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FILE NO. 575.

SLINGS - FLOATING CRANE "MAHUA".

VARIOUS.





QUOTE THIS REFERENCE.

MARINE DEPARTMENT,

AUCKLAND C.1. 31st. January 1935.

The Engineer, Auckland Harbour Board, AUCKLAND C.1.

"The Department

Please arrange accordingly

Dear Sir,

Re: Flosting Crane "MAHUA"

In reply to yours of the 25th. instant I have to advise that the Department has ruled that while plying in river limits, this vessel requires an engineer duly certificated as a river engineer, or third class engineer, or higher. It is therefore not compulsory that a first class engineer should be in charge.

Yours fsithfully,

Senior for to jo hos hory

Yours truly,

Just. 5613. 1/2/35

The Chief Inspector of Machinery, Marine Department, <u>AUCKLAND.</u>

Dear Sir;

FLOATING CRANE "MAHUA".

Will you please take up with your Head Office in Wellington the question of the staffing of the Floating Crane "Mahua".

In the early days of this vessel's commissioning in Auckland (about 1911) there was some discussion on the grade of Engineer required for this plant, and in order to be on the safe side it has always been customary to carry an Engineer with a firstclass marine certificate.

At that time, and until a few years ago, it was a comparatively simple matter to arrange this as the Board had extensive engineering works in hand and a large number of Engineers of all grades then in its employ. With the complete closing down of construction works and re-organisation of staff, there remain very few men with first-class marine certificates and these few are constantly employed at their various special jobs.

For the past two or three years the Board's Foreman of Works, whose time can ill be spared for this purpose, has had to be in attendance on board the "Mahua" when this vessel has been under way.

In view of the fact that the "Mahua" never leaves the harbour and is only called upon to go from wharf to wharf, or across the harbour to Calliope Dock - and this on very rare occasions - it is felt that some much less highly qualified Engineer would suffice.

The man who actually operates the engines holds a First Stationary, River Steam, and Second Oil Certificates only, and I shall be glad to know what lesser certificate than a first-class marine is considered by your Department to be sufficient for this purpose.

During the last financial year the crane left her berth eighteen times only, twelve of which times she was towed by the Board's Tug "Te Awhina" and only six times under her own power.

Yours truly,

25th. January, 35.

575

Auckland Harbour Board

1627 A

INSTRUCTIONS TO FOREMEN & INSPECTORS

ENGINEER'S OFFICE,

THE FOREMAN OF WORKS To

Date 15th June 1962

Subject 80 TON FLOATING CRANE "MAHUA" - WIRE SLINGS

The Inspector of Machinery reports that the two 50 ft. x 3" circ. 6/24 construction wire slings at present in use on the "Mahua" are slightly flattened at the eye splice and have a number of loops and a few minor distortions but are generally in good condition for use. There is however, the possibility of these slings being required for evidence.

Please therefore have the two existing slings withdrawn and clearly tagged with a tag stating the date of withdrawal, this instruction number and that the slings are to be held for evidence. After tagging the slings are to be handed over to Inspector of Machinery for safe custody.

Discuss with Master "Mahua" the desirable size and length of slings for replacements having regard to the fact that the new crane is expected to be in service early next year and if necessary have new slings made up.

Inspector of Machinery will arrange to maintain the old slings in their present condition until called for by this office or alternatively released for further use.

Copy to Insp.of Machinery Engineer to the Board. for action as at para 4 Chief 12 Mechanical Engineer

(This Form to be filled up & returned to Engineer's Office immediately on completion of Work)

		This wor	k was completed on		_at a cost of:-
	Labour Material		+ + + +	1627	А
		Total £	: :		
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Auckland Harbour Board FROM IAth gune 1962 Inspector of Archinery Chief Engineer. BO TON FLOATING CRAME MANUA WIRE SLINGS On Wednesday 13th June 1962 I inspected two soft x 3" circumference, 6/24 construction wire sling which were in use on the floating crane "Mahua" The condition of these slings are :- slightly flattened at eye splice a number of loops and a few minor distortions of weres in strands but are still generally in good condition for use Slings, such as these, which are constantly being used for varying sizes of cargo, tend to loop since the bending of the wires does not occur always in the same place. Faspector of Machinery. G. .

- COPY -

AUCKLAND HARBOUR BOARD.

No.8859.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

13th. May, 1939.

Foreman of Works.

6³/₄" WIRE ROPE SLINGS FOR "MAHUA"

The 304' of $6\frac{3}{4}$ " wire rope recently supplied by John Shaw Ltd., for 20-Ton Slings for the "Mahua", failed during test at a breaking strain of 135.8 tons, whereas to give the required factor of safety of 7 as 20-Ton Slings, the breaking strain should have been at least 140 Tons.

Delivery of the rope is now being accepted at a reduced price and the rope is to be made up into the required lengths of slings which are not to be used for loads in excess of 19-Tons per sling.

> D. Holderness ENGINEER TO THE BOARD.

> > per: A.N.T.

675

15th. May,

39.

The Purchasing Officer.

STEEL WIRE ROPE FOR FLOATING CRANE "MAHUA".

Please note that I have agreed to accept the 304ft. of $6\frac{3}{4}$ " wire rope supplied by John Shaw Limited, at a reduction in price of 5/- per Cwt.

This reduction is on account of the rope supplied failing to withstand the prescribed tests.

The rope will, however, be used for the purpose for which it was ordered, but at a slightly reduced working load.

15th. May, 1939.

Messrs. John Shaw Limited, Groves Buildings, Fanshawe Street, <u>AUCKLAND, C.1.</u>

Dear Sirs,

1

I have received your letter of 10th. instant, and note that you are willing to accept the suggested reduction of 5/- per Cwt. in the price of the 304ft. of $6\frac{3}{4}$ " wire rope supplied by you, owing to its failure to withstand the prescribed tests.

This is to inform you that delivery of the rope will now be accepted, and on receipt of your amended account arrangements will be made for payment.

Yours truly,

TELEPHONE 45-05I

WIRE ROPES FOR MINES LOG HAULING, ELEVATORS SHIPPING & GENERAL PURPOSES

ALL SIZES STOCKED

BLACK & GALVANISED

LENGTHS CUT TO ORDER WIRE ROPE GRIPS

Than,

Codes ; SHAW'S PRIVATE : A.B.C. 6th. Edition

CABLE & TELEGRAPHIC ADDRESS: "WINDING," AUCKLAND

WIRE ROPE MANUFACTURERS Sheffield England. REPRESENTATIVE : WILFRED SHAW GROVES BUILDINGS. 16/18 FANSHAWE ST

Auckland, C. 1. May 10th 1939

The Superintendent & Engineer The Auckland Harbour Board Auckland.

Dear Sir.

We beg to acknowledge receipt of your letter of the 6th inst and contents noted.

We immediately cabled our Principals your proposal and today we have received their reply to accept your offer.

We very much regret the mistake that has occured in this order and pappreciate the efforts you have used to get the Govt to give permission to use the ropes and altho they have not seen their way clear to give a release for a 20 ton lift we are very grateful that you can still make use of the ropes and will recommend your Board to accept the ropes at a reduction in price of 5/- per cwt.

We hereby accept your offer and await your further instructions. Robe be and present out of you assessed at present out of the state of the second of t

Yours faithfully, P.P.John Shaw Ltd Vilhed Shaw?

wet to Richasing

6th. May, 1939.

Messrs. John Shaw Ltd., Grove Building, Fanshawe Street, AUCKLAND, C.1.

Dear Sirs,

Further to my letter of 28th. ultimo, re the failure of the 304ft. of 63" wire rope supplied by you to stand up to the prescribed test, I have communicated with the Chief Inspector of Machinery and he informs me that he is not prepared to authorise the use of this rope for 20-Ton slings for which purpose it was required and ordered.

In an endeavour to assist you in the difficult circumstances in which this decision places you, I would recommend the Board to accept the rope supplied and reduce the rated capacity of the slings to conform to the reduced breaking load, at a reduction in price of 5/- per Cwt.

Please advise me whether you are prepared to accept this offer, if approved by the Board, or alternatively whether you prefer to take back the rope supplied and replace it with a rope in conformity with our enquiry and your quotation.

Yours truly,

6th, May, 1939.

The Chief Inspector of Machinery, Marine Department, WELLINGTON, C.1.

Dear Sir,

J

STEEL WIRE ROPES.

Your letter of 4th. instant received, and your ruling with regard to the rope for "Mahua" slings is noted.

My two letters of 28th. ultimo and lst. instant may have appeared to you to have been referring to the same matter, but this was not the case.

My earlier letter referred to another contract covering a variety of ropes both galvanised and black. In the case of the black ropes for use on cranes, one was definitely outside the tolerance permitted by British Standard Specification No.302 and must be rejected. Another, however, while below the guaranteed breaking weight shown in the table was well within the 5 per cent tolerance permitted by the British Standard Specification.

If therefore the N.Z. Regulations are intended to conform to the British Standard Specification, this particular rope would have to be accepted and, while both the British Standard Specification and N.Z. Regulations were quoted in my specification, it is hardly reasonable to reject a rope which complies with the British Standard Specification but fails to comply with the N.Z. Regulations which use the same table of breaking weights but omit to mention a tolerance provided in the British Standard Specification.

I am not sure that there is really any anomaly between the two British Standard Specifications, one for galvanised ropes and the other for black, and without definite knowledge as to why no tolerance is mentioned in the Specification for galvanised ropes, I would not care to say that there should be any such tolerance.

Yours truly,

- <u>COPY</u> - (Original and file 484).

Telegraphic Address "PLIMSOLL"

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Instruction the this.

M.24/8/2/4.

MARINE DEPARTMENT.

Private Bag, WELLINGTON, C.1.

4th. May, 1939.

The Superintendent & Engineer, Auckland Harbour Board, P.O. Box 1259, <u>A U C K L A N D</u>

Dear Sir,

STEEL WIRE ROPES.

I acknowledge receipt of your letter of the 28th. April commenting on the absence of the provision in the Department's Safe Working Loads Regulations accepting breaking loads for wire ropes not more than 5 per cent below the breaking loads specified in the Tables. I have also to acknowledge at the same time your letter of the lst. instant relating to the wire rope obtained for the making of slings for the Floating Crane "Mahua."

There would appear to be some inconsistency in the British Standard Specification for wire ropes in that B.S.S. No.302/1938 - "Wire Ropes for Cranes" provides for the acceptance of a breaking load not more than 5 per cent below the tabular breaking load, whereas in B.S.S. No.365/1929 - "Galvanised Wire Ropes for Shipping Purposes" no such provision has been made. The absence of such a provision in the Safe Working Loads Regulations is, however, not important as ropes of a breaking load not specified in the Tables may be dealt with under Section 110 of the Safe Working Loads Regulations: for example, the Tables provide only for a galvanised wire rope made from wire of 85-95 tons per square inch and the Department would not object to the acceptance of ropes made from 95-105 tons per square inch if the breaking load was appropriate to this construction of rope.

The Rules do, however, state that in computing the safe working load of a rope not provided for in the Tables, a uniform factor of safety must be used. I regret, therefore, that the rope obtained for the making of slings for the "Mahua" cannot be approved for a greater safe working load than one-seventh of the breaking load, which is 135.8 tons. The approved safe working load is, therefore, 19.4 tons.

> Yours faithfully, (Sgd.) G.E. Breeze.

Chief Inspector of Machinery.

lst. May, 1939.

Chief Inspector of Machinery, Marine Department, WELLINGTON, C.1.

Dear Sir,

615

To replace a set of 20-Ton slings for the Floating Crane "Mahua", the Board in January last issued enquiries and placed an order for 304ft. of $6\frac{5}{4}$ " circumference 6/24 galvanised hawser plough steel wire rope to British Standard Specification No.365 (guaranteed breaking load 141.8 tons).

The enquiry stated that the rope would be required to comply with N.Z. Government General Harbour (Safe working load) Regulations 1935. Test certificates (including breaking load and wrapping test) in accordance with these regulations to be supplied.

The necessity for using $6\frac{3}{4}$ " rope was dictated by the use of existing thimbles, links, etc., and in order to obtain a factor of safety of 7 it was necessary that the rope should be made of the quality known as Hawser Plough Steel 95-105 tons persquare inch.

The rope has now been delivered and the test certificate shows that the sample tested failed at 135.8 tons.

Although it is clearly set out in the enquiry and the quotation from the Local Agents, I am inclined to think that the failure is due to a softer quality of steel having been used in the manufacture of the rope. The rope is of a size rarely called for in New Zealand, and if your Department is agreeable to its use for the purpose ordered at the somewhat lower factor of safety (6.79 instead of 7) I would be agreeable to accept it, and I think this could be done with complete safety and satisfaction.

I shall be glad if you will consider this matter and give me an early reply so that matters can be finalised with the suppliers Messrs. John Shaw Limited.

Yours truly,

28th. April, 1939.

Messrs. John Shaw Ltd., Grove Building, Fanshawe Street, AUCKLAND, C.1.

Dear Sirs,

I have received the test certificate for the 304ft. of 6% inch circumference 6/24 ordinary lay galvanised hawser plough steel wire rope being supplied by you, and in this connection I regret to inform you that the test certificate of the rope is unsatisfactory and the rope will not be accepted.

It will be noted from your copy of the test certificate that the actual breaking load of the rope supplied was 135.8 tons, whereas the breaking load specified in our quotation form dated 13th. January 1939 was 141.8 tons.

This rope is required for cargo handling gear and is subject to the Regulations issued by the Government Inspection of Machinery Department.

Yours truly,



THE FOLLOWING ARE THE RESULTS OF TENSILE TEST(S) OF ONE SAMPLE,

RECEIVED 2nd March 1939,

FROM Messrs. John Shaw Limited,

SHEFFIELD, 11.

CIR ^{CE} W OF							172				an printe	1.16	STRANDS			1 4 3	- 50	1. 18	m (1)	TO .	£ 00	10 -	. 1.	1	MAXIMUM	TOTAL EXTEN-	
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Messrs. John Shaw Limited,



THE FOLLOWING ARE THE RESULTS OF TENSILE TEST(S) OF ONE SAMPLE,

FROM

RECEIVED 2nd March 1939,

Messrs. John Shaw Limited, SHE

SHEFFIELD, 11.

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				-	65				-					6.4							

Messrs. John Shaw Limited, SHEFFIELD, 11.

Michar.

DIRECTOR & GENERAL MANAGES

615.

- <u>C O P Y</u> -

AUCKLAND HARBOUR BOARD.

No.8595.

INSTRUCTIONS TO FOREMEN AND INSPECTORS.

19th. January, 1939.

Foreman of Works.

20-TON SLINGS FOR "MAHUA" M/A.

Make pattern and requisition 8 Cast Steel Thimbles to Drawing S.474 herewith.

304 feet of $6\frac{3}{4}$ circ. wire rope has been ordered to cut 2/67', 2/50' and 2/35'.

As soon as this arrives, make up 2/52', 2/35' and 2/20' slings, using in addition to the 8 new thimbles, the 4 thimbles from the existing 20 foot slings which will then be scrapped.

D. Holderness ENGINEER TO THE BOARD. per: A. N. T.

QUOTATIONS FOR STEEL WIRE ROPE FOR CRANE "MAHUA".

Firm	Delivery	Per Cwt.	Total
John Shaw Ltd.	Shipped 2 weeks after receipt of order in England.	2.11. 9,	51.15. 0
Samuel Brown Ltd.	Shipped 2/3 weeks from receipt of cabled order		59.7.6
A.C. Gillies & Laird Ltd.	10/12 weeks	3. 6. 6	66.10. 0

bopy for Engineer's File

ENGINEER'S REMARKS:

I recommend acceptance of offer of John Shaw Ltd. Please arrange for order to be cabled immediately.

> N.L.Vickerman. <u>18.1.1939.</u>

Order Sent to John Shawhte. 19 Jan 1939 Reed in England Day 21 Jan 1939. schould be delivered alld. approx. 18 tharch 1939

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AUCKLAND HARBOUR BOARD

PURCHASING DEPARTMENT, QUAY STREET,

AUCKLAND, C.I., 13th January, 19 39

QUOTATION FORM

Messrs. John Shaw Limited, To

1

AUCKLAND.

Please fill in on this sheet Prices and terms for the following articles, delivered to A.H.B. Store, Hobson Street , and subject to the conditions prescribed on back hereon.

DESCRIPTION OF MATERIALS PAG		Ra	ate	AMOUNT	Di
DESCRIPTION OF MATERIALS, ETC.	Quantity	At	Per	AMOUNT	Discount
STEEL WIRE ROPE FOR FLOATING CRANE "MAHUA	13				
a source of the second part of the second	and the late	The second	13 all		
63" circumference 6/24 ordinary-lay galvani	zed	100			
hawser plough steel wire rope to British					
Standard Specification No.365 (Guarantee	đ	dar it			
breaking load 141.8 tons)			12.35		
304 feet (to cut 2/67' 2/50' 2/35') appro	x .20 cw	t.	cwt		
and the second		51/	9đ p	er Cwt. 1	ETT.
To comply with N.Z. Govt. General Harbou: (Safe working load) Regulations 1935. Test certificates (including breaking loa and wrapping test) in accordance with the regulations to be supplied.	r ad ose	N	o Sa	les Tax.	
DELIVERY URGENT.		ad max			
Name of Makers John Shaw Ltd., Sheffiel	đ.				
Delivery Shipment 2 weeks after receipt	of orde	r in	Eng	land.	
Alternative quotations will be considered for having a breaking load of not less than 140 to available from Stock.	6/37 Ga ns if d	lv. Ieli	ord very	inary lay is	
the prices quoted are plus Sales Tax this must be clearly stated.					
QUOTATIONS CLOSE AT NOON ON WEDNESDAY, 18th JAN	ARY, 19	39.			
Completed quotation must be enclosed in sealed envelope marked "Quotation					
For					
and addressed to "Purchasing Officer."					

I/We hereby agree to supply the items quoted for at the prices stated and deliver in accordance with the conditions hereon.

If

Signature JOHN SHAW LIMITED.

Date 17.1.1939.

SHADD HARBOUR BOARD

PURCHASING DEPARTMENT, QUAY STREET: -

TERNIER CARE AND AND MINE AND AND

NHOA ROTATON

GENERAL CONDITIONS

1. Quotations must be properly filled in, both as regards quantities and rates, and must be signed by the tenderer. All figures or other information inserted on any quotation-sheet must be plainly stated.

2. The quotation is to state, when applicable, whether the material is of British or foreign manufacture, and the maker's name, brands, and trade numbers to be given wherever possible.

3. If any quotation on receipt is found to be incomplete or irregular, it may be rejected.

- 4 Any stores supplied not to the satisfaction of the Board's authorised representative or being in any respect contrary to the quotation, will be rejected, and the removal of such stores shall be made by the tenderer at his own risk and expense immediately upon receiving notice of rejection.
- 5. Whenever a quotation is invited for the supply of stores according to sample, it is necessary that those intending to quote will, in order to prevent any misunderstanding, take the opportunity of examining the sample before furnishing quotation.
- 6. Each item will be considered a separate quotation, and the schedule may accordingly be dealt with line by line.

7. The prices quoted are to include all charges for packing and delivery.

Deriver HARANEST, R. R. R. M. M. S. S. S. Storer 1, "Antini-Alternetico quotationa will be considered for 5/37 Gelv antinash "arias a preasing food of uor lear their 140 tone in delitery is oratisate from Storer.

METAL REPLY SENTER

LEPIS AND ALL MADE

1 37 . 1. 18 W.

Slings for Hosting Caare 1 Required immediately to replace it deteriorated slings which have been destroyed and thinkle used for causion lifting slings 2/52' plus thembles 2/35' plus thimbles Celeo at the same time 2/20' slings which are of same ago & condition as the distrayed slings 2/52' requires 2/67 to allow for splices 2/35' " 2/50' " " 2/20' . 2/35' + " = 134 + 100 + 70 = 304 ft. These are 2010n Slings for Cargo working and must have a breaking load of not less than 140 tous They are 6 34 encemperance and Shoald therefore be of Dalvaniges Hawser Plough Steel. 95-105 low - Breaking Train 141.8 low 6/24 ordensig lay, in most suitable construction .

December 10/13.

The Secretary,

A. H. B.

FLOATING CRAME.

HIRE OF SLINGS AND SHACKLES.

Peferring to my memo of the 22nd April 1913, the charge per day to return 20% on value of rope slings, if spread over only 25 days per arnum, would be:-

Size of rope	Length	Charge per day to seturn 20/ in 25 days per arrum.
95" repes for 40 tons	52 It length	9/-
	35 aitto	9 6/2
	20 ditto	3,/6
62" repes for 20 tons	52 ditto	1/4
	35 ditto	0I/S 2/10
	20 aitto	I/8
4°" ropes for IC tens	35 dit to	1/4
and the second second second second	20 ditto	[- 0 0 IC4.
	IO ditte	54

I recommend that charges be-

Bach 94" sling 22 -0 -0 per day

Fach 6 ?" do SI- IC - C per day

. Much $4\frac{2}{5}$ do $\mathcal{R}I = 0 = 0$ per day.

(See also Enqueers file M. 11)

TYNGINER TO THE BOATD.

28th March 1923

FLOATING CRANE

CHARGES FOR HIRE OF SLINGS AND SHACKLES

(see file 575)

Size of rope	Length	Charge
	n enternetis della rodonali della della (1923) 2047 il dero dura di produce descrito della subgross subgross su	
9 ¹ / ₂ " ropes for 40 tons	52ft length	£2- 0- 0 per day
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6¾" " 20 tons	52 f t "	£1-10- 0 "
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4 ³ / ₄ " " 10 tons	35ft "	£1-0-0 "
	20ft "	8 11
	loft "	H H
Shackles for any of the links if used.	10/- per shackle	
3" rope (Mahua's own gea	10/- per day	

uction slip 5109, + 5065 July 11/12 atarlanes poport 8422 40 tono 10 20 Call. Dock 3 0 On Hoating brand. - Lotal 6 3 1 - -18 shugo V 6. 6 Shackes Ho tons 10 20 Al ball Dock 4 5 0 On Hoating Gane Total 56 5 10 30 29. shackles 10 \$ 10 Links 40 tono 20 10 Al ball . Dock 0 2 On Hoating Faul 1 2 3 3 9 links 3 3 This now agrees with our list in Hoating brane specification

