

◆ABS 船用电缆认证



CERTIFICATE NUMBER 21-2153557-PDA
EFFECTIVE DATE 19-November-2021
EXPIRATION DATE 18-November-2026
ABS TECHNICAL OFFICE CN Shanghai ESD

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

ANHUI TIANKANG (GROUP) SHARES CO., LTD

located at

**NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI, TIANCHANG,
CHINA**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Cable, Power

Model CJ Series and CE Series

This Product Design Assessment (PDA) Certificate remains valid until 3 August 2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

Bin-Hong Wang, Director

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement



**Design Assessment (DA) Certification
Attachment for Listing**

DA Cert. No.: 21-2153557-PDA

DA Certificate No.: 21-2153557-PDA
Entry Date: 19 November 2021
Expire Date: 18 November 2026
(subject to the condition stated on the DA Certificate)
Name of Manufacturer: Anhui Tiankang (Group) Shares Co., Ltd.
Address: No.20 South Renhe Road,
City: Tianchang,
Zip: 239300
Country: P. R. China
Telephone: 0550-7308843
Fax: 0550-7308931
Email: xmxia-0929@163.com
Contact Person: Mr. Xia, Xi-ming
Product: Cable, Power
Model: CJ Series, CE Series

Model	Description
CJ86/SC/NC:	XLPE insulated extruded inner covering tinned copper wire braided armored PO outer sheathed shipboard power cable
CJ96/SC/NC:	XLPE insulated extruded inner covering galvanized steel wire braided armored PO outer sheathed shipboard power cable
CJ85/SC/NC:	XLPE insulated extruded inner covering tinned copper wire braided armored cross-linked PO outer sheathed shipboard power cable
CJ95/SC/NC:	XLPE insulated extruded inner covering galvanized steel wire braided armored cross-linked PO outer sheathed shipboard power cable
CJPJ/SC/NC:	XLPE insulated cross-linked PO outer sheathed shipboard power cable
CJPJ85/SC/NC:	XLPE insulated cross-linked PO inner sheathed tinned copper wire braided armored cross-linked PO outer sheathed shipboard power cable
CJPJ95/SC/NC:	XLPE insulated cross-linked PO inner sheathed galvanized steel wire braided armored cross-linked PO outer sheathed shipboard power cable
CJPJ80/SC/NC:	XLPE insulated cross-linked PO inner sheathed tinned copper wire braided armored shipboard power cable
CJPJ90/SC/NC:	XLPE insulated cross-linked PO inner sheathed galvanized steel wire braided armored shipboard power cable
CJPF/SC/NC:	XLPE insulated PO outer sheath shipboard power cable
CJPF86/SC/NC:	XLPE insulated PO inner sheathed tinned copper wire braided armored PO outer sheathed shipboard power cable
CJPF96/SC/NC:	XLPE insulated PO inner sheathed galvanized steel wire braided armored PO outer sheathed shipboard power cable

CJPF80/SC/NC:	XLPE insulated PO inner sheath tinned copper wire braided armored shipboard power cable
CJPF90/SC/NC:	XLPE insulated PO inner sheath galvanized steel wire braided armored shipboard power cable
CEPF/SC/NC:	EPR Insulated PO sheathed shipboard power cable
CEPF86/SC/NC:	EPR Insulated PO inner sheathed copper wire braided armored PO outer sheathed shipboard power cable
CEPF96/SC/NC:	EPR Insulated PO inner sheathed steel wire braided armored PO outer sheathed shipboard power cable
CEPF80/SC/NC:	EPR Insulated PO inner sheathed tinned copper wire braided armored shipboard power cable
CEPF90/SC/NC:	EPR Insulated PO inner sheathed galvanized steel wire braided armored shipboard power cable
CEPJ/SC/NC:	EPR Insulated cross-linked PO inner sheathed shipboard power cable
CEPJ85/SC/NC:	EPR Insulated cross-linked PO inner sheathed copper wire braided armored cross-linked PO outer sheathed shipboard power cable
CEPJ95/SC/NC:	EPR Insulated cross-linked PO inner sheathed galvanized steel wire braided armored cross-linked PO outer sheathed shipboard power cable
CEPJ80/SC/NC:	EPR Insulated cross-linked PO inner sheathed tinned copper wire braided armored shipboard power cable
CEPJ90/SC/NC:	EPR insulated chloroprene rubber sheathed shipboard power cable
CEF/SA/NA:	EPR Insulated cross-linked PO inner sheathed tinned copper wire braided armored shipboard power cable
Type SA:	Bunched cable flame retardant, comply with IEC60332-1(2004), IEC60332-3.A(2009);
Type NA:	Fire resistant cable, comply with IEC60332-1(2004), IEC60332-3.A(2009), IEC60331-1(2009), IEC60331-2(2009);
Type SC:	Halogen-free low-smoke bunched flame retardant cable, comply with IEC60332-1(2004), IEC60332-3.A(2009), IEC 60754-1/2(2001), IEC61034(2005);
Type NC:	Halogen-free low-smoke fire resistant cable, comply with IEC60332-1(2004), IEC60332-3.A(2009), IEC 60754-1/2(2001), IEC61034(2005), IEC60331-1(2009), IEC60331-2(2009);



**Design Assessment (DA) Certification
Attachment for Listing**

DA Cert. No.: 21-2153557-PDA

No. of Cores	Nominal Cross Section mm ²
1	1,1.5,2.5,4,6,10,16,25,35,50,70,95,120,150,185,240
2	1,1.5,2.5,4,6,10,16,25,35,50,70,95,120
3	1,1.5,2.5,4,6,10,16,25,35,50,70,95,120,150,185
4,5,7,10,12,14,16,19,24,27,30,33,37	1,1.5,2.5

ANHUI TIANKANG (GROUP) SHARES CO.
NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI
TIANCHANG ANHUI
China
Telephone: 86-550-7308843
Fax: 86-550-7308931
Email: xmxia-0929@163.com
Web: www.tiankang.com

Tier: 3 - Type Approved, unit certification not required

Product: Cable, Power
Model: CJ Series and CE Series
Endorsements:

Intended Service:
Power System for Shipboard and Offshore Installations.
Not intended for use as propulsion cable.

Description:
See Attachment

Rating:
0.6/1 kV; Maximum conductor temperature: 90 deg/C

Service Restriction:

1. Unit Certification is not required for this product. However, unit certification is required for electric propulsion cables.
2. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
3. Electrical cables are to be tested by the manufacturers in accordance with the standards of compliance. Records of tests are to be maintained and are to be submitted upon request by ABS. For propulsion cables, see 4-8-5/5.17.11 of Marine Vessel Rules.

Comments:

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The following cable markings are to be provided in accordance with IEC 60092-353: Indication of origin (manufacturer's name or trade mark) and rated voltage (Uo/ U) and construction (number of cores pairs triples or quads and cross sectional area of the conductor).
3. All propulsion cables, other than internal wiring in control gears and switchboards, are to be subjected to dielectric and insulation tests in the presence of the Surveyor.

Notes/Drawing/Documentation:

Drawing No./Drawing Title/Revision No.
NA-1/Approved List of Products 2015/1
NA-2/Application material/0
Test Report No./Title/Date
CT16-3471-2/CEF-NA-0.6-1KV 3X50/18 Sep 2016
CT16-3471-1/CEPF96-NC-0.6-1KV 37X1/18 Sep 2016
CT16-3471-3/CJPF86-SC-0.6-1KV 37X1/18 Sep 2016
CT16-3471-4/CJPF85-NC-0.6-1KV 1X240/18 Sep 2016

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 18/Nov/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for

ANHUI TIANKANG (GROUP) SHARES CO.
NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI
TIANCHANG ANHUI
China
Telephone: 86-550-7308843
Fax: 86-550-7308931
Email: xmxia-0929@163.com
Web: www.tiankang.com

Tier: 3 - Type Approved, unit certification not required

construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance.
Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:

1-1-4/7.7, 1-1-A3 and 1-1-A4, 4-8-3/9, 4-8-3/9.17 and 4-1-1/Table 3 item 20 of Marine Vessel Rules (2021)

National:

NA

International:

IEC 60092-350 (2020)
IEC 60092-353 (2016)
IEC 60092-360 (2021)
IEC 60228 (2004)
IEC 60332-3-22 Category A (2018)
IEC 60331-1 (2018)
IEC 60331-2 (2018)
IEC 60754-1/2 (2019)
IEC 61034-1/2 (2019)

Government:

NA

EUMED:

NA

OTHERS:

NA



CERTIFICATE NUMBER 21-2153559-PDA
EFFECTIVE DATE 19-November-2021
EXPIRATION DATE 18-November-2026
ABS TECHNICAL OFFICE CN Shanghai ESD

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

ANHUI TIANKANG (GROUP) SHARES CO., LTD

located at

**NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI, TIANCHANG,
CHINA**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Cable, Control, Signal and Instrumentation

Model CKJ Series, CKE Series, CHJ Series

This Product Design Assessment (PDA) Certificate remains valid until 3 August 2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

Bin-Hong Wang, Director

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement



**Design Assessment (DA) Certification
Attachment for Listing**

DA Cert. No.: 21-2153559-PDA

DA Certificate No.: 21-2153559-PDA
Entry Date: 19 November 2021
Expire Date: 18 November 2026
(subject to the condition stated on the DA Certificate)
Name of Manufacturer: Anhui Tiangkang (Group) Shares Co., Ltd.
Address: No.20 South Renhe Road,
City: Tianchang,
Zip: 239300
Country: P. R. China
Telephone: 0550-7308843
Fax: 0550- 7308931
Email: xmxia-0929@163.com
Contact Person: Mr. Xia, Xi-ming
Product: Cable, Control, Signal and Instrumentation
Model: CKJ Series, CKE Series, CHJ Series

Model	Description
CKJ86/SC /NC:	XLPE insulated extruded inner covering tinned copper wire braided armored PO outer sheathed shipboard control cable
CKJ96/SC /NC:	XLPE insulated extruded inner covering galvanized steel wire braided armored PO outer sheathed shipboard control cable
CKJ85/SC /NC:	XLPE insulated extruded inner covering tinned copper wire braided armored cross-linked PO outer sheathed shipboard control cable
CKJ95/SC /NC:	XLPE insulated extruded inner covering galvanized steel wire braided armored cross-linked PO outer sheathed shipboard control cable
CKJPF/SC /NC:	XLPE insulated extruded PO outer sheathed shipboard control cable
CKJPF86/SC /NC:	XLPE insulated PO inner sheathed tinned copper wire braided armored PO outer sheathed shipboard control cable
CKJPF96/SC /NC:	XLPE insulated PO inner sheathed galvanized steel wire braided armored PO outer sheathed shipboard control cable
CKJPF80/SC /NC:	XLPE insulated PO inner sheathed tinned copper wire braided armored shipboard control cable
CKJPF90/SC /NC:	XLPE insulated PO inner sheath galvanized steel wire braided armored shipboard control cable
CKJJP/SC /NC:	XLPE insulated cross-linked PO outer sheathed shipboard control cable
CKJJP85/SC /NC:	XLPE insulated cross-linked PO inner sheathed tinned copper wire braided armored cross-linked PO outer sheathed shipboard control cable
CKJJP95/SC /NC:	XLPE insulated cross-linked PO inner sheathed galvanized steel wire braided armored cross-linked PO outer sheathed shipboard control cable



**Design Assessment (DA) Certification
Attachment for Listing**

DA Cert. No.: 21-2153559-PDA

CKJPJ80/SC /NC:	XLPE insulated cross-linked PO inner sheathed tinned copper wire braided armored shipboard control cable
CKJPJ90/SC /NC:	XLPE insulated cross-linked PO inner sheath galvanized steel wire braided armored shipboard control cable
CKEPF/SC /NC:	EPR insulated PO sheathed shipboard control cable
CKEPF86/SC /NC:	EPR insulated PO inner sheathed tinned copper wire braided armored PO outer sheathed shipboard control cable
CKEPF96/SC /NC:	EPR insulated PO inner sheathed galvanized steel wire braided armored PO outer sheathed shipboard control cable
CKEPF80/SC /NC:	EPR insulated PO inner sheathed tinned copper wire braided armored shipboard control cable
CKEPF90/SC /NC:	EPR insulated PO inner sheathed galvanized steel wire braided armored shipboard control cable
CKEPJ/SC /NC:	EPR insulated cross-linked PO sheathed shipboard control cable
CKEPJ85/SC /NC:	EPR insulated cross-linked PO inner sheathed tinned copper wire braided armored cross-linked PO outer sheathed shipboard control cable
CKEPJ95/SC /NC:	EPR insulated cross-linked PO inner sheathed galvanized steel wire braided armored cross-linked PO outer sheathed shipboard control cable
CKEPJ80/SC /NC:	EPR insulated cross-linked PO inner sheathed tinned copper wire braided armored shipboard control cable
CKEPJ90/SC /NC:	EPR insulated cross-linked PO inner sheathed galvanized steel wire braided armored shipboard control cable
CKEF/SA/NA:	EPR insulated chloroprene rubber sheathed shipboard control cable
CHJ86/SC/NC:	XLPE insulated extruded inner covering tinned copper wire braided armored PO outer sheathed shipboard communication cable
CHJ96/SC/NC:	XLPE insulated extruded inner covering tinned copper wire braided collective screened galvanized steel wire braided armored PO outer sheathed shipboard communication cable
CHJ85/SC/NC:	XLPE insulated extruded inner covering tinned copper wire braided armored cross-linked PO outer sheathed shipboard communication cable
CHJ95/SC/NC:	XLPE insulated extruded inner covering tinned copper wire braided collective screened galvanized steel wire braided armored cross-linked PO outer sheathed shipboard communication cable
CHJPF/SC/NC:	XLPE insulated tinned copper wire braided collective screened PO outer sheathed shipboard communication cable
CHJPF86/SC/NC:	XLPE insulated PO inner sheathed tinned copper wire braided armored PO outer sheathed shipboard communication cable
CHJPF96/SC/NC:	XLPE insulated tinned copper wire braided collective screened PO inner sheathed galvanized steel wire braided armored PO outer sheathed shipboard communication cable



**Design Assessment (DA) Certification
Attachment for Listing**

DA Cert. No.: 21-2153559-PDA

CHJPF80/SC/NC:	XLPE insulated PO inner sheathed tinned copper wire braided armored shipboard communication cable
CHJPF90/SC/NC:	XLPE insulated tinned copper wire braided collective screened PO inner sheathed galvanized steel wire braided armored shipboard communication cable
CHJFPF/SC/NC:	XLPE insulated tinned copper wire braid individual screened PO outer sheathed shipboard communication cable
CHJFPF86/SC/NC:	XLPE insulated tinned copper wire braid individual screened PO inner sheathed tinned copper wire braid armored PO outer sheathed shipboard communication cable
CHJFPF96/SC/NC:	XLPE insulated tinned steel wire braid individual screened PO inner sheathed galvanized steel wire braid armored PO outer sheathed shipboard communication cable
CHJFPF80/SC/NC:	XLPE insulated tinned copper wire braid individual screened PO inner sheathed tinned copper wire braid armored shipboard communication cable
CHJFPF90/SC/NC:	XLPE insulated tinned copper wire braid individual screened PO inner sheathed galvanized steel wire braid armored shipboard communication cable
CHJPJ/SC/NC:	XLPE insulated tinned copper wire braided collective screened cross-linked PO outer sheathed shipboard communication cable
CHJPJ85/SC/NC:	XLPE insulated tinned copper wire collective screened PO inner sheathed tinned copper wire braid armored cross-linked PO outer sheathed shipboard communication cable
CHJPJ95/SC/NC:	XLPE insulated tinned copper wire braided collective screened cross-linked PO inner sheathed galvanized steel wire braid armored cross-linked PO outer sheathed shipboard communication cable
CHJPJ80/SC/NC:	XLPE insulated cross-linked PO inner sheathed tinned copper wire braid armored shipboard communication cable
CHJPJ90/SC/NC:	XLPE insulated tinned copper wire braided collective screened cross-linked PO inner sheathed galvanized steel wire braid armored shipboard communication cable
CHJPJP/SC/NC:	XLPE insulated tinned copper wire braided individual screened cross-linked PO inner sheathed shipboard communication cable
CHJPJP85/SC/NC:	XLPE insulated tinned copper wire braided individual screened cross-linked PO inner sheathed tinned copper wire braid armored cross-linked PO outer sheathed shipboard communication cable
CHJPJP95/SC/NC:	XLPE insulated tinned copper wire braided individual screened cross-linked PO inner sheathed galvanized steel wire braid armored cross-linked PO outer sheathed shipboard communication cable
CHJPJP80/SC/NC:	XLPE insulated tinned copper wire braided individual screened cross-linked PO inner sheathed tinned copper wire braid armored shipboard communication cable
CHJPJP90/SC/NC:	XLPE insulated tinned copper wire braided individual screened cross-linked PO inner sheathed galvanized steel wire braid armored shipboard communication cable

CHJV/SA/NA:	XLPE insulated tinned copper wire braided collective screened polyvinyl chloride sheathed shipboard communication cable
CHJV82/SA/NA:	XLPE insulated polyvinyl chloride inner sheathed tinned copper wire braided armored polyvinyl chloride outer sheathed shipboard communication cable
CHJV92/SA/NA:	XLPE insulated tinned copper wire braided collective screened polyvinyl chloride inner sheathed galvanized steel wire braid armored polyvinyl chloride outer sheathed shipboard communication cable
CHJV80/SA/NA:	XLPE insulated polyvinyl chloride inner sheathed tinned copper wire braid armored shipboard communication cable
CHJV90/SA/NA:	XLPE insulated tinned copper wire braided collective screened polyvinyl chloride inner sheathed galvanized steel wire braid armored shipboard communication cable
CHJVP/SA/NA:	XLPE insulated tinned copper wire braided individual screened polyvinyl chloride outer sheathed shipboard communication cable
CHJVP82/SA/NA:	XLPE insulated tinned copper wire braided individual screened polyvinyl chloride inner sheathed tinned copper wire braided armored polyvinyl chloride outer sheathed shipboard communication cable
CHJVP92/SA/NA:	XLPE insulated tinned copper wire braided individual screened polyvinyl chloride inner sheathed galvanized steel wire braided armored polyvinyl chloride outer sheathed shipboard communication cable
CHJVP80/SA/NA:	XLPE insulated tinned copper wire braided individual screened polyvinyl chloride inner sheathed polyvinyl chloride inner sheathed tinned copper wire braided armored shipboard communication cable
CHJVP90/SA/NA:	XLPE insulated tinned copper wire braided individual screened polyvinyl chloride inner sheathed galvanized steel wire braided armored shipboard communication cable
Type SA:	Bunched cable flame retardant, comply with IEC60332-1(2004), IEC60332-3.A(2009);
Type NA:	Fire resistant cable, comply with IEC60332-1(2004), IEC60332-3.A(2009), IEC60331-1(2009), IEC60331-2(2009);
Type SC:	Halogen-free low-smoke bunched flame retardant cable, comply with IEC60332-1(2004), IEC60332-3.A(2009), IEC 60754-1/2(2001), IEC61034(2005);
Type NC:	Halogen-free low-smoke fire resistant cable, comply with IEC60332-1(2004), IEC60332-3.A(2009), IEC 60754-1/2(2001), IEC61034(2005), IEC60331-1(2009), IEC60331-2(2009);



**Design Assessment (DA) Certification
Attachment for Listing**

DA Cert. No.: 21-2153559-PDA

Control Cables for CKJ and CKE Series

No. of Cores	Nominal Cross Section mm ²
2,3,4,5,7,8,10,12,14,16,19,24,27,30,33,37,44,48	0.5,0.75,1,1.5,2.5

Communication Cables for CHJ Series

No. of Pairs (x2)	Nominal Cross Section mm ²
1,2,3,4,5,7,10,12,14,16,19,24,30,37	0.5,0.75,1,1.5,2.5

No. of Triples (x3)	Nominal Cross Section mm ²
1	0.5,0.75,1,1.5,2.5

No. of Quads (x4)	Nominal Cross Section mm ²
1	0.5,0.75,1,1.5,2.5

ANHUI TIANKANG (GROUP) SHARES CO.
NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI
TIANCHANG ANHUI
China
Telephone: 86-550-7308843
Fax: 86-550-7308931
Email: xmxia-0929@163.com
Web: www.tiankang.com

Tier: 3 - Type Approved, unit certification not required

Product: Cable, Control, Signal and Instrumentation
Model: CKJ Series, CKE Series, CHJ Series
Endorsements:

Intended Service:
Communication and control cables for Shipboard and Offshore Installations.
Not intended for use as propulsion cable.

Description:
See Attachment

Rating:
Rated Voltage: 150/250V (300V);
Max Conductor Temperature: 90 deg/C

Service Restriction:
Unit Certification is not required for this product.
If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:
1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The following cable markings are to be provided in accordance with IEC 60092-376: Indication of origin (manufacturer's name or trade mark) and rated voltage (Uo/ U) and construction (number of cores and cross sectional area of the conductor).

Notes/Drawing/Documentation:
Drawing No./Drawing Title/Revision No.
NA-1/Approved List of Products 2015/1
NA-2/Application material/0
Test Report No./Title/Date
CT16-3473-5/CHJPF86-SC 7PX1.0/18 Sep 2016
CT16-3473-6/CHJJP95-NC 1QX1.5/18 Sep 2016
CT16-3473-7/CHJVP92-NA 2PX0.75/18 Sep 2016
CT16-3473-2/CKEF-NA 3X1.5/18 Sep 2016
CT16-3473-1/CKEJP95-NC 5X1.0/18 Sep 2016
CT16-3473-3/CKJPF86-SC 48X0.5/18 Sep 2016
CT16-3473-4/CKJJP95-NC 2X1.5/18 Sep 2016

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 18/Nov/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ANHUI TIANKANG (GROUP) SHARES CO.
NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI
TIANCHANG ANHUI
China
Telephone: 86-550-7308843
Fax: 86-550-7308931
Email: xmxia-0929@163.com
Web: www.tiankang.com

Tier: 3 - Type Approved, unit certification not required

STANDARDS

ABS Rules:

1-1-4/7.7, 1-1-A3 and 1-1-A4, 4-8-3/9, 4-8-3/9.17 and 4-1-1/Table 3 item 20 of Marine Vessel Rules (2021)

National:

NA

International:

IEC 60092-350 (2020)
IEC 60092-376 (2017)
IEC 60092-360 (2021)
IEC60228 (2004)
IEC 60332-1-2 (2015)
IEC 60332-3-22 Category A (2018)
IEC 60754-1/2 (2019)
IEC 61034-1/2 (2019)

Government:

NA

EUMED:

NA

OTHERS:

NA



CERTIFICATE NUMBER 21-2153561-PDA
EFFECTIVE DATE 19-November-2021
EXPIRATION DATE 18-November-2026
ABS TECHNICAL OFFICE CN Shanghai ESD

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

ANHUI TIANKANG (GROUP) SHARES CO., LTD

located at

**NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI, TIANCHANG,
CHINA**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Cable, Medium Voltage

Model CJPF Series

This Product Design Assessment (PDA) Certificate remains valid until 3 August 2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

Bin-Hong Wang, Director

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement

ANHUI TIANKANG (GROUP) SHARES CO.
NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI
TIANCHANG ANHUI
China
Telephone: 86-550-7308843
Fax: 86-550-7308931
Email: xmxia-0929@163.com
Web: www.tiankang.com

Tier: 3 - Type Approved, unit certification not required

Product: Cable, Medium Voltage
Model: CJPF Series
Endorsements:

Intended Service:
High voltage power system for Shipboard and Offshore Building
Not intended for use as propulsion cable.

Description:
CJPF/SC: XLPE insulated PO outer sheathed shipboard low-smoke halogen-free flame-retardant medium voltage power cable.
CJPF86/SC: XLPE insulated PO inner sheathed tinned copper wire braided armored PO outer sheathed shipboard low-smoke halogen-free flame-retardant medium voltage power cable.
CJPF96/SC: XLPE Insulated PO Inner sheathed galvanized steel wire braided armored PO outer sheathed shipboard low-smoke halogen-free flame-retardant medium voltage power cable.

For 3.6/6 kV:
Nominal Cross Section (mm²)/Number of Cores
25,35,50,70,95,120,150,185,240/1
25,35,50,70,95,120,150,185/3

For 6/10 kV:
Nominal Cross Section (mm²)/Number of Cores
25,35,50,70,95,120,150,185,240/1
25,35,50,70,95,120,150,185/3

For 8.7/15 kV:
Nominal Cross Section (mm²)/Number of Cores
25,35,50,70,95,120,150,185,240/1
25,35,50,70,95,120,150,185/3

Rating:
Rated Voltage: 3.6/6kV; 6/10kV; 8.7/15kV;
Max Conductor Temperature: 90 deg/c;

Service Restriction:
1. Unit Certification is not required for this product. However, unit certification is required for electric propulsion cables.
2. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
3. Electrical cables are to be tested by the manufacturers in accordance with the standards of compliance. Records of test are to be maintained and are to be submitted upon request by ABS. For propulsion cables, see 4-8-5/5.17.11 of Marine Vessel Rules.

Comments:
1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The following cable markings are to be provided in accordance with IEC 60092-354: Indication of origin (manufacturer's name or trade mark) and rated voltage (U₀/U) and construction (number of cores pairs triples or quads and cross sectional area of the conductor).
3. All propulsion cables, other than internal wiring in control gears and switchboards, are to be subjected to dielectric and insulation tests in the presence of the Surveyor.

ANHUI TIANKANG (GROUP) SHARES CO.
NO. 20 SOUTH RENHE ROAD, TIANCHANG, ANHUI
TIANCHANG ANHUI
China
Telephone: 86-550-7308843
Fax: 86-550-7308931
Email: xmxia-0929@163.com
Web: www.tiakang.com

Tier: 3 - Type Approved, unit certification not required

Notes/Drawing/Documentation:

Drawing No./Drawing Title/Revision No.
NA-1/Approved List of Products 2015/1
NA-2/Application material/0
Test Report No./Title/Date
CT16-3471-6/CJPF86-SC-3.6-6KV 1X35/18 Sep 2016
CT16-3471-5/CJPF96-SC-8.7-15KV 3X150/18 Sep 2016

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 18/Nov/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

STANDARDS

ABS Rules:

1-1-4/7.7, 1-1-A3 and 1-1-A4, 4-8-3/9, 4-8-3/9.17 and 4-1-1/Table 3 item 20 of Marine Vessel Rules (2021)

National:

NA

International:

IEC 60092-350 (2020)
IEC 60092-354 (2020)
IEC 60092-360 (2021)
IEC60228 (2004)
IEC 60332-1-2 (2015)
IEC 60332-3-22 Category A(2018)
IEC 60754-1/2 (2019)
IEC 61034-1/2 (2019)

Government:

NA

EUMED:

NA

OTHERS:

NA