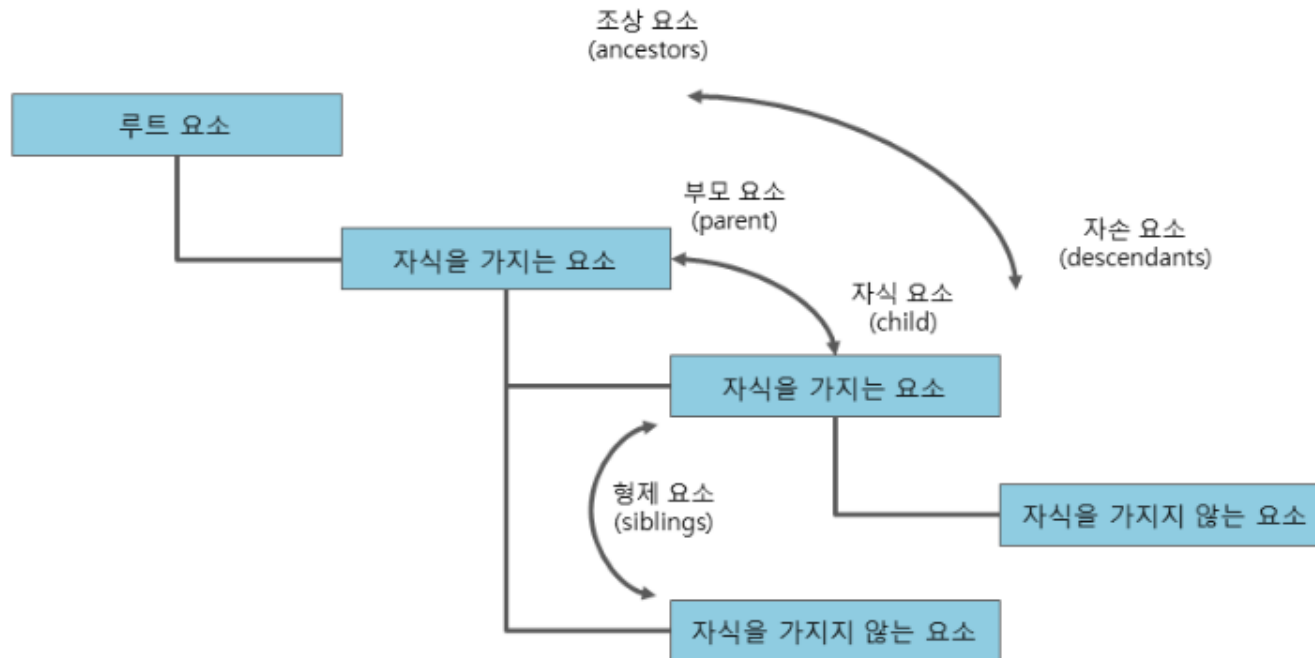
# 4. XML

## XML

- XML은 문서를 구조화한 데이터를 표현하는 언어, 다양한 문서를 구조화한 데이터를 표현
- Extensible Markup Language의 약어, 확장 가능한 마크업 언어로 다양한 문서를 표현할 수 있는 언어

## XML 구조

- 트리 (tree) 구조로 표현
- 루트 요소 (root)를 시작으로, 부모 요소 (parent)와 자식 요소 (child)로 구성
- XML은 루트 요소를 시작으로, 부모 요소 (parent)와 자식 요소 (child)로 구성



# 4. XML

XML 练习 练习 练习

```
<?xml version="1.0" encoding="UTF-8"?>
<shop city="北京" type="超市">
  <food>
    <name>饺子</name>
    <sort>北方</sort>
    <cost>3000</cost>
  </food>
  <food>
    <name>包子</name>
    <sort>北方</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

Field	Value	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

Field	Value	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**

項目	値	Type	Notes	単位
reportingPeriod	2017	int	年	年 月 日
fromDate	01-01-2017	string	年	年 月
toDate	31-12-2017	string	年	年 月
discriminateThroughIce	false	Boolean	年	通過氷, 通過氷 : false
emissionsBetweenEuPort	1000	decimal		CO2 年
emissionsDepartEuPort	100	decimal		CO2 年
emissionsToEuPort	110	decimal		CO2 年
emissionsEuPortAtBerth	50	decimal		CO2 年
distanceRegularNav	500	decimal		年
distanceThroughIce		decimal		年 通過氷 年 月 日
timeRegularNav	99	decimal		年
timeThroughIce		decimal		年 通過氷 年 月 日
timeAtAnchorage		decimal		年
<b>annualConsumption</b>	年		0~ 年 月 日 X	
<b>annualDirectMeasurement</b>	年		0~ 年 月 日 X	
<b>annualCargoAndTransportWork</b>	年		0~ 年 月 日 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**

項目	値	Type	Notes	単位
reportingPeriod	2017	int	年	年 月 日
fromDate	01-01-2017	string	開始日	年 月 日
toDate	31-12-2017	string	終了日	年 月 日
discriminateThroughIce	false	Boolean	氷を通る航行を区別する	はい/いいえ : false
emissionsBetweenEuPort	1000	decimal	EU港間のCO2排出量	CO2 トン
emissionsDepartEuPort	100	decimal	EU港を発航するCO2排出量	CO2 トン
emissionsToEuPort	110	decimal	EU港に向かうCO2排出量	CO2 トン
emissionsEuPortAtBerth	50	decimal	EU港に在港するCO2排出量	CO2 トン
distanceRegularNav	500	decimal	通常航行距離	海里
distanceThroughIce		decimal	氷を通る航行距離	海里 通常航行距離 海里
timeRegularNav	99	decimal	通常航行時間	時間
timeThroughIce		decimal	氷を通る航行時間	時間 通常航行時間 時間
timeAtAnchorage		decimal	錨泊時間	時間
annualConsumption	00		0~ 99 99 X	
annualDirectMeasurement	00		0~ 99 99 X	
annualCargoAndTransport Work	00		0~ 99 99 X	

Edit Annual Emissions

This annual record is part of the Reporting Period 2018 for which there is an Emission Report Submitted to Commission, therefore cannot be amended.

Total CO<sub>2</sub> Emissions2750.3418 m tonnes

Reporting period

Fuel consumption

Direct emissions

Parameters

Average energy efficiency

Reporting period \*2018Discriminate navigation through ice☐

From \*01-01-2018

To \*31-12-2018

Date of record11-03-2019 16:28ReporterJinyoung Yang

SaveAutomatic data fillingClose

Edit Annual Emissions

This annual record is part of the Reporting Period 2018 for which there is an Emission Report Submitted to Commission, therefore cannot be amended.

Total CO<sub>2</sub> Emissions2750.3418 m tonnes

Reporting period

Fuel consumption

Direct emissions

Parameters

Average energy efficiency

Total fuel consumption881.0999999999999 m tonnes

Total CO<sub>2</sub> emissions2750.3418 m tonnes

CO<sub>2</sub> emissions from all voyages between ports under a MS jurisdiction219.9 m tonnes

CO<sub>2</sub> emissions from all voyages which departed from ports under a MS jurisdiction1573.5 m tonnes

CO<sub>2</sub> emissions from all voyages to ports under a MS jurisdiction803.7 m tonnes

CO<sub>2</sub> emissions which occurred within ports under a MS jurisdiction at berth153.2 m tonnes

Total distance travelled8293.00 n miles

Regular navigation8293 n miles

Through ice n miles

Total time spent at sea686.00 hours

Regular navigation649 hours

Through ice hours

At anchorage37 hours

Total transport work (mass)168615780 m tonnes · n miles

SaveAutomatic data fillingClose

# C22 - Company uploads data through XML files

## Emissions.xml (Voyage\_Emissions.xml + Port\_Emissions.xml)

- shipEmissions – **annualEmission** – annualConsumption ( 00007000 0 )

項目	値	説明	Type	Notes	単位
fuelTypeCode	MDO	MDO	string	00	00 00
		ETHANOL MGO HFO LFO LNG LPG_BUTANE LPG_PROPA NE METHANOL OTHER			
amount	10		decimal	00	00 00 000
atBerth	true		Boolean	00	00 0 000 00 , 00 000 TRUE
diffCriterionCode	ON_BALLAST ON_LADEN CARGO_HEATING DYNAMIC_POSIT IONING PASSENGER_TRAN SPORT FREIGHT_TRANSPORT	ON_BALLAST ON_LADEN CARGO_HEATING DYNAMIC_POSIT IONING PASSENGER_TRAN SPORT FREIGHT_TRANSPORT	string	0~ 00 00 X Managed, based on ship type.	Ballast, Laden 0 000 00 00 00 0 00 0000 00 00
emissionFactor	1		decimal	00	000 00 000 00
<div><div><div>- &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;MDO&lt;/fuelTypeCode&gt;   &lt;amount&gt;10&lt;/amount&gt;   &lt;atBerth&gt;true&lt;/atBerth&gt;   &lt;emissionFactor&gt;1&lt;/emissionFactor&gt; &lt;/annualConsumption&gt; - &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;ETHANOL&lt;/fuelTypeCode&gt;   &lt;amount&gt;20&lt;/amount&gt;   &lt;atBerth&gt;&gt;false&lt;/atBerth&gt;   &lt;emissionFactor&gt;2&lt;/emissionFactor&gt; &lt;/annualConsumption&gt; - &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;MGO&lt;/fuelTypeCode&gt;   &lt;amount&gt;30&lt;/amount&gt;   &lt;atBerth&gt;true&lt;/atBerth&gt;   &lt;emissionFactor&gt;3&lt;/emissionFactor&gt; &lt;/annualConsumption&gt;</div><div>- &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;HFO&lt;/fuelTypeCode&gt;   &lt;amount&gt;40&lt;/amount&gt;   &lt;atBerth&gt;&gt;false&lt;/atBerth&gt;   &lt;emissionFactor&gt;4&lt;/emissionFactor&gt; &lt;/annualConsumption&gt; - &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;LFO&lt;/fuelTypeCode&gt;   &lt;amount&gt;50&lt;/amount&gt;   &lt;atBerth&gt;true&lt;/atBerth&gt;   &lt;emissionFactor&gt;5&lt;/emissionFactor&gt; &lt;/annualConsumption&gt; - &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;LNG&lt;/fuelTypeCode&gt;   &lt;amount&gt;60&lt;/amount&gt;   &lt;atBerth&gt;&gt;false&lt;/atBerth&gt;   &lt;emissionFactor&gt;6&lt;/emissionFactor&gt; &lt;/annualConsumption&gt;</div><div>- &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;LPG_BUTANE&lt;/fuelTypeCode&gt;   &lt;amount&gt;70&lt;/amount&gt;   &lt;atBerth&gt;true&lt;/atBerth&gt;   &lt;emissionFactor&gt;7&lt;/emissionFactor&gt; &lt;/annualConsumption&gt; - &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;LPG_PROPA NE&lt;/fuelTypeCode&gt;   &lt;amount&gt;80&lt;/amount&gt;   &lt;atBerth&gt;&gt;false&lt;/atBerth&gt;   &lt;emissionFactor&gt;8&lt;/emissionFactor&gt; &lt;/annualConsumption&gt; - &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;METHANOL&lt;/fuelTypeCode&gt;   &lt;amount&gt;90&lt;/amount&gt;   &lt;atBerth&gt;true&lt;/atBerth&gt;   &lt;emissionFactor&gt;9&lt;/emissionFactor&gt; &lt;/annualConsumption&gt; - &lt;annualConsumption&gt;   &lt;fuelTypeCode&gt;METHANOL&lt;/fuelTypeCode&gt;   &lt;amount&gt;100&lt;/amount&gt;   &lt;atBerth&gt;&gt;false&lt;/atBerth&gt;   &lt;diffCriterionCode&gt;DYNAMIC_POSIT IONING&lt;/diffCriterionCode&gt;   &lt;emissionFactor&gt;10&lt;/emissionFactor&gt; &lt;/annualConsumption&gt;</div></div></div>					

# C22 - Company uploads data through XML files

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

Edit Annual Emissions

This annual record is part of the Reporting Period 2018 for which there is an Emission Report Submitted to Commission, therefore cannot be amended.

Total CO<sub>2</sub> Emissions2750.3418 m tonnes

Reporting period

Fuel consumption

Direct emissions

Parameters

Average energy efficiency

	Fuel Type	Amount [m tonnes]	At berth	Differentiating criteria	Emission factor [t-CO <sub>2</sub> /t-Fuel]	CO <sub>2</sub> emissions [m tonnes]
Actions	Gas oil (MGO)	47.8	✓		3.206	153.2468
Actions	Gas oil (MGO)	23.9			3.206	76.6234
Actions	Heavy fuel oil ...	809.4			3.114	2520.4716

Add consumption

Total consumption881.0999999999999 m tonnes

Total CO<sub>2</sub>2750.3418 m tonnes

Save

Automatic data filling

Close

Edit Annual Consumption

This annual record is part of the Reporting Period 2018 for which there is an Emission Report Submitted to Commission, therefore cannot be amended.

Fuel type \*Gas oil (MGO)

Amount \*23.9 m tonnes

Ship at berth☐

Differentiating criteria

Emission factor \*3.206 t-CO<sub>2</sub>/t-Fuel

CO<sub>2</sub> emissions76.6234 m tonnes

Save

Close

# C22 - Company uploads data through XML files

## Emissions.xml (Voyage\_Emissions.xml + Port\_Emissions.xml)

- shipEmissions – annualEmission – annualDirectMeasurement(CO2 00 0000 - 00 )

00	0	Options/Rules	Type	Notes	00
atBearth			boolean	00	
diffCriterionCode		ON_BALLAST ON_LADEN CARGO_HEATING DYNAMIC_POSITIONING PASSENGER_TRANSPORT FREIGHT_TRANSPORT	string	0~00 00 X Managed, based on ship type.	
co2Emissions			decimal	00	

- shipEmissions – annualEmission – annualCargoAndTransportWork

00	0	Options/Rules	Type	Notes	00
transportWork	10		decimal	00	Transportwork 0
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	00	000 00 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

Field	Value	Options/Rules	Type	Notes	Field
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>
```

Reporting period

Fuel consumption

Direct emissions

Parameters

Average energy efficiency

Total fuel consumption

881.0999999999999

m tonnes

Total CO<sub>2</sub> emissions

2750.3418

m tonnes

CO<sub>2</sub> emissions from all voyages between ports under a MS jurisdiction

219.9

m tonnes

CO<sub>2</sub> emissions from all voyages which departed from ports under a MS jurisdiction

1573.5

m tonnes

CO<sub>2</sub> emissions from all voyages to ports under a MS jurisdiction

803.7

m tonnes

CO<sub>2</sub> emissions which occurred within ports under a MS jurisdiction at berth

153.2

m tonnes

Total distance travelled

8293.00

n miles

Regular navigation

8293

n miles

Through ice

n miles

Total time spent at sea

686.00

hours

Regular navigation

649

hours

Through ice

hours

At anchorage

37

hours

Total transport work (mass)

168615780

m tonnes · n miles

Save

Automatic data filling

Close