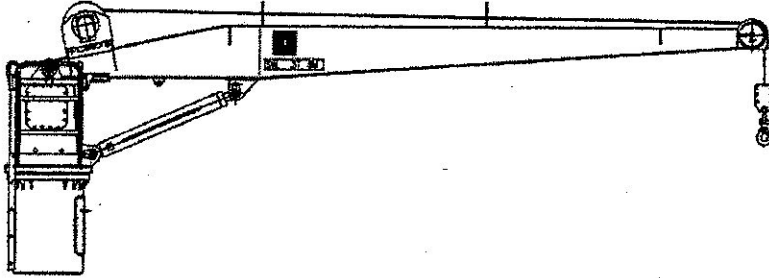


USER MANUAL

Main Data

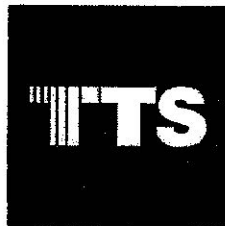


Provision Service Crane
GP 40-3-8

Hull Number/Name: 767

21513

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2.3 Pump Capacity

Pump capacity: Max ~51 l/min

2.4 El. Motor Data

El. data: 440 V / 60 Hz / 3 ph

Starter method: DOL

Power rating continuous S1: 17.3 kW 28 A

Power rating S6-40% ID: 24 kW 39 A

Starting Current: 182 A (DOL)

Rotational speed (approx.): 1770 rpm

Rotation seen from fan end: CW (See arrow-sign on fan end)

Enclosure: IP 55

Insulation class: F

Temp. rise class: -

Heater voltage/phase: 220V / 1ph

Heater Power Consumption: 1x25W

2.5 External Connections

Electric connection - see drawing: 21511EB1
21511ES1

2 MAIN DATA

The below stated speeds apply during maximum load and working radius against the stated heel plus trim conditions. A speed tolerance of +10% to -5% is within the accepted range and should be taken into consideration.

2.1 Technical Specification

TTS Marine - Provision Service Crane

Type:	GP 40-3-8
Machine number:	21513
Lifting capacity (SWL):	3 T
Working radius - max:	8 m
Working radius - min:	1,6 m
Lifting speed at SWL:	0 - 20m/min
Lifting speed at no load:	0 - 20 m/min
Lifting height:	40 m (Single hook travel distance)
Luffing time:	40 sec (average up/down)
Slewing sector:	360°
Slewing speed:	0-1rpm
Heel + trim conditions:	5°+ 2°
Weight of crane - theoretical w/o oil:	~3.5 T

2.2 Hydraulic Pressure

Main pressure:	240 bar
Winch up:	225 bar
Winch down:	115 bar
Jib up:	185 bar
Jib down:	70 bar
Slew:	180 bar

2.6 Restrictions in Use

Subject equipment must only be used for the prescribed purpose and within the specified limitations referred to in chapter 5.7. The operator must be qualified according to chapter 5.8.

Repairs and modifications must not be carried out without prior written approval from TTS Marine, except for the minor corrections that are described in the maintenance chapter. If such work is carried out by others; TTS's procedures for this kind of work must be followed. Only approved materials and original spare parts must be used.

2.7 Restrictions in Guarantee

TTS refuses all responsibility caused by breach of the restrictions described in the section above. The guarantee for good performance is strictly linked to the correct and careful application of the instructions in this user manual. If, during the warranty period, these restrictions are breached, the warranty/guarantee shall no longer be valid.

2.8 Name Plate

The name plate is located at the main control platform.

The name plate is a rectangular metal plate with four corner mounting holes. At the top center is the TTS logo, consisting of three vertical bars of increasing height followed by the letters 'TTS'. Below the logo are three horizontal input fields for 'SERIAL NO.', 'TYPE', and 'MONTH/YEAR'. At the bottom center, the text 'TTS Marine ASA' and 'NORWAY' is printed.

*Figure 2-1
Name Plate*

2.9 Certificates

Certificates are enclosed as separate attachments after this page.



AMERICAN BUREAU OF SHIPPING

Customer Name	SHANGHAI LURUN SHIPBUILDING STEEL STRUCTURE ENGINE	Purchase Order No.	
Attending Office	Shanghai	Report Number	SQ1712444
First Visit Date	30-Jul-2009	Last Visit Date	19-Apr-2010

Certification Of: FOUNDATION STEEL STRUCTURE
Manufacturer: SHANGHAI LURUN
SHIPBUILDING STEEL
STRUCTURE ENGINE
Quantity: One(1)

Survey Location: SHANGHAI, P.R.CHINA

Equipment Data

Manufacturer Number(S. No.) 21513
Model Number GP-40
Destination Vessel (Class Number) YY219446
Builder/Shipyard PRM OFFSHORE HEAVY INDUSTRIES PTE LTD
Builder ID / Hull No. 767

Design Details

Design State Design Approved/Reviewed
ABS Reviewing Organization Singapore Engineering Services
Drawing Number 21511001

Additional Data

ABS Stamping * SQ1712444-A

This is to Certify that the undersigned surveyor(s) to this Bureau did, at the request of the customer, carry out the following survey and report as follows:

Traceability of materials used on this project has been verified.

Welding plans, procedures & welder qualifications have been reviewed as required by Rule/Specifications.

The principal data has been verified in accordance with the applicable Rules/specifications and approved plans, and confirmed to be within acceptable tolerances.

Examination during manufacturer assembly has been carried out to verify all critical phases of welding, fitting, machining, and non-destructive examination as required by the applicable Rules and/or requirements.

Testing machines are maintained in a satisfactory condition and records of their recheck or calibration dates confirmed.

All parts of the machinery/equipment satisfactorily complied with the approved drawings. Amendments, if any, verified to be rectified and considered satisfactory.

Subject to satisfactory installation, testing and trials after installation onboard the vessel.

Final markings for identification confirmed.

1. The following inspection and tests were carried out in accordance with approved drawings and no abnormality was noted.

- a. Visually examination
- b. Dimension randomly checked
- c. Ultrasonic test
- d. Magnetic particle test

NOTE: This report evidences that the survey reported herein was carried out in compliance with one or more of the Rules, guides, standards or other criteria of the American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Report is a representation only that the vessel, structure, item or material equipment, machinery or any other item covered by this Report has been examined for compliance with, or has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping. The validity, applicability and interpretation of this report is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Report or in any notation made in the contemplation of this Report shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.

Customer Name	SHANGHAI LURUN SHIPBUILDING STEEL STRUCTURE ENGINE	Purchase Order No.	
Attending Office	Shanghai	Report Number	SQ1712444
First Visit Date	30-Jul-2009	Last Visit Date	19-Apr-2010

2. Final acceptance is subject to installation and shop test as part of the crane to the satisfaction of attending surveyor.

**Surveyor(s) to The American Bureau of Shipping
Attending Surveyors**

Fu Ai-Qing

Electronically Signed on 25-Apr-2010

Reviewed By
Kang, Da-Dian

Electronically Signed on 25-Apr-2010, Shanghai Port

NOTE: This report evidences that the survey reported herein was carried out in compliance with one or more of the Rules, guides, standards or other criteria of the American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Report is a representation only that the vessel, structure, item or material equipment, machinery or any other item covered by this Report has been examined for compliance with, or has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping. The validity, applicability and interpretation of this report is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Report or in any notation made in the contemplation of this Report shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.



ILO FORM Nr.4

CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF WIRE ROPE

Name of Ship	Certificate No.	LA4/09-00410
Official Number	Reference no.	CW8357 (112066) /Reel 07-530-3
Call Sign		
Port of Registry		
Name of Owner		

Name and address of the maker or supplier :	LTI Steel Wire Rope (Shanghai) Co., Ltd. No.112, East FuTe No.1 Rd.,WaiGaoQiao Free Trade Zone, Shanghai, P.R.China (200131)
---	--

Length	1X54m
Minimal diameter of rope (mm)	13.00mm
Construction	VEROTOP
Number of strands	35
Number of wires per strands	7
Core	
Lay	Right Hand Lang's Lay Rope
Quality of Wire (N/mm ²)	1960
Date of test of sample	27.08.2008
Load of which sample broke (tonnes)	162.3KN
Safe working Load of rope (tonnes)	30.90KN

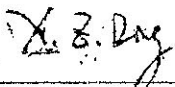
Intended use

Name and address of the firm of competent person who witnessed testing and carried out thorough examination	KISWIRE LTD. No. 475 Mangmi-2Dong, Sooyoung-ku, Busan, Korea.
---	---

I certify that the above particulars are correct, and that the rope was tested and thoroughly examined and no defects affecting its SWL were found.

Date: 2009-7-29
Place: LTI Steel Wire Rope (Shanghai) Co.,Ltd.

Signature:


LTI Steel Wire Rope (Shanghai) Co.,Ltd.

Note: This Certificate is the standard international form as recommended by the International Labour Office in accordance with ILO Convention No. 152.

TTS Marine(Shanghai) Co.,Ltd.,P/O:104130,Item No:600286,Project No:21513.



Certificate of test and examination of chains, rings, hooks, shackles, swivels and pulley blocks, before being taken into use, and of such gear after it has been lengthened, overstrained, altered or repaired by welding.

Sertifikat nr. : 0000443108/010/2009

Test Certificate No.



Mottaker : TTS Marine (Shanghai) Co. Ltd.

Kundens ordrenr. : 103749

Receiver :

Customer Order No.:

Kjenningnr. eller merke Distinguishing number or mark	Angivelse av det som er prøvet Description of gear	Antall av det som er prøvet Number tested	Datum da prøven ble utført Date of test	Anvendt prøvevekt (last) tonn Proof load applied ton	Tillatt arbeidsbelastning tonn Working load limit ton
S1	SAFETY HOOK BRISAFE BS 10-8 3.15 T SF : 4 Levert i henhold til/according to: Maskindirektiv 522 Referanse til standard/ref standard: EN-1677 * Av produsent/by producer MÅ IKKE VARMEBEHANDLES NOT TO BE HEAT-TREATED	7	*	6,3	3,15

Navn og adresse til fabrikanten eller forhandlerne. Name and address of makers or suppliers.	CERTEX NORGE AS
Navn og adresse til den institusjon det selskap eller firma som utførte prøven og undersøkelsen. Name and address of public service, association, company or firm performing the test and examination.	SYMA
Undertegnedes stilling i ovennevnte institusjon, selskap eller firma. Name and address of makers or suppliers.	Sakkyndig / Competent Person

Vi attesterer at ovennevnte utstyr er i SAMSVAR med Maskindirektivet 522 utgitt av Arbeidstilsynet.

03.06.2009

Certex Norge AS

Underskrift/Signature

Declaration Of Conformity

TTS Marine (Shanghai) Co., Ltd,

Declare

德瑞斯海达(上海)机械有限公司

证明

TTS Marine (Shanghai) Co., Ltd,

No.:433 Gao Xiang Huan Rd. GaoDong Industrial Park,

Pudong Shanghai. PR China.

Tel:+86 021 5848 5300,

Fax:+86 021 5848 5311

Following Product / 以下产品

Hull No./ Project No. 船号/ 项目号 767/21513

Product Name 产品名称 Provision handling Crane

Product Type 产品型号 GP40-3-8

Quantity/ 数量 1

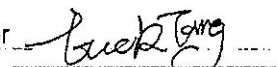
Is in conformity with related standard(ABS class, design reuls for Pedestal only)/technical specification(TS 13599-OA-1) after inspection and authorize to Ex-works / 经检验符合相关标准/技术要求, 准予出厂。

质量工程师/ Quality Engineer



检验日期/ Inspection Date 2009. 10. 10

项目工程师/ Project Engineer



检验日期/ Inspection Date 16th Oct. 2009



Sertifikat nr. : 0000443108/060/2009

Test Certificate No.



Mottaker : TTS Marine (Shanghai) Co. Ltd.

Kundens ordrenr.: 103749

Receiver :

Customer Order No.:

Kjenningnr. eller merke Distinguishing number or mark	Angivelse av det som er prøvet Description of gear	Antall av det som er prøvet Number tested	Datum da prøven ble utført Date of test	Anvendt prøvevekt (last) tonn Proof load applied ton	Tillatt arbeidsbelastning tonn Working load limit ton
PE	SHACKLE SMS 1577A M22 3 T SF : 5	3	*	6	3,0
<p>Levert i henhold til/according to: Maskindirektiv 522 Referanse til standard/ref standard: SMS 1577 * Av produsent/by producer MÅ IKKE VARMEBEHANDLES NOT TO BE HEAT-TREATED</p>					

Navn og adresse til fabrikanten eller forhandlerne. Name and address of makers or suppliers.	CERTEX NORGE AS
Navn og adresse til den institusjon det selskap eller firma som utførte prøven og undersøkelsen. Name and address of public service, association, company or firm performing the test and examination.	CERTEX NORGE AS
Undertegnendes stilling i ovennevnte institusjon, selskap eller firma. Name and address of makers or suppliers.	Sakkyndig / Competent Person

Vi attesterer at ovennevnte utstyr er i SAMSVAR med Maskindirektivet 522 utgitt av Arbeidstilsynet.

03.06.2009
Certex Norge AS

Underskrift/Signature