

fixed steam engines, or portable engines, and also steam engines and steam generators for service in the Machinery Hall.

Machinery and apparatus specially adapted to the requirements of the Exhibition may also be supplied by exhibitors, as for instance:—

Boilers for the production of steam for engines. Steam engines for driving the main shafting in the Machinery Hall.

Gas and water-power engines, for driving single machines and groups of machines.

Large and small pumps for waterworks and fountains.

Travelling cranes with normal gauges of 1·5 metre (4 ft. 11 inch. from centre to centre), for service in the Machinery Hall.

Overhead travelling cranes, with winch and moving gear, with a gauge of 10·5 metres from rail to rail, for the erection of heavy pieces for the Machinery Hall.

Hydraulic lifts for raising persons.

Portable engines for the service outside the Machinery Hall.

Exhibitors supplying such machines and apparatus intended for special service during the Exhibition, will enjoy special privileges, to be arranged between them and the Director-General.

If British makers lend cranes, hoists, boilers, engines, &c., for use of British exhibitors, no fees will be levied by the Imperial Austrian Commission for the use of the same by British exhibitors. But if British exhibitors lend such machinery for the use of foreign exhibitors, arrangements will be made by the Austrian Director-General to indemnify British exhibitors for the use of their machinery.

The power required to set machinery and main shafting for driving machinery in motion will be supplied by the Austrian Commission, and exhibitors will in no case be charged for motive power supplied by the main driving shafts in the Machinery Hall.

The moving force will be transmitted by two horizontal shafts of a diameter of 0·9 metre (about 4·39 inches), and 120 revolutions per minute is the speed rate.

The exhibitors have to supply the pulleys for the main shafts, as well as any other gear and driving bands, at their own cost.

Machinery intended to be worked will be placed in the central gallery of the Machinery Hall.

The preservation, cleaning, and oiling of the main shafts will be attended to by the Austrian General Manager, but exhibitors will have to attend to the preservation and oiling of the gear supplied by them, as also to the security of their straps.

Brickwork foundations in the Machinery Hall must be built at the cost of the exhibitors, and be finished and ready for receiving the machinery by the 15th of March, 1873; but the brick foundations and the stonework for engines and steam boilers, &c., employed for setting in motion the machines exhibited, will be constructed by the Austrian Commission according to the plans of the exhibitors.

The main lines of pipes for water, steam, and gas will also be laid by the Austrian Commission, and the exhibitor has only to supply the connecting pipes with his machines.

Coals from the best Austrian and Prussian coal mines, and feeding water for boilers, &c., supplying steam engines, driving machinery in the Machinery Hall, will be supplied by the Austrian Commission free of expense. Stokers will also be provided for the steam boilers lent for service in the Exhibition, or if the exhibitor should prefer to

employ his own people, the wages of the latter will be paid by the Austrian Commission according to the fixed tariff.

Should an exhibitor wish to burn wood, he will likewise be provided with it.

The whole Exhibition ground will be drained by a system of drainage pipes, carrying water and liquids to the Danube, and every measure has been taken to have a sufficient supply of water in all parts of the Exhibition.

Water will be furnished at a pressure of about 24 feet at low pressure, and about 120 feet at high pressure.

Gas will be furnished by the Imperial Continental Gas Company at the usual pressure.

Steam pressure generally at 5 atmospheres, about 70 lbs. to the square inch.

Steam pressure in foreign boilers is not limited, but they will be subject to the Austrian laws and regulations.

Single boiler-houses are being erected at the rear of the Machinery Hall, about 40 feet distant; but a special boiler-house for British boilers will be built by the Austrian Commission.

Plans furnished by the British Commission for British boiler-houses will be adopted, if the British Commission will undertake to execute the same. The erection of British boiler-houses is especially desired, in order to show the ingenuity and workmanship of British construction.

Traction engines, locomotive steam carriages for ordinary roads, steam omnibuses, and similar kinds of self-propelling vehicles will be allowed to run about during the Exhibition, in some parts of the Park and the Exhibition grounds. In fact, traction engines, road rollers, self-propelling steam-carriages, steam omnibuses, and steam pleasure carriages will be very welcome.

There will be some work of importance to be done by steam road rollers, and, in case of any work performed for the installation by traction engines or road rollers, all expenses will be paid by the Austrian Commission.

In case of railway locomotive engines and carriages being sent to the Exhibition, the rails for them to stand upon must be provided by the exhibitors, and it is very much desired that rails from England should be sent to Vienna as exhibition articles.

There will be competitive trials with steam fire engines, and the jury and exhibitors are invited to send special engines for this purpose. Such engines will be considered as objects of exhibition, and, if lent for use, fuel and care will be at the charge of the Imperial Austrian Commission.

There will likewise be special trials held with agricultural machines and implements in fields in the neighbourhood of Vienna, or in such places as can be easily reached by the Exhibition railway.

Agricultural machines will not be exhibited in the Machinery Hall, but in a pavilion specially built for that purpose.

All machines, &c., intended for the Exhibition will be admitted to the Machinery Hall from the 1st of February till the 15th of April, 1873, inclusive, and must be set up by the 25th of April.

Machines and apparatus arriving in pieces, and consisting of heavy and bulky parts, must be set up by the 15th of April.

Slate is particularly desired to be sent to the Exhibition; the slate will stand a chance of being sold with advantage at the close of the Exhibition, the Austrian slate being only fit for roofing.

It is also desired by the Director-General that fittings, show-cases, cloth for the covering of walls, window glass, &c., should be sent from England to Vienna; these would be considered as exhibition