

November 24th, 1926.

PRESTON WORKSHOPS.

When the conversion of the Cable trams to electricity was decided upon the Tramways Board recognised that to secure efficiency and economy in the building and repairing of rolling stock, the whole of the work should be done at one centre.

Of the seven different systems taken over by the Board in only one, viz. the Prahran and Malvern, were adequate shop facilities available for the repair of electric rolling stock. The Malvern shops were, however, designed for a system of 100 cars, and, for lack of space, could not be enlarged to meet the ultimate requirements of the Melbourne and Metropolitan System. Preliminary estimates indicated that an area of some 15 to 20 acres would be necessary. Such an area could obviously not be obtained in a settled district; in fact, very few sites near a tramway were obtainable at a reasonable cost. After inspection of the sites offered, an area at Preston covering 17 acres was purchased.

In preparing the main shop layout, the objective was to provide for continuity of operations on the cars whether they were being built or overhauled. The aim of the designing staff was to provide for taking a damaged or worn car in at one end of the plant and turn it out at the other ready for the road in the shortest space of time, without double handling. It was also necessary to place the various shops so as to permit their extension as the services increased in order to save interest on portion of the large outlay which will ultimately be required. The shops are therefore so designed as to permit of extension up to the limits of the area without interfering with work already completed. The system will have reached about 1800 cars, and the population of Melbourne will probably be nearing 1½ million before the possibilities of this site are exhausted.

Many preliminary plans were prepared before the final design was adopted. The buildings now nearing completion will occupy less than one half of the area purchased by the Board, and the shops already







The Smith's Shop about to be constructed, will cover an area of ~~twenty-sixth~~ 27,000 sq. ft. The equipment comprises the usual forges and steam hammers, etc. and will be capable of handling the construction of all steel cars. Provision is made under the same roof for electric welding, plumbing, and for a brass foundry and pattern shop and store. Undergear and trucks for electric cars will be manufactured in this Shop, where better handling facilities will be available than in the old Cable Repair Shops at Nicholson Street, where this work is being done at present.

The next Shop is the Truck and Machine Shop. All mechanical and electrical repairs of the car are handled here. The area of this Shop is 47,000 sq. ft. It is divided into 6 bays, in three of which five ton cranes are provided. These three bays will be used mostly for trucks and under-carriages of the cars, the trucks being dismantled on general overhaul and rebuilt in this area; also the wheels and axles are looked after. The cranes serve the wheel lathe where the tyres are turned, the wheel press where the centres or spiders are pressed on the axles, also the tyre heaters where the tyres are heated to expand them before slipping onto the centres where they are cooled and consequently shrink. The grip of the shrinkage is all that is depended on to keep the tyre on.

The number of men employed in this Shop will 120, and the cost was £40,000 without equipment. Some of the equipment for this Shop will be brought from the existing Shops, but new and up-to-date tools are being provided where required. The most important of these is the wheel lathe which was recently imported at a cost of £4300.00. This will turn tyres at a rate of 25 pairs a day, and is provided with all modern facilities for rapid handling.

The next is the Car Body Shop, with a lifting bay 60 ft. wide and has a 15 ton crane running the full length. Pits are provided under most tracks. Beyond this is the woodworking section and the car building section, the whole Shop having an area of 47,000 sq. ft. and cost £40,000 without equipment. It may be noted that this Shop is fully occupied, cars being turned out at the rate of three per



The next building is the Car Body Shop which has an area of 47,000 sq. ft. and cost £40,000 without tracks or equipment. Along the Eastern side is the lifting bay, 60 ft. wide and spanned by a 15 ton crane; in this bay there are ~~roads~~ ~~which~~ roads, of which are provided with inspection pits. The Western portion of this Shop is devoted to body-building and repairs. At the Southern end, handy to the Timber Storage Sheds, is the Woodworking Section equipped with modern machinery. The driving motors are placed below the floor and saw dust and shavings removed by an exhauster and a system of pipes beneath the floor; adjoining this section are the joiners' benches where the material is finished after machining. At the Northern end are the roads upon which cars are assembled or damaged cars repaired. In this Shop may be seen the numerous types of cars acquired by the Board from the various Tramway Trusts, and also the newer cars designed by the Board's staff, including the one-man/two-man steel cars.

The Paint Shop measures 20,000 sq. ft. in area and has room for 20 cars, and includes a section where trucks can be sprayed. The cost was £14,000. The Administrative Building will contain Drawing Office and Laboratory.

The mess room is so designed that it will be suitable for entertainments after working hours, a stage and dressing room being provided.

A fully equipped ambulance room in charge of an attendant will be included.