CEEG 中电电气

中电电气集团
总部地址：南京市江宁经济技术开发区水阁路6号
生产基地：江苏省扬中市中电大道188号 南京市江宁经济技术开发区水阁路6号
电话：+86 25-83275395 传真：+86 25-52095624
全国统一客户服务专线：800-828-6118 400-828-6118
欢迎访问http://www.ceeg.cn

China Electric Equipment Group
CEEG Headquarter: 6 Shuige Road, Jiangning Economy & Technology Development Zone.
Production Base: 188 Zhongdian Road, Yangzhong City, Jiangsu Province
6 Shuige Road, Jiangning Economy & Technology Development Zone.
Tel:86-25-83275395 Fax:86-25-52095624
Unified National Customer Service Hotline: 800-828-6118 400-828-6118
Welcome to our website: http://www.ceeg.cn

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CS(CBF)D PSC(BF)D
船用、海洋平台变压器

超强绝缘 三防抗振

www.ceeg.cn

CEEG® 中电电气®

DuPont™ Nomex®

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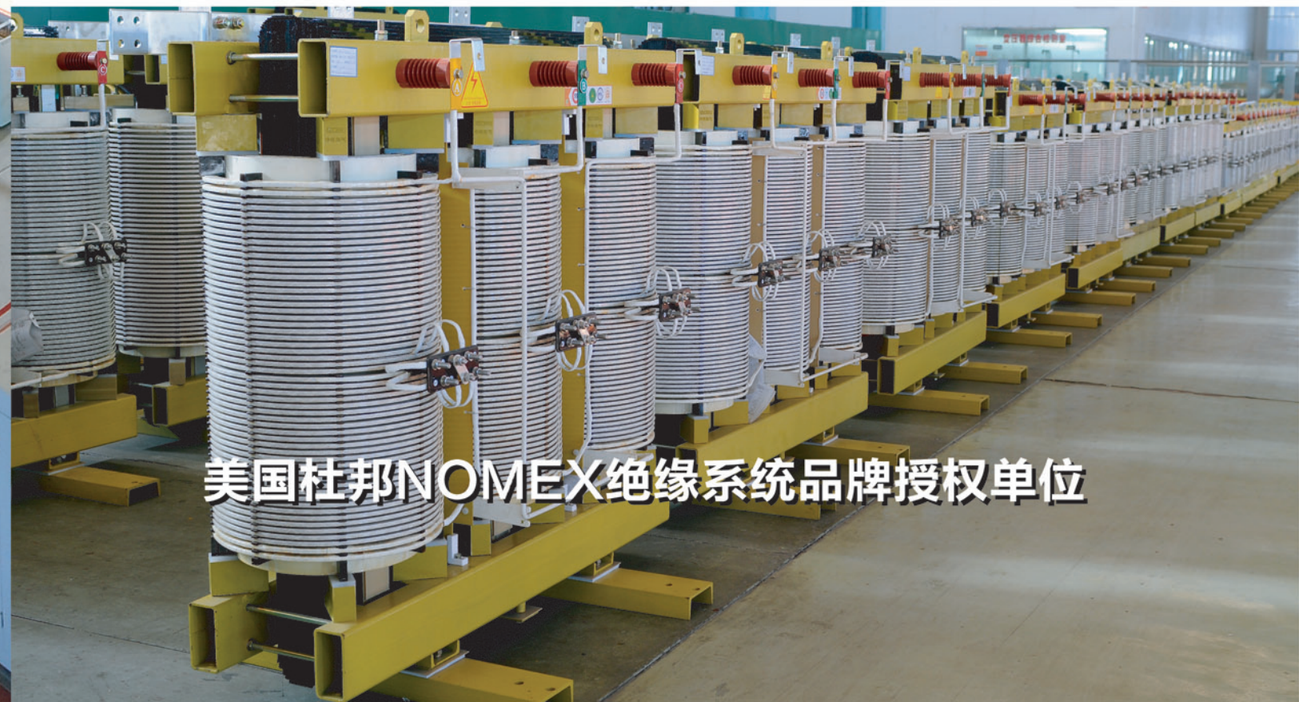
完整的全球各大船级社认证

中国最早最大的敞开式变压器生产基地

我公司生产的船用及海洋平台变压器产品先后通过了包括CCS、ABS、DNV、BV、GL、LR、NK等几大船级社的第三方检验。

2001年，中电电气与**美国杜邦公司**签订战略合作伙伴协议，借助杜邦公司先进成熟的雷力通变压器核心技术，中电电气生产的敞开式变压器始终在行业内处于领先地位。

2010年，在中电电气成立20周年之际，中电电气再度与杜邦公司合作，**签订了杜邦NOMEX品牌商标许可授权协议。**未来，杜邦NOMEX绝缘系统将在中电电气实现全系列产品应用。这是中电电气与杜邦公司品牌联盟新的开始。



C S(C B F) D −□/□

- 高压绕组电压等级，kV
- 额定容量，kVA
- 防滴水
- 风冷
- 箔绕
- 环氧浇注
- 三相
- 船用

CS(CBF)D船用变压器

C S(C B F) D −□/□

- 高压绕组电压等级，kV
- 额定容量，kVA
- 防滴水
- 风冷
- 箔绕
- 环氧浇注
- 三相
- 海洋平台用

PSC(BF)D海洋平台变压器

超强绝缘 三防抗振

本公司生产的船用(海洋平台)变压器为干式自冷（风冷）变压器，可作为电力网中供动力、照明、隔离用设备；绝缘等级可为B、F、H级；船用低压变压器容量为2000kVA及以下，电压等级为1kV以下；船用中压及海洋平台变压器容量为8000kVA及以下，电压等级为10kV以下。

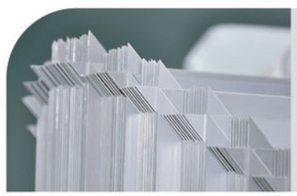
本公司技术力量雄厚，可根据客户的要求设计生产各种特殊规格的产品。

性能特点

柜体模块化
柜体采用模块式拆装，安装方便、快捷。

降低噪音
采用穿心螺杆结构，降低噪音效果明显。

特殊工艺
线圈采用多次浸漆，电气和机械联接件采用特殊工艺，增强“三防”性能。



45° 冷轧硅钢片
铁心材料采用优质冷轧硅钢片，45° 全斜精心叠置而成。

填料函
变压器的箱体上设置有供电缆进出的填料函。填料函设在左侧或右侧。容量500kVA及以上变压器进出线方式一般为下进下出，变压器底座上开设电缆孔，并由防电缆划伤及固定电缆的装置。

使用条件

环境温度为：−25℃～45℃
相对湿度≤95%
有变压器安装场所工作时产生的振动、冲击
摇摆角度≤22.5° ，倾斜角度≤15°
有凝露、油雾、盐雾和霉菌的影响

船用低压变压器(1kV)

技术参数

型 号	额定容量(kVA)	空载损耗W	空载电流(%)	负载损耗W(75℃)	阻抗电压(%)(75℃)
CSD−3	3	80	14	105	3.5
CSD−5	5	110	12	165	3.5
CSD−10	10	160	11	288	3.5
CSD−16	16	210	10	370	3.5
CSD−20	20	230	8	480	3.5
CSD−25	25	250	7	528	3.5
CSD−30	30	280	6	600	3.5
CSD−40	40	290	5	680	3.5
CSD−50	50	300	4	1045	3.5
CSD−63	63	340	4	1250	3.5
CSD−80	80	420	3	1450	3.5
CSD−100	100	510	3	1840	3.5
CSD−125	125	520	2	1930	3.5
CSD−160	160	580	2	2170	3.5
CSD−200	200	650	2	2780	3.5
CSD−250	250	890	1.9	3400	4.0
CSD−300	300	1350	1.8	3900	4.0
CSD−400	400	1450	1.8	4800	4.0
CSD−500	500	1650	1.7	6210	4.0
CSD−630	630	1800	1.6	6700	4.0
CSD−800	800	1900	1.6	7240	4.5
CSD−1000	1000	2210	1.4	8530	6.0
CSD−1250	1250	2500	1.3	13800	4.5
CSD−1600	1600	2600	1.2	18000	4.5
CSD−2000	2000	2900	1.1	22000	6.0

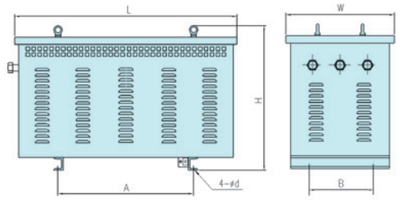
一次侧额定电压(V)
50Hz —— 400、380或其它
60Hz —— 450、440或其它

二次侧额定电压(V)
50Hz —— 400、230、115或其它
60Hz —— 450、115或其它

联结组标号
Dd0、Dy11、Dyn11、Yd11、Yyn0或其它

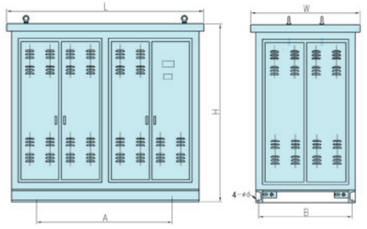
外形尺寸

船用低压变压器(1kV级)外型安装尺寸及重量



(3～250kVA)

型 号	外型尺寸			安装尺寸			重量
	L	W	H	A	B	4-φd	Kg
CSD-3	480	340	440	270	220	4-Φ12	60
CSD-5	510	360	510	290	230	4-Φ12	80
CSD-10	600	380	550	330	260	4-Φ14	120
CSD-16	660	400	560	370	280	4-Φ14	140
CSD-20	680	400	600	390	280	4-Φ14	160
CSD-25	680	400	600	390	280	4-Φ14	175
CSD-30	750	400	680	410	310	4-Φ14	185
CSD-40	800	430	710	460	340	4-Φ14	250
CSD-50	820	460	730	470	340	4-Φ14	270
CSD-63	820	460	730	470	340	4-Φ14	280
CSD-80	860	480	870	510	350	4-Φ18	380
CSD-100	940	540	920	530	380	4-Φ18	400
CSD-125	990	570	990	560	430	4-Φ22	560



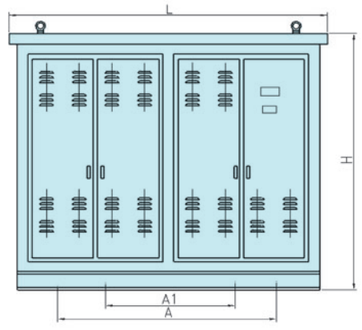
(300～2000kVA)

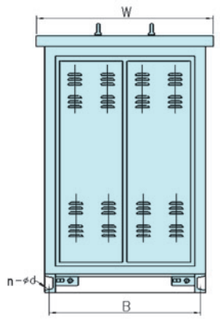
型 号	外型尺寸			安装尺寸			重量
	L	W	H	A	B	4-φd	Kg
CSD-160	1100	620	1030	620	440	4-Φ22	610
CSD-200	1100	640	1110	620	460	4-Φ22	710
CSD-250	1160	730	1120	640	470	4-Φ24	1050
CSD-300	1250	760	1130	760	470	4-Φ24	1250
CSD-400	1360	920	1200	810	560	4-Φ24	1900
CSD-500	1510	1080	1260	850	660	4-Φ24	2060
CSD-630	1780	1200	1890	1500	940	4-Φ26	2530
CSD-800	1930	1300	2000	1720	1040	4-Φ26	2920
CSD-1000	2000	1300	2100	1720	1040	4-Φ26	3830
CSD-1250	2000	1300	2450	1720	1040	4-Φ26	4300
CSD-1600	2050	1400	2600	1760	1140	4-Φ26	4600
CSD-2000	2010	1500	2700	1800	1240	4-Φ26	5000

船用中压变压器(10kV)

外形尺寸

船用中压变压器(10kV级)外型安装尺寸及重量





技术参数

型 号	外型尺寸			安装尺寸				重量
	L	W	H	A	A1	B	n-Φd	kg
CSCD-100/10	1600	1240	1500	1000	—	1130	4-Φ18	850
CSCD-125/10	1600	1240	1500	1000	—	1130	4-Φ18	950
CSCD-160/10	1600	1240	1650	1000	—	1130	4-Φ18	1100
CSCD-200/10	1900	1300	1700	1200	—	1190	4-Φ18	1250
CSCD-250/10	1900	1300	1700	1200	—	1190	4-Φ18	1400
CSCD-315/10	1900	1300	1800	1200	—	1190	4-Φ18	1450
CSCD-400/10	2100	1450	1800	1400	—	1260	4-Φ26	1650
CSCD-500/10	2100	1450	1800	1400	—	1260	4-Φ26	1950
CSCBFD-630/10	2100	1450	1800	1400	—	1260	4-Φ26	2500
CSCBFD-800/10	2300	1540	2000	1600	—	1350	4-Φ26	3000
CSCBFD-1000/10	2300	1640	2000	1600	—	1450	4-Φ26	3400
CSCBFD-1250/10	2400	1640	2200	1600	—	1450	4-Φ26	3500
CSCBFD-1600/10	2400	1810	2200	1600	800	1620	8-Φ26	4100
CSCBFD-2000/10	2510	1810	2400	1800	1000	1620	8-Φ26	5500
CSCBFD-2500/10	2510	1810	2400	1800	1000	1620	8-Φ26	6300
CSCBFD-3150/10	2800	1880	2800	2200	1200	1690	8-Φ26	8000
CSCBFD-3500/10	2800	1880	2800	2200	1200	1690	8-Φ26	8200
CSGBFD-4000/10	3000	1960	2800	2400	1800	2490	8-Φ32	9200
CSGBFD-5000/10	3800	2200	2800	3200	2400	3090	8-Φ32	11600
CSGBFD-6300/10	4600	2800	2800	4000	2800	3690	8-Φ32	14000
CSGBFD-8000/10	5400	3600	2800	4800	3200	4290	8-Φ32	18000

型号	额定容量	空载损耗	负载损耗	空载电流	阻抗压降
CSCD-100/10	100	500	1850	2.4	4
CSCD-125/10	125	590	2170	2.2	4
CSCD-160/10	160	680	2500	2.2	4
CSCD-200/10	200	780	2970	2	4
CSCD-250/10	250	900	3240	2	4
CSCD-315/10	315	110	4080	1.8	4
CSCD-400/10	400	1220	4690	1.8	4
CSCD-500/10	500	1450	5740	1.8	4
CSCBFD-630/10	630	1620	7010	1.6	6
CSCBFD-800/10	800	1900	8180	1.6	6
CSCBFD-1000/10	1000	2210	9560	1.4	6
CSCBFD-1250/10	1250	2610	11400	1.4	6
CSCBFD-1600/10	1600	3060	13800	1.4	6
CSCBFD-2000/10	2000	4150	17000	1.2	6
CSCBFD-2500/10	2500	5000	20200	1.2	6
CSCBFD-3150/10	3150	5400	24000	1	6
CSCBFD-3500/10	3500	5800	28000	1	7.5
CSGBFD-4000/10	4000	6500	34000	0.8	8
CSGBFD-5000/10	5000	7800	42000	0.8	8
CSGBFD-6300/10	6300	8960	47000	0.6	8
CSGBFD-8000/10	8000	10220	53000	0.6	9

初级额定电压: 11、10.5、10、6.6、6.3、6、3.3、3、或其它　**次级额定电压:** 0.45、0.4或其它　**初级电压分接范围:** ±2×2.5%、±5%　**联接组别:** Dyn11或其它

海洋平台变压器

技术参数

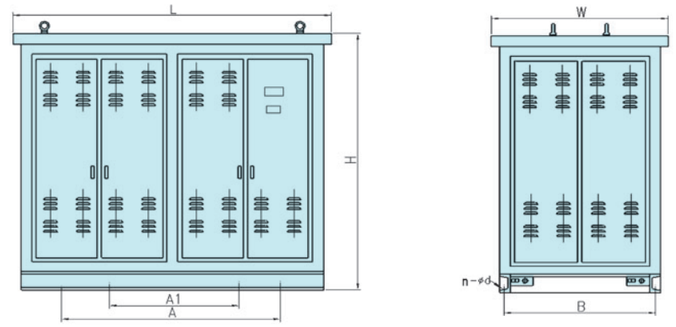
型号	额定容量	空载损耗	负载损耗	空载电流	阻抗压降
PSCD-100/10	100	500	1850	2.4	4
PSCD-125/10	125	590	2170	2.2	4
PSCD-160/10	160	680	2500	2.2	4
PSCD-200/10	200	780	2970	2	4
PSCD-250/10	250	900	3240	2	4
PSCD-315/10	315	110	4080	1.8	4
PSCD-400/10	400	1220	4690	1.8	4
PSCD-500/10	500	1450	5740	1.8	4
PSCBFD-630/10	630	1620	7010	1.6	6
PSCBFD-800/10	800	1900	8180	1.6	6
PSCBFD-1000/10	1000	2210	9560	1.4	6
PSCBFD-1250/10	1250	2610	11400	1.4	6
PSCBFD-1600/10	1600	3060	13800	1.4	6
PSCBFD-2000/10	2000	4150	17000	1.2	6
PSCBFD-2500/10	2500	5000	20200	1.2	6
PSCBFD-3150/10	3150	5400	24000	1	6
PSCBFD-3500/10	3500	5800	28000	1	7.5
PSGBFD-4000/10	4000	6500	34000	0.8	8
PSGBFD-5000/10	5000	7800	42000	0.8	8
PSGBFD-6300/10	6300	8960	47000	0.6	8
PSGBFD-8000/10	8000	10220	53000	0.6	9

初级额定电压：11、10.5、10、6.6、6.3、6、3.3、3或其它
次级额定电压：0.45、0.4或其它
初级电压分接范围：±2×2.5%、±5%
联接组别：Dyn11或其它

外形尺寸

海洋平台变压器外型安装尺寸及重量

型 号	外型尺寸			安装尺寸				重量
	L	W	H	A	A1	B	n-Φd	kg
PSCD-100/10	1600	1240	1500	1000	—	1130	4-Φ18	850
PSCD-125/10	1600	1240	1500	1000	—	1130	4-Φ18	950
PSCD-160/10	1600	1240	1650	1000	—	1130	4-Φ18	1100
PSCD-200/10	1900	1300	1700	1200	—	1190	4-Φ18	1250
PSCD-250/10	1900	1300	1700	1200	—	1190	4-Φ18	1400
PSCD-315/10	1900	1300	1800	1200	—	1190	4-Φ18	1450
PSCD-400/10	2100	1450	1800	1400	—	1260	4-Φ26	1650
PSCD-500/10	2100	1450	1800	1400	—	1260	4-Φ26	1950
PSCBFD-630/10	2100	1450	1800	1400	—	1260	4-Φ26	2500
PSCBFD-800/10	2300	1540	2000	1600	—	1350	4-Φ26	3000
PSCBFD-1000/10	2300	1640	2000	1600	—	1450	4-Φ26	3400
PSCBFD-1250/10	2400	1640	2200	1600	—	1450	4-Φ26	3500
PSCBFD-1600/10	2400	1810	2200	1600	800	1620	8-Φ26	4100
PSCBFD-2000/10	2510	1810	2400	1800	1000	1620	8-Φ26	5500
PSCBFD-2500/10	2510	1810	2400	1800	1000	1620	8-Φ26	6300
PSCBFD-3150/10	2800	1880	2800	2200	1200	1690	8-Φ26	8000
PSCBFD-3500/10	2800	1880	2800	2200	1200	1690	8-Φ26	8200
PSGBFD-4000/10	3000	1960	2800	2400	1800	2490	8-Φ32	9200
PSGBFD-5000/10	3800	2200	2800	3200	2400	3090	8-Φ32	11600
PSGBFD-6300/10	4600	2800	2800	4000	2800	3690	8-Φ32	14000
PSGBFD-8000/10	5400	3600	2800	4800	3200	4290	8-Φ32	18000



船用水冷变压器

技术参数

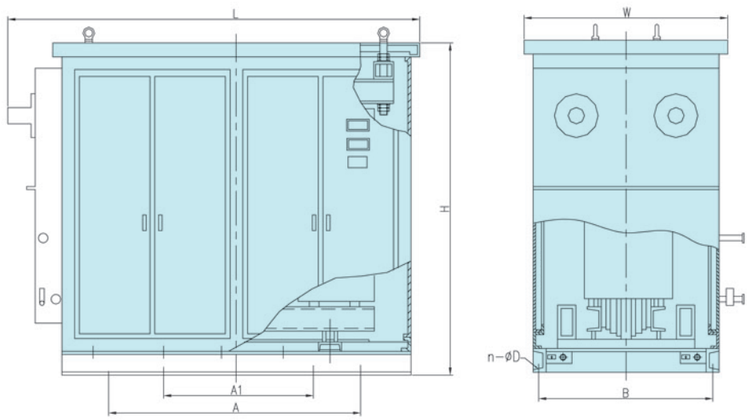
型号	额定容量	空载损耗	负载损耗	空载电流	阻抗压降
CSCB(W/F)D-1000/10	1000	2210	9560	1.4	6
CSCB(W/F)D-1250/10	1250	2610	11400	1.4	6
CSCB(W/F)D-1600/10	1600	3060	13800	1.4	6
CSCB(W/F)D-2000/10	2000	4150	17000	1.2	6
CSCB(W/F)D-2500/10	2500	5000	20200	1.2	6
CSCB(W/F)D-3150/10	3150	5400	24000	1	6
CSCB(W/F)D-3500/10	3500	5800	28000	1	7.5
CSGB(W/F)D-4000/10	4000	6500	34000	0.8	8
CSGB(W/F)D-5000/10	5000	7800	40000	0.8	8
CSGB(W/F)D-6300/10	6300	8960	47000	0.6	8
CSGB(W/F)D-8000/10	8000	10220	53000	0.6	9

初级额定电压：11、10.5、10、6.6、6.3、6、3.3、3或其它
次级额定电压：400、450、690或其它
初级电压分接范围：±2×2.5%或其它
联接组别：Dd0、Dyn11、Dd0y11或其它

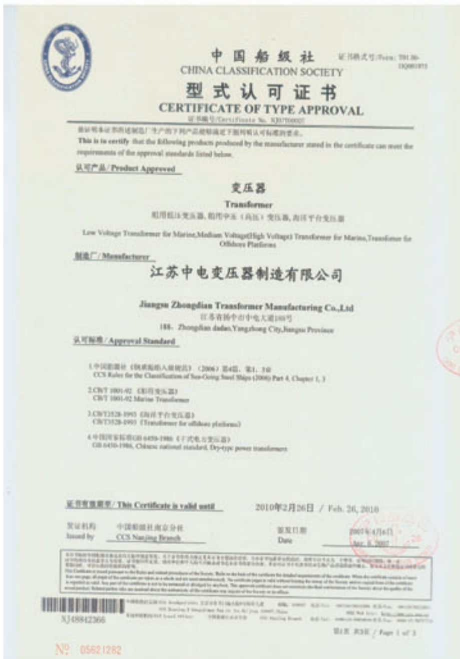
外形尺寸

船用水冷变压器外型安装尺寸及重量

型 号	外型尺寸			安装尺寸				重量
	L	W	H	A	A1	B	n-Φd	kg
CSCB(W/F)D-1000/10	2700	1640	1900	1600	—	1450	4-Φ26	3670
CSCB(W/F)D-1250/10	2800	1640	2100	1600	—	1450	4-Φ26	3900
CSCB(W/F)D-1600/10	2800	1810	2100	1600	800	1620	8-Φ26	4840
CSCB(W/F)D-2000/10	2910	1810	2300	1800	1000	1620	8-Φ26	5820
CSCB(W/F)D-2500/10	2910	1810	2300	1800	1000	1620	8-Φ26	6600
CSCB(W/F)D-3150/10	3200	1880	2700	2200	1200	1690	8-Φ26	8450
CSCB(W/F)D-3500/10	3200	1880	2700	2200	1200	1690	8-Φ26	8650
CSGB(W/F)D-4000/10	3400	1960	2700	2400	1800	2490	8-Φ32	9600
CSGB(W/F)D-5000/10	4200	2200	2700	3200	2400	3090	8-Φ32	12600
CSGB(W/F)D-6300/10	5000	2800	2700	4000	2800	3690	8-Φ32	14350
CSGB(W/F)D-8000/10	5800	3600	2700	4800	3200	4290	8-Φ32	18200



权威机构认证



中 国 船 级 社
CHINA CLASSIFICATION SOCIETY
型 式 认 可 证 书
CERTIFICATE OF TYPE APPROVAL

This is to certify that the following products produced by the manufacturer stated in the certificate can meet the requirements of the approval standards listed below.

认可产品 / Product Approved
变压器
Transformer
Low Voltage Transformer for Marine, Medium Voltage(High Voltage) Transformer for Marine, Transformer for Offshore Platforms

制造厂 / Manufacturer
江苏中电变压器制造有限公司
Jiangsu Zhongdian Transformer Manufacturing Co.,Ltd
188, Zhongdian dadao,Yangzhong City,Jiangsu Province

认可标准 / Approval Standard
1. CCS Rules for the Classification of Sea-Going Steel Ships (2006) Part 4, Chapter 1, 3
2. CB/T 1001-92 Marine Transformer
3. CB/T3528-1993 (Transformer for offshore platforms)
4. GB 6450-1986, Chinese national standard, Dry-type power transformers

证书有效期至 / This Certificate is valid until 2010年2月26日 / Feb. 26, 2010
发证机构 / Issued by 中国船级社南京分社 CCS Nanjing Branch
签发日期 / Date 2007年4月6日 Apr. 6, 2007

XJ48842366
第1页 共3页 / Page 1 of 3
№ 05621282

证书编号 / Certificate No. NJ06T00005

产品明细 / Product Description
CSD系列 / CSD Series
产品型号 / Type : CSD-20/CSD-50/CSD-100
容量 / Capacity : 20/50/100 kVA
额定频率 / Rated Frequency : 50/60 Hz
初级电压 / Primary Voltage : 400/450 V
次级电压 / Secondary Voltage : 230 V
相数 / Phases : 3
联结组标号 / Connection Symbol : Y/yn, Y/d11, D/do
绝缘等级 / Insulation Class : H
防护等级 / Protection Class : IP22

批准的图纸和设计计算书 / Approved Drawings and Design Calculations
图纸批准号 / Drawings Approval No. : NJ06A00005

产品认可试验报告 / Approval Test Report
试验报告编号 / Test Report No. : 06005-001, 06005-IP04, 06005-001
试验报告日期 / Test Report Date : 2006-01-27
试验单位 / Laboratory : 上海电器设备检测所 Shanghai Testing and Inspection Institute for Electrical Equipment
试验单位地址 / Test Address : 上海市武宁路505号 No. 505 Wuning Road, Shanghai City

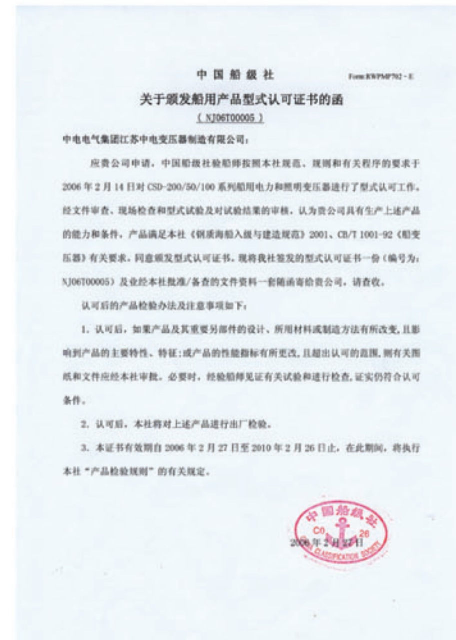
产品适用范围 / Application of the Product
船舶电力及照明系统 / Marine Power and Lighting System.

认可保持条件 / Maintenance Requirements of Approval

认可后的产品检验方式 / Method of product inspection after approval

其他 / Others
中国船级社南京分社 CCS Nanjing Branch
*****本证书正文完 / End of Text*****

证书编号: NJ06T00005
第2页 共2页 / Page 2 of 2



中 国 船 级 社　Form:RWPMP702-E
关于颁发船用产品型式认可证书的函
（NJ06T00005）

中电电气集团江苏中电变压器制造有限公司：

应贵公司申请，中国船级社验船师按照本社规范、规则和有关程序的要求于2006年2月14日对CSD-200/50/100系列船用电力和照明变压器进行了型式认可工作。经文件审查、现场检查和型式试验及对试验结果的审核，认为贵公司具有生产上述产品的能力和条件，产品满足本社《钢质海船入级与建造规范》2001、CB/T 1001-92《船变压器》有关要求，同意颁发型式认可证书。现将我社签发的型式认可证书一份（编号为：NJ06T00005）及业经本社批准/备查的文件资料一套随函寄给贵公司，请查收。

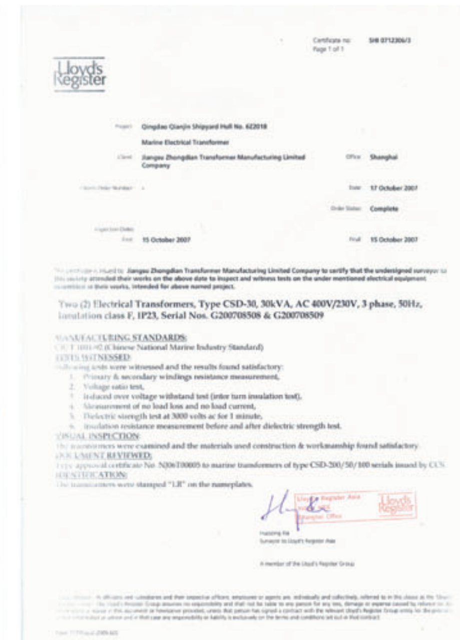
认可后的产品检验办法及注意事项如下：

1. 认可后，如果产品及其重要另部件的设计、所用材料或制造方法有所改变，且影响到产品的主要特性、特征；或产品的性能指标有所更改，且超出认可的范围，则有关图纸和文件应经本社审批。必要时，经验船师见证有关试验和进行检查，证实仍符合认可条件。

2. 认可后，本社将对上述产品进行出厂检验。

3. 本证书有效期自2006年2月27日至2010年2月26日止，在此期间，将执行本社"产品检验规则"的有关规定。

2006年2月27日



Certificate no: SHI 0712306/3
Page 1 of 1

Lloyd's Register

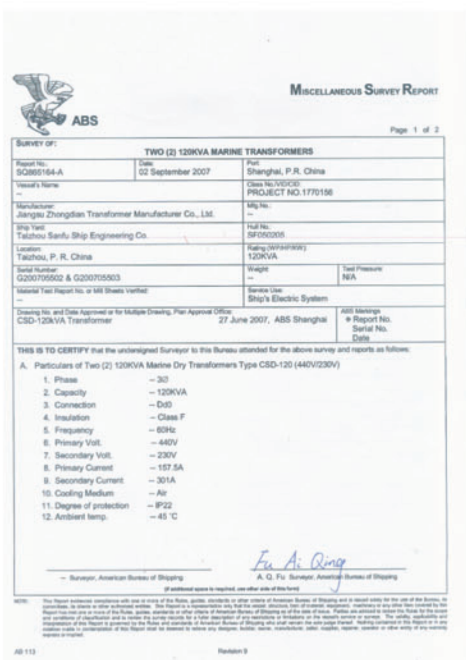
Project: Qingdao Qianjin Shipyard Hull No. 622018
Marine Electrical Transformer
Client: Jiangsu Zhongdian Transformer Manufacturing Limited Company
Office: Shanghai
Date: 17 October 2007
Order Status: Complete
First: 15 October 2007
Final: 15 October 2007

This certificate is issued to Jiangsu Zhongdian Transformer Manufacturing Limited Company to certify that the undersigned surveyor to this society attended their works on the above date to inspect and witness tests on the under mentioned electrical equipment, intended for above named project.

Two (2) Electrical Transformers, Type CSD-30, 30kVA, AC 400V/230V, 3 phase, 50Hz, Insulation class F, IP23, Serial Nos. G200708508 & G200708509

MANUFACTURING STANDARDS:
CB/T 1001-92 (Chinese National Marine Industry Standard)
TESTS WITNESSED:
Following tests were witnessed and the results found satisfactory:
1. Primary & secondary windings resistance measurement,
2. Voltage ratio test,
3. Induced over voltage withstand test (inter turn insulation test),
4. Measurement of no load loss and no load current,
5. Dielectric strength test at 3000 volts ac for 1 minute,
6. Insulation resistance measurement before and after dielectric strength test.
VISUAL INSPECTION:
The transformers were examined and the materials used construction & workmanship found satisfactory.
DOCUMENT REVIEWED:
Type approval certificate No. NJ06T00005 to marine transformers of type CSD-200/50/100 serials issued by CCS.
IDENTIFICATION:
The transformers were stamped "LR" on the nameplates.

Surveyor to Lloyd's Register Asia
A member of the Lloyd's Register Group



ABS
Miscellaneous Survey Report
Page 1 of 2

Survey of: TWO (2) 120KVA MARINE TRANSFORMERS		
Report No.: SQ865164-A	Date: 02 September 2007	Port: Shanghai, P.R. China
Vessel's Name: –		Class No./VID/CID: PROJECT NO.1770156
Manufacturer: Jiangsu Zhongdian Transformer Manufacturer Co., Ltd.		Mfg No.: –
Ship Yard: Taizhou Sanfu Ship Engineering Co.		Hull No.: SF050205
Location: Taizhou, P. R. China		Rating: 120KVA
Serial Number: G200705502 & G200705503		Weight: – / Test Pressure: N/A
Material Test Report No. or Mill Sheets Verified:		Service Use: Ship's Electric System
Drawing No. and Date Approved: CSD-120kVA Transformer	27 June 2007, ABS Shanghai	ABS Markings: Report No. Serial No. Date

THIS IS TO CERTIFY that the undersigned Surveyor to this Bureau attended for the above survey and reports as follows:

A. Particulars of Two (2) 120KVA Marine Dry Transformers Type CSD-120 (440V/230V)
1. Phase – 3Ø
2. Capacity – 120KVA
3. Connection – Dd0
4. Insulation – Class F
5. Frequency – 60Hz
6. Primary Volt. – 440V
7. Secondary Volt. – 230V
8. Primary Current – 157.5A
9. Secondary Current – 301A
10. Cooling Medium – Air
11. Degree of protection – IP22
12. Ambient temp. – 45 ℃

A. Q. Fu Surveyor, American Bureau of Shipping

AB 113　Revision 9

DNV
DET NORSKE VERITAS　Certificate No.: SHA-07-2773
CERTIFICATE FOR ELECTRIC TRANSFORMER

Manufacturer: Zhongdian Transformer Manufacture Co.,Ltd
Works order No.: Fax. dated: 23.03.2007
Transformer type: CSCBFD - 3500
Serial No.: G200703502
Ordered by: Manufacturer
Order No.: 32071261
Intended for: Shanghai Huarun Dadong
Yard No.: SONGA ANCORA

THIS IS TO CERTIFY that the electrical Transformer described below, has been built and tested in accordance with Det Norske Veritas' current Rules for Classification of "Ships / High Speed, Light Craft and Naval Surface Craft" and Det Norske Veritas' "Offshore Standard".

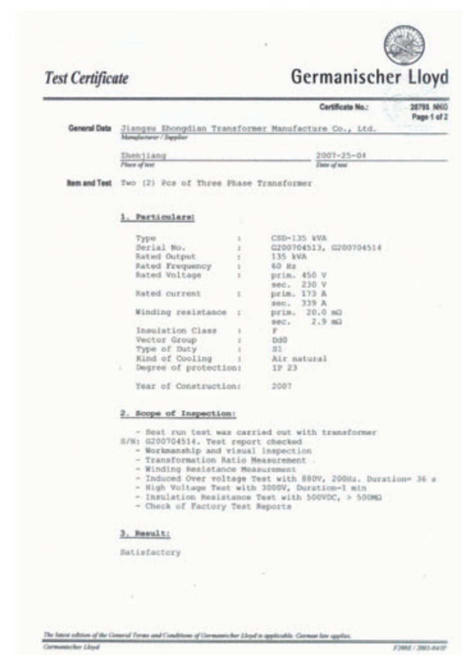
The test results can be seen from enclosed test report.

Transformer specification						
Voltage primary (V)	440	Power (kVA)	3500	Insulation class	F
Voltage secondary (V)	3300				
Frequency (Hz)	60	Winding connection	Dd0	Degree of protection (IP)	23
Current primary (Amps)	4592,6	Cooling method	AF	Ambient temperature (°C)	45
Current secondary (Amps)	612,3				

Marking: For identification the transformer was stamped: NV SHA - 07 - 2773 By DNV surveyor
This product certificate is only valid when signed by a DNV surveyor.
Place: Shanghai
Date: 2007-03-27
Surveyor: Helge Johnsen

Remarks:

DET NORSKE VERITAS, VERITASVEIEN 1, NO-1322 HØVIK, NORWAY, TEL INT: +47 67 57 99 00, TELEFAX: +47 67 57 99 11
Form No.: 79.41a　Issue: March 2004　Page 1 of 1



Test Certificate　Germanischer Lloyd
Certificate No.: 28793 NKG
Page 1 of 2

General Data: Jiangsu Zhongdian Transformer Manufacture Co., Ltd.
Manufacturer / Supplier
Zhenjiang　2007-25-04
Place of test　Date of test
Item and Test: Two (2) Pcs of Three Phase Transformer

1. Particulars:
Type : CSD-135 kVA
Serial No. : G200704513, G200704514
Rated Output : 135 kVA
Rated Frequency : 60 Hz
Rated Voltage : prim. 450 V / sec. 230 V
Rated current : prim. 173 A / sec. 339 A
Winding resistance : prim. 20.0 mΩ / sec. 2.9 mΩ
Insulation Class : F
Vector Group : Dd0
Type of Duty : S1
Kind of Cooling : Air natural
Degree of protection : IP 23
Year of Construction : 2007

2. Scope of Inspection:
- Heat run test was carried out with transformer S/N: G200704514. Test report checked
- Workmanship and visual inspection
- Transformation Ratio Measurement
- Winding Resistance Measurement
- Induced Over voltage Test with 880V, 200Hz, Duration= 36 s
- High Voltage Test with 3000V, Duration=1 min
- Insulation Resistance Test with 500VDC, > 500MΩ
- Check of Factory Test Reports

3. Result:
Satisfactory

The latest edition of the General Terms and Conditions of Germanischer Lloyd is applicable. German law applies.

Certificate No.: 28793 NKG
Page 2 of 2

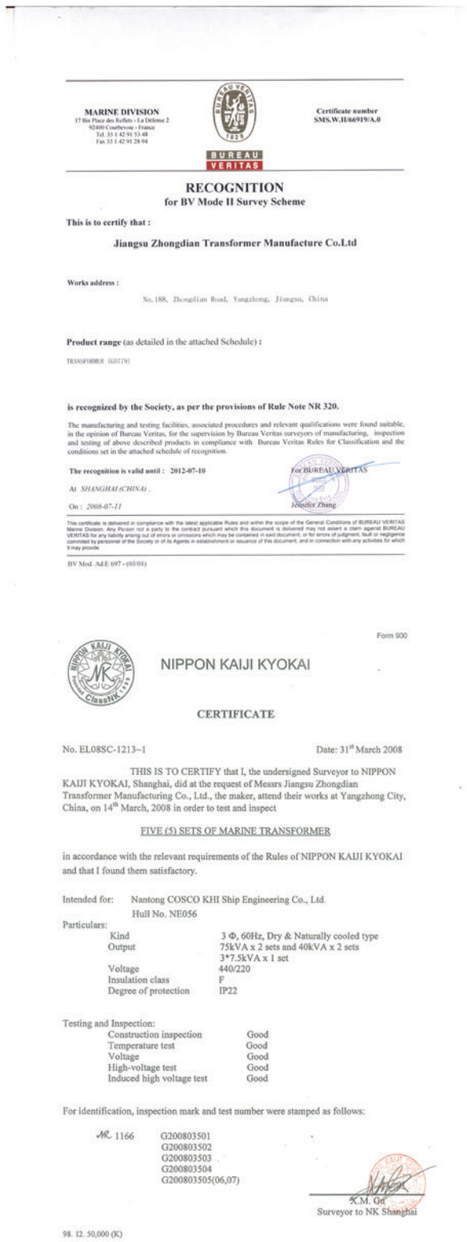
Remarks: ---
Additional Statements: Jangzhou Dayang shipyard, 1100TEU-DY207
Intended for
28793 NKG

We hereby certify that the item(s) described above was (were) tested in accordance with the mentioned test procedure(s) by our Surveyor.

Nanjing, 2007-05-08　Heikki Virtanen
Place/Date　Signature of GL Surveyor

Germanischer Lloyd

权威机构认证



MARINE DIVISION
17 bis Place des Reflets - Le Defense 2
92400 Courbevoie - France
Tel. 33 1 42 91 53 48
Fax 33 1 42 91 28 94

Certificate number
SMS.W.H.665919/A.0

BUREAU VERITAS

RECOGNITION
for BV Mode H Survey Scheme

This is to certify that :

Jiangsu Zhongdian Transformer Manufacture Co.Ltd

Works address :

No. 188, Zhongdian Road, Yangzhong, Jiangsu, China

Product range (as detailed in the attached Schedule) **:**

TRANSFORMER (L0179)

is recognized by the Society, as per the provisions of Rule Note NR 320.

The manufacturing and testing facilities, associated procedures and relevant qualifications were found suitable, in the opinion of Bureau Veritas, for the supervision by Bureau Veritas surveyors of manufacturing, inspection and testing of above described products in compliance with Bureau Veritas Rules for Classification and the conditions set in the attached schedule of recognition.

The recognition is valid until : 2012-07-10

For BUREAU VERITAS

At *SHANGHAI (CHINA)* ,

On : *2008-07-11*

Jingdice Zhang

This certificate is delivered in compliance with the latest applicable Rules and within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgment, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

BV Mod. Ad.E 697 - (03/01)

Form 900

NIPPON KAIJI KYOKAI

CERTIFICATE

No. EL08SC-1213–1 Date: 31st March 2008

THIS IS TO CERTIFY that I, the undersigned Surveyor to NIPPON KAIJI KYOKAI, Shanghai, did at the request of Messrs Jiangsu Zhongdian Transformer Manufacturing Co., Ltd., the maker, attend their works at Yangzhong City, China, on 14th March, 2008 in order to test and inspect

FIVE (5) SETS OF MARINE TRANSFORMER

in accordance with the relevant requirements of the Rules of NIPPON KAIJI KYOKAI and that I found them satisfactory.

Intended for: Nantong COSCO KHI Ship Engineering Co., Ltd.
Hull No. NE056

Particulars:

Kind	3 Φ, 60Hz, Dry & Naturally cooled type
Output	75kVA x 2 sets and 40kVA x 2 sets 3*7.5kVA x 1 set
Voltage	440/220
Insulation class	F
Degree of protection	IP22

Testing and Inspection:

Construction inspection	Good
Temperature test	Good
Voltage	Good
High-voltage test	Good
Induced high voltage test	Good

For identification, inspection mark and test number were stamped as follows:

NK 1166 G200803501
G200803502
G200803503
G200803504
G200803505(06,07)

K.M. Ge
Surveyor to NK Shanghai

98. 12. 50,000 (K)

备注