

## ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE



Rewritten

Certificate No. 23HO01219-EAP-1  
(Ex.Cert.No. 23HL0003-EAP-1)

Issued under the provisions of the Protocol of 1997 to the  
**INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973**,  
as modified by the Protocol of 1978 relating thereto (hereinafter referred to as 'the Convention')  
under the authority of the Government of

**the Republic of Panama**  
by **NIPPON KAIJI KYOKAI**

Engine Manufacturer	Model number	Serial number	Test Cycle(s)	Rated Power (kW) and Speed (RPM)	Engine Approval number
Yichang Marine Diesel Engine Plant	6RTA48T-B	YS-109	E3	7,368 kW 118 RPM	19MS0001-1

**THIS IS TO CERTIFY:**

1. That the above-mentioned marine diesel engine has been surveyed for pre-certification in accordance with the requirements of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines made mandatory by Annex VI of the Convention; and
2. That the pre-certification survey shows that the engine, its components, adjustable features, and Technical File, prior to the engine's installation and/or services on board a ship, fully comply with the applicable regulation 13 of Annex VI of the Convention.

This Certificate is valid for the life of engine subject to surveys in accordance with regulation 5 of Annex VI of the Convention, installed in ships under the authority of this Government.

Issued at Tokyo on 8 May 2023

*The undersigned declares that he is duly authorized by the said Government to issue this certificate.*



*Note: This certificate was issued for correction of clerical errors.*

S. SASAKI  
General Manager of Classification Department

**NIPPON KAIJI KYOKAI**



**SUPPLEMENT TO  
ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE  
(EIAPP CERTIFICATE)  
RECORD OF CONSTRUCTION, TECHNICAL FILE AND MEANS OF VERIFICATION**

In respect of the provisions of Annex VI of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred as “the Convention”) and of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (hereinafter referred to as the “NOx Technical Code”).

**Notes:**

1. This Record and its attachments shall be permanently attached to the EIAPP Certificate. The EIAPP Certificate shall accompany the engine throughout its life and shall be available on board the ship at all times.
2. The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.
3. Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and the requirements for an engine's Technical File and means of verifications refer to mandatory requirements from the NOx Technical Code.

**1. Particulars of the engine**

- 1.1 Name and address of manufacturer Yichang Marine Diesel Engine Plant  
93 Xiling No.2 Road, Yichang, PRC
- 1.2 Place of engine build as above
- 1.3 Date of engine build January 2010
- 1.4 Place of pre-certification survey Yichang, China
- 1.5 Date of pre-certification survey 8 January 2010
- 1.6 Engine type and model number 6RTA48T-B
- 1.7 Engine serial number YS-109
- 1.8 If applicable, the engine is a parent engine ☒ or a member engine ☐ of the following engine family ☐  
or engine group ☒ YMD-RTA48T-B-06
- 1.9 Test cycle(s) (see chapter 3 of the NOx Technical Code) E3
- 1.10 Rated Power (kW) and Speed (RPM) 7,368 kW 118 RPM
- 1.11 Engine approval number 19MS0001-1
- 1.12 Specification(s) of test fuel DM grade(ISO8217)
- 1.13 NOx reducing device designated approval number (if installed) Nil
- 1.14 Applicable NOx Emission Limit (g/kWh) (regulation 13 of Annex VI) 17.0 g/kWh
- 1.15 Engine's actual NOx Emission Value (g/kWh) 12.38 g/kWh



**2. Particulars of the Technical File**


- 2.1 Technical File identification/approval number 4-Z.007.307;YMDE\_007/YS-109 / 19MS0001TF-1
- 2.2 Technical File approval date 3 January 2019
- 2.3 The Technical File, as required by chapter 2 of the NOx Technical Code, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

**3. Specification for the On-board NOx Verification Procedures for the Engine Parameter Survey**

- 3.1 On-board NOx verification procedures identification/approved number 4-Z.007.307;YMDE\_007/YS-109 / 19MS0001TF-1
- 3.2 On-board NOx verification procedures approval date 3 January 2019
- 3.3 The specifications for the on-board NOx verification procedures, as required by chapter 6 of the NOx Technical Code, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at Tokyo on 8 May 2023

  
 S. SASAKI  
 General Manager of Classification Department  
 NIPPON KAIJI KYOKAI



## ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE



Rewritten

Certificate No. 23HO01219-EAP-2  
(Ex.Cert.No. 23HL0003-EAP-2)

Issued under the provisions of the Protocol of 1997 to the  
**INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973**,  
as modified by the Protocol of 1978 relating thereto (hereinafter referred to as 'the Convention')  
under the authority of the Government of

**the Republic of Panama**  
by **NIPPON KAIJI KYOKAI**

Engine Manufacturer	Model number	Serial number	Test Cycle(s)	Rated Power (kW) and Speed (RPM)	Engine Approval number
Anqing CSSC Diesel Engine Co., Ltd.	5DK-20	AQ5K206 20	D2	660 kW 900 RPM	19MS0001-2

**THIS IS TO CERTIFY:**

1. That the above-mentioned marine diesel engine has been surveyed for pre-certification in accordance with the requirements of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines made mandatory by Annex VI of the Convention; and
2. That the pre-certification survey shows that the engine, its components, adjustable features, and Technical File, prior to the engine's installation and/or services on board a ship, fully comply with the applicable regulation 13 of Annex VI of the Convention.

This Certificate is valid for the life of engine subject to surveys in accordance with regulation 5 of Annex VI of the Convention, installed in ships under the authority of this Government.

Issued at Tokyo on 8 May 2023

*The undersigned declares that he is duly authorized by the said Government to issue this certificate.*



*Note: This certificate was issued for correction of clerical errors.*

S. SASAKI  
General Manager of Classification Department

**NIPPON KAIJI KYOKAI**



**SUPPLEMENT TO  
ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE  
(EIAPP CERTIFICATE)  
RECORD OF CONSTRUCTION, TECHNICAL FILE AND MEANS OF VERIFICATION**

In respect of the provisions of Annex VI of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred as “the Convention”) and of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (hereinafter referred to as the “NOx Technical Code”).

**Notes:**

1. This Record and its attachments shall be permanently attached to the EIAPP Certificate. The EIAPP Certificate shall accompany the engine throughout its life and shall be available on board the ship at all times.
2. The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.
3. Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and the requirements for an engine's Technical File and means of verifications refer to mandatory requirements from the NOx Technical Code.

**1. Particulars of the engine**

- |      |  |  |         |
|------|--|--|---------|
| 1.1  | Name and address of manufacturer   | Anqing CSSC Diesel Engine Co., Ltd.<br>Wei 2# Western Road, 3.9 km2 Industrial Park, Anqing E.T.D. Zone,<br>Anqing City, Anhui Province, PRC |         |
| 1.2  | Place of engine build  | as above   |         |
| 1.3  | Date of engine build   | December 2009  |         |
| 1.4  | Place of pre-certification survey  | Anhui, PRC   |         |
| 1.5  | Date of pre-certification survey   | 17 December 2009   |         |
| 1.6  | Engine type and model number   | 5DK-20   |         |
| 1.7  | Engine serial number   | AQ5K20620  |         |
| 1.8  | If applicable, the engine is a parent engine <input type="checkbox"/> or a member engine <input checked="" type="checkbox"/> of the following engine family <input checked="" type="checkbox"/><br>or engine group <input type="checkbox"/> DK-20(T) |  |         |
| 1.9  | Test cycle(s) (see chapter 3 of the NOx Technical Code)  | D2   |         |
| 1.10 | Rated Power (kW) and Speed (RPM)   | 660 kW   | 900 RPM |
| 1.11 | Engine approval number   | 19MS0001-2   |         |
| 1.12 | Specification(s) of test fuel  | DMB(ISO8217)   |         |
| 1.13 | NOx reducing device designated approval number (if installed)  | Nil  |         |
| 1.14 | Applicable NOx Emission Limit (g/kWh) (regulation 13 of Annex VI)  | 11.5 g/kWh   |         |
| 1.15 | Engine's actual NOx Emission Value (g/kWh)   | 10.4 g/kWh   |         |



**2. Particulars of the Technical File**

- 2.1 Technical File identification/approval number Q7LT330300FD,DDM-Y018P/AQ5K20620 /  
19MS0001TF-2
- 2.2 Technical File approval date 3 January 2019
- 2.3 The Technical File, as required by chapter 2 of the NOx Technical Code, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

**3. Specification for the On-board NOx Verification Procedures for the Engine Parameter Survey**

- 3.1 On-board NOx verification procedures identification/approved number Q7LT322620FA,DDM-Y018P/AQ5K20620 /  
19MS0001TF-2
- 3.2 On-board NOx verification procedures approval date 3 January 2019
- 3.3 The specifications for the on-board NOx verification procedures, as required by chapter 6 of the NOx Technical Code, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at Tokyo on 8 May 2023



S. SASAKI

General Manager of Classification Department

**NIPPON KAIJI KYOKAI**



## ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE



Rewritten

Certificate No. 23HO01219-EAP-3  
(Ex.Cert.No. 23HL0003-EAP-3)

Issued under the provisions of the Protocol of 1997 to the  
**INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973**,  
as modified by the Protocol of 1978 relating thereto (hereinafter referred to as 'the Convention')  
under the authority of the Government of

**the Republic of Panama**  
by **NIPPON KAIJI KYOKAI**

Engine Manufacturer	Model number	Serial number	Test Cycle(s)	Rated Power (kW) and Speed (RPM)	Engine Approval number
Anqing CSSC Diesel Engine Co., Ltd.	5DK-20	AQ5K206 21	D2	660 kW 900 RPM	19MS0001-3

**THIS IS TO CERTIFY:**

1. That the above-mentioned marine diesel engine has been surveyed for pre-certification in accordance with the requirements of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines made mandatory by Annex VI of the Convention; and
2. That the pre-certification survey shows that the engine, its components, adjustable features, and Technical File, prior to the engine's installation and/or services on board a ship, fully comply with the applicable regulation 13 of Annex VI of the Convention.

This Certificate is valid for the life of engine subject to surveys in accordance with regulation 5 of Annex VI of the Convention, installed in ships under the authority of this Government.

Issued at Tokyo on 8 May 2023

*The undersigned declares that he is duly authorized by the said Government to issue this certificate.*



*Note: This certificate was issued for correction of clerical errors.*

S. SASAKI  
General Manager of Classification Department

**NIPPON KAIJI KYOKAI**



**SUPPLEMENT TO  
ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE  
(EIAPP CERTIFICATE)  
RECORD OF CONSTRUCTION, TECHNICAL FILE AND MEANS OF VERIFICATION**

In respect of the provisions of Annex VI of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred as “the Convention”) and of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (hereinafter referred to as the “NOx Technical Code”).

**Notes:**

1. This Record and its attachments shall be permanently attached to the EIAPP Certificate. The EIAPP Certificate shall accompany the engine throughout its life and shall be available on board the ship at all times.
2. The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.
3. Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and the requirements for an engine's Technical File and means of verifications refer to mandatory requirements from the NOx Technical Code.

**1. Particulars of the engine**

- |      |  |  |         |
|------|--|--|---------|
| 1.1  | Name and address of manufacturer   | Anqing CSSC Diesel Engine Co., Ltd.<br>Wei 2# Western Road, 3.9 km2 Industrial Park, Anqing E.T.D. Zone,<br>Anqing City, Anhui Province, PRC |         |
| 1.2  | Place of engine build  | as above   |         |
| 1.3  | Date of engine build   | December 2009  |         |
| 1.4  | Place of pre-certification survey  | Anhui, PRC   |         |
| 1.5  | Date of pre-certification survey   | 17 December 2009   |         |
| 1.6  | Engine type and model number   | 5DK-20   |         |
| 1.7  | Engine serial number   | AQ5K20621  |         |
| 1.8  | If applicable, the engine is a parent engine <input type="checkbox"/> or a member engine <input checked="" type="checkbox"/> of the following engine family <input checked="" type="checkbox"/><br>or engine group <input type="checkbox"/> DK-20(T) |  |         |
| 1.9  | Test cycle(s) (see chapter 3 of the NOx Technical Code)  | D2   |         |
| 1.10 | Rated Power (kW) and Speed (RPM)   | 660 kW   | 900 RPM |
| 1.11 | Engine approval number   | 19MS0001-3   |         |
| 1.12 | Specification(s) of test fuel  | DMB(ISO8217)   |         |
| 1.13 | NOx reducing device designated approval number (if installed)  | Nil  |         |
| 1.14 | Applicable NOx Emission Limit (g/kWh) (regulation 13 of Annex VI)  | 11.5 g/kWh   |         |
| 1.15 | Engine's actual NOx Emission Value (g/kWh)   | 10.4 g/kWh   |         |





**2. Particulars of the Technical File**

- 2.1 Technical File identification/approval number Q7LT330300FD,DDM-Y018P/AQ5K20621 / 19MS0001TF-3
- 2.2 Technical File approval date 3 January 2019
- 2.3 The Technical File, as required by chapter 2 of the NOx Technical Code, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

**3. Specification for the On-board NOx Verification Procedures for the Engine Parameter Survey**

- 3.1 On-board NOx verification procedures identification/approved number Q7LT322620FA,DDM-Y018P/AQ5K20621 / 19MS0001TF-3
- 3.2 On-board NOx verification procedures approval date 3 January 2019
- 3.3 The specifications for the on-board NOx verification procedures, as required by chapter 6 of the NOx Technical Code, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

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Issued at Tokyo on 8 May 2023



S. SASAKI

General Manager of Classification Department

**NIPPON KAIJI KYOKAI**



## ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE



Rewritten

Certificate No. 23HO01219-EAP-4  
(Ex.Cert.No. 23HL0003-EAP-4)

Issued under the provisions of the Protocol of 1997 to the  
**INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973**,  
as modified by the Protocol of 1978 relating thereto (hereinafter referred to as 'the Convention')  
under the authority of the Government of

**the Republic of Panama**  
by **NIPPON KAIJI KYOKAI**

Engine Manufacturer	Model number	Serial number	Test Cycle(s)	Rated Power (kW) and Speed (RPM)	Engine Approval number
Anqing CSSC Diesel Engine Co., Ltd.	5DK-20	AQ5K206 22	D2	660 kW 900 RPM	19MS0001-4

**THIS IS TO CERTIFY:**

1. That the above-mentioned marine diesel engine has been surveyed for pre-certification in accordance with the requirements of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines made mandatory by Annex VI of the Convention; and
2. That the pre-certification survey shows that the engine, its components, adjustable features, and Technical File, prior to the engine's installation and/or services on board a ship, fully comply with the applicable regulation 13 of Annex VI of the Convention.

This Certificate is valid for the life of engine subject to surveys in accordance with regulation 5 of Annex VI of the Convention, installed in ships under the authority of this Government.

Issued at Tokyo on 8 May 2023

*The undersigned declares that he is duly authorized by the said Government to issue this certificate.*



*Note: This certificate was issued for correction of clerical errors.*

S. SASAKI  
General Manager of Classification Department

**NIPPON KAIJI KYOKAI**



**SUPPLEMENT TO  
ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE  
(EIAPP CERTIFICATE)  
RECORD OF CONSTRUCTION, TECHNICAL FILE AND MEANS OF VERIFICATION**

In respect of the provisions of Annex VI of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred as “the Convention”) and of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (hereinafter referred to as the “NOx Technical Code”).

**Notes:**

1. This Record and its attachments shall be permanently attached to the EIAPP Certificate. The EIAPP Certificate shall accompany the engine throughout its life and shall be available on board the ship at all times.
2. The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.
3. Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and the requirements for an engine's Technical File and means of verifications refer to mandatory requirements from the NOx Technical Code.

**1. Particulars of the engine**

- |      |  |  |         |
|------|--|--|---------|
| 1.1  | Name and address of manufacturer   | Anqing CSSC Diesel Engine Co., Ltd.<br>Wei 2# Western Road, 3.9 km <sup>2</sup> Industrial Park, Anqing E.T.D. Zone,<br>Anqing City, Anhui Province, PRC |         |
| 1.2  | Place of engine build  | as above   |         |
| 1.3  | Date of engine build   | December 2009  |         |
| 1.4  | Place of pre-certification survey  | Anhui, PRC   |         |
| 1.5  | Date of pre-certification survey   | 17 December 2009   |         |
| 1.6  | Engine type and model number   | 5DK-20   |         |
| 1.7  | Engine serial number   | AQ5K20622  |         |
| 1.8  | If applicable, the engine is a parent engine <input type="checkbox"/> or a member engine <input checked="" type="checkbox"/> of the following engine family <input checked="" type="checkbox"/><br>or engine group <input type="checkbox"/> DK-20(T) |  |         |
| 1.9  | Test cycle(s) (see chapter 3 of the NOx Technical Code)  | D2   |         |
| 1.10 | Rated Power (kW) and Speed (RPM)   | 660 kW   | 900 RPM |
| 1.11 | Engine approval number   | 19MS0001-4   |         |
| 1.12 | Specification(s) of test fuel  | DMB(ISO8217)   |         |
| 1.13 | NOx reducing device designated approval number (if installed)  | Nil  |         |
| 1.14 | Applicable NOx Emission Limit (g/kWh) (regulation 13 of Annex VI)  | 11.5 g/kWh   |         |
| 1.15 | Engine's actual NOx Emission Value (g/kWh)   | 10.4 g/kWh   |         |



**2. Particulars of the Technical File**

- 2.1 Technical File identification/approval number Q7LT330300FD,DDM-Y018P/AQ5K20622 / 19MS0001TF-4
- 2.2 Technical File approval date 3 January 2019
- 2.3 The Technical File, as required by chapter 2 of the NOx Technical Code, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

**3. Specification for the On-board NOx Verification Procedures for the Engine Parameter Survey**

- 3.1 On-board NOx verification procedures identification/approved number Q7LT322620FA,DDM-Y018P/AQ5K20622 / 19MS0001TF-4
- 3.2 On-board NOx verification procedures approval date 3 January 2019
- 3.3 The specifications for the on-board NOx verification procedures, as required by chapter 6 of the NOx Technical Code, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at Tokyo on 8 May 2023



S. SASAKI

General Manager of Classification Department

**NIPPON KAIJI KYOKAI**

