

SPECIFICATION

Of the several Works required in the construction of Sheave Pulleys, Shafts, Bearings, &c., together with the construction of Cast Iron Manhole Frames and Covers for the MELBOURNE TRAMWAY and OMNIBUS COMPANY (Limited.)

Contract.

1. This Contract includes the supply of all Labour, Tools, Plant, Material, &c., necessary for the proper carrying out and completion of the Contract, in accordance with the Drawings, Specifications, and general conditions hereinafter stipulated.

Extent of Contract.

2. The Contract embraces the casting of the following Sheaves and Covers :—

2000 General Pulleys marked A on Sheet No. 3.

16 Crown " " B " " 3.

150 Curve " " C " " 5.

16 Depression Frames, with three (3) Pulleys to each, marked D on Sheet No. 6.

2000 Manhole Frames and Covers to General Pulleys.

16 Manhole Covers for Crown Pulleys.

150 " " Curve "

Together with the providing of all Shafts, Bearings, Oil Boxes, Bolts, Girders, and Buckleplates; also, the casting and securing of the General Pulley Frames to the Yokes, the materials when completed to be stored in Contractors' Workshops until taken delivery of by the Tramway Trust.

GENERAL PULLEYS MARKED A (as per Sheet No. 3.)

3. These shall be cast to the form and dimensions shown, they shall be fixed one (1) on each Shaft and secured by means of one (1) Set Screw—the ends of Pulley Bosses will be faced.

Shafts.

4. The Shafts shall be of Cast Steel of dimensions shown—the ends being turned so as to fit accurately into the Oil Boxes, a Flat to be cut on Shaft to receive Set Screw, so as to provide for securely holding the Pulley.

Oil Boxes.

5. The Oil Boxes shall be of Cast Iron of the dimensions shown, and be made to fit closely and securely into the recess of Frames—they shall be truly bored to allow of Shaft working freely. Two Boxes shall be provided to each Shaft. The Boxes shall be furnished with Covers of the form shown.

Frames.

6. Frames of Cast Iron of dimensions and form figured on the Drawings, shall be secured to Bent Rail as shown on Drawing. The Snug, which engages with Rail, shall be cast with Chipping Pieces to provide for accurate fitting.

Manhole Covers. 7. The Manhole Frames and Covers shall be cast to the form shown on Sheet No. 4. Of the total quantity of Frames and Covers specified, one hundred (100), will be six and one-half ($6\frac{1}{2}$) inches, and the balance five and one half ($5\frac{1}{2}$) inches in depth. The Covers will be made to fit freely into the Frames and have the Keyhole formed as shown; they will be deeply corrugated on top.

Yokes. 8. The Yokes to which the Cast Iron Frames will be secured, shall be provided to the Contractor in his foundry, and he will secure each Pulley Frame by means of a Templet, and will drill holes in the web of the Yoke for securing the Frames.

CROWN PULLEYS MARKED B (as per Sheet No. 3.)

9. The Crown Pulleys shall be cast to the form and dimensions shown. They shall be accurately bored to receive Shafts to which they shall be secured with two (2) $\frac{3}{4}$ -inch Set Screws, cup ended, hexagon headed; the Boss of the Pulley being drilled and tapped to receive same.

Shafts. 10 The Shafts, shall be of B.B.H. Crown Bar Iron and accurately turned to fit Bearings.

Bearings 11. The Bearings for the Pulleys to be cast to the form shown; they shall all be bored to receive the ends of Shafts, and shall be secured to the Rolled Girders as shown.

Rolled Girders. 12. The Rolled Girders shall be of the dimensions shown, and shall have Bearings securely bolted on top Flange.

Manhole Covers. 13. The Manhole Frames and Covers shall be cast to the dimensions shown, two (2) of which will be six and a-half ($6\frac{1}{2}$) inches deep, and the balance five and a-half ($5\frac{1}{2}$) inches deep. Tee Covers will be deeply corrugated on top,

CURVE PULLEYS MARKED C (as per Sheet No. 5.)

14. The Curve Pulley shall be of Cast Iron, and have the form and dimensions shown. They shall be accurately bored to receive Shafts, and will be secured thereto by means of two (2) $\frac{3}{4}$ -inch Set Screws.

Shafts. 15. The Shafts shall be of B.B.H. Crown Bar Iron, and accurately turned to fit Bearings.

Bearings. 16. The Bearings for the Pulleys to be cast to the form shown, and accurately bored to receive the ends of Shafts. The Footstep Bearings shall be secured to Rolled Girders; and the Top Bearing shall be secured to T iron of dimensions shown.

Manhole Covers. 17. The Manhole Frames and Covers shall be cast as specified for General Pulleys. They shall be of the dimensions shown on Sheet No. 5, and all shall be $5\frac{1}{2}$ inches in depth.

Buckle Plates and Roller Girders. 17A. Contractors shall supply the Buckle-plates and Rolled Girders as shown in drawing.

DEPRESSION PULLEYS MARKED D (as per Sheet No. 6.)

18. The Depression Pulleys shall be cast to the form and dimensions shown on Sheet No. 6. They shall be fitted three (3) to each Frame, and shall have Bolt Holes drilled as shown for securing same to Yokes.

- Spindles.** 19. The Spindles shall be of Cast Steel, bored for lubricating as shown ; and shall be securely and accurately fastened to Sliding Bar.
- Frame.** 20. The Frame shall be cast to the dimensions, and have the removable Covers cast and secured as shown. The Covers of Frame shall be deeply corrugated.
- Bolts, &c.** 21. The Contractor shall provide all Bolts, Nuts, and Set Screws shown for securing Bearings, Pulleys, and Manhole Covers. They shall all be hand made, neatly and accurately forged, and shall be screwed in oil to Whitworth's threads full and well formed.
- Quality.** 22. All Pulleys, Frames, and Bearings specified shall be made of the best Grey Cast Iron. They shall be cast perfectly sound, to be neatly dressed, and free from all air-holes, sand cracks, scoria, and other defects.
- Paint.** 23. All Pulleys, Bearings, Frames, Manhole Covers, and Girders shall receive two (2) coats of Hematite, or approved Mineral Paint, before being sent out of the shops.
- Delivery.** 24. The Pulleys, Bearings, &c., together with the Manhole Frames and Covers, shall be completed in accordance with the Drawings and Specifications as follows :—General Pulleys (marked A, and secured to Yokes) at the rate of three hundred (300) per month. The Crown Pulleys, with Bearings, Spindles, &c. at the rate of six (6) per month. Curve Pulleys, with Bearings, &c., at the rate of thirty-five (35) per month. Depression Pulleys complete with Frames, &c., at the rate of six (6) Frames per month.
- Manhole Covers and Frames.** 25. At the rate per month of three hundred (300) for General Pulleys ; at the rate per month of six (6) for Crown Pulleys ; at the rate per month of thirty-five (35) for Curve Pulleys ; Buckle Plates and Rolled Girders for Manhole Recesses complete at thirty-five (35) sets per month. The Contractor shall have stored and ready for delivery at the end of May, 1885, one month's supply of each of the various Pulleys and Covers as specified, after which date the regular delivery shall be taken. The whole of the materials specified to be completed within eight (8) months from the date of acceptance of tender.
- Patterns.** 26. The whole of the Wooden Patterns shall be provided by the Tramways Trust, from which the Contractor shall cast Patterns for the General and Curve Pulleys, and likewise for the Manhole Frames and Covers.
- Tenders.** 27. Tenders will each be accompanied with a complete Schedule of Rates, showing how the lump sum of tender is arrived at.
- Bond.** 28. Each tender to be accompanied with a Cash deposit or marked cheque for 5 per cent. on the amount of tender.
- Penalty.** 29. Thirty pounds per week.

Date when Tenders close,

GEO. S. DUNCAN,
Engineer.

SCHEDULE FORM.

SCHEDULE OF RATES FOR CONTRACT.

with prices and costs upon which this Tender is calculated.

Description of Works.	Rate.	Cost.	Total Cost.
2000 General Pulleys, complete.			
16 Crown " "			
150 Curve Pulleys, complete.			
150 Setts Buckle Plates, with Rolled Girders, complete.			
16 Depression Frames.			
2000 Manhole Frames and Covers, complete.			
16 Manhole Frames and Covers for Crown Pulley, complete.			
150 Manhole Frames and Covers for Curve Pulleys, complete.			
150 T Irons, 4in. x 4in. x 3ft. 2½in., complete.			
300 Angle Straps, 3½in. x ¾in. x 10in. "			

£

Name _____

Address _____

Date _____

TENDER

FOR

To

I We the undersigned, do hereby tender and offer to construct, completely finish and maintain the various works for the

in accordance with the Plans, Drawings, Specifications, and Conditions of Contract prepared for that purpose by the Engineer of the Melbourne Tramways Trust for the sum of

sterling,

and enclose herewith a marked cheque for pounds sterling, as required by Clause 10 of the said General Conditions.

Annexed hereto is a complete Schedule of Quantities and Prices showing how the said sum of £ has been arrived at, as required by the said Conditions of Contract.

Should this tender be accepted, I we undertake to execute a contract embodying the aforesaid Plans, Drawings, Specifications, and Conditions within seven days of the acceptance, or at any time thereafter when requested by you or on your behalf so to do.

Name : _____

Address : _____

Date : _____