

## Enclosure in No. 3.

## COOK'S STRAITS ELECTRIC SUBMARINE CABLE.

SPECIFICATION and CONDITIONS upon which Manufacturers are invited to tender for a SUBMARINE CABLE on account of the Government of New Zealand.

1. Fourteen nautical miles of cable, containing a single conductor of seven stranded copper wires, equalling one of No. 14 Birmingham wire gauge, and weighing 107 lbs. to the nautical mile.

The interstices being filled with Chatterton's compound, and then insulated with three alternate coatings of Chatterton's compound and gutta percha, all of the best description, in No. 1 Birmingham wire gauge, and weighing, exclusive of the copper conductor, 166 lbs. to the nautical mile, making a total of 273 lbs.

The copper to possess conducting power at 75° Fahrenheit, equal to at least 85 per cent. of pure copper by Mathusen's standard, and the insulation tested at 75° Fahrenheit to equal a resistance of not less than 150 millions of Siemon's units per nautical mile.

All core to be kept under water until made up. This core to be then served with tarred jute yarn (wet), and further served with Stockholm tarred jute yarn to a sufficient thickness to take a covering of twelve No. 1 B. W. gauge "best best" galvanized iron wires laid on spirally, each wire being capable of being elongated 7 per cent., without breaking; the whole to be covered with two coatings of Stockholm tarred hemp and Bright and Clark's compound.

The above to compose the shore ends, including two taper ends of 100 fathoms each to meet the No. 4 wires of the main cable.

And for the main cable, thirty-two nautical miles of the same description of core to be served with wet tarred jute, and further protected with twelve No. 4 B. W. G. "best best" galvanized iron wire; the whole to be protected with two coatings of tarred hemp and Bright and Clark's compound as before stated, and kept under water until shipped.

2. For a cable of forty-six nautical miles, containing two insulated conductors similar to the above, two twisted yarns of wet tarred jute to be laid on longitudinally with the conductors so as to make a perfectly central bed for the further coating of wet tarred jute; the whole to be sheathed with twelve No. 1 B. W. G. "best best" galvanized iron wires, and further protected with hemp and Bright and Clark's compound as before stated.

3. For a cable of forty-six nautical miles containing three insulated conductors similar to before stated, having three twisted wet tarred jute yarns laid on longitudinally with the conductors; the whole making a central bed for the further coatings of wet tarred yarn twelve No. 1 "best best" galvanized iron wire and the two coatings of hemp and Bright and Clark's compound.

The sheathing to be commenced at latest fourteen days after signing the contract, and the cable to be shipped within sixty days after signing, under penalty of £100 per day.

The vessel containing the cable to be ready for sea, and to proceed on her voyage, sixty-five days after signing contract, under penalty of like amount.

All excess cable to be the property of the Government of New Zealand, and landed at Wellington.

An inspecting engineer will be appointed, who shall be entitled to inspect every and any stage of the process of manufacture of the cable, and at all seasonable times to have free access to all such parts of the works of the said manufacturer as may be necessary for the purpose of such inspection.

The manufacturer at the same time shall supply means of testing the iron wire, and of electrically testing the core and the cable at each stage of its manufacture; but such inspection and examination shall not in any way commit the Government of New Zealand to the approval and acceptance of any cable which shall not be strictly in accordance with the specification, or which when submerged shall be in any way defective.

The tender is required to state for what sum the contractor would be prepared to ship to New Zealand, submerge, and keep either cable in perfect working order from twelve months from the date of it being successfully laid, and then to deliver the cable to the Government of New Zealand in as perfect electrical condition as when approved by the inspecting engineer in England; but such twelve months is to be exclusive of any period that may be occupied in repairing the said cable, and to be prolonged for an equal period.

Payments for the cable will be made to the contractor in the Colony by the Government of New Zealand by instalments, viz. :—

1st instalment.—On the cable being submerged, and the electrical condition proved perfect.

2nd instalment.—In six months from date of laying the cable, it being at that time in perfect working order.

3rd and last instalment.—At the expiration of twelve months, the cable being in as perfect electrical condition as when approved by the inspecting engineer.

Interest will be allowed to the contractor from the date on which the cable is reported to the Government as being in perfect working order, and during the time it continues so, but will cease on payment of last instalment, or for such time or times during the twelve months that the cable is not in perfect working order.

Tenders with specimens of the cable Nos. 1, 2, 3, will be received until the 17th instant.

## No. 4.

Copy of a Letter from Mr. JOHN MORRISON to the Hon. the COLONIAL SECRETARY.

Office of the New Zealand Government Agency,

3, Adelaide Place, King William Street,

London, E.C., 23rd December, 1865.

(No. 498.)

SIR,—

Referring to the letters of numbers and dates stated in margin upon the subject of the Electric Submarine Cable for Cook's Straits, I have now the honor to inform you that I have entered into a

No. 407.  
October 24, 1865.  
No. 472.  
Nov. 27, 1865.