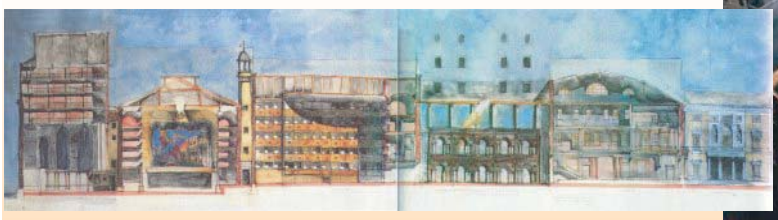
Completed projects

*The "La Fenice" Theatre of Venice was destroyed by fire on 29th January 1996. Pictures of the theatre in flames made their way all over the world; nothing remained of the prestigious building except the blackened outer walls and a plume of black smoke that impregnated the air of the city and could even be seen from the mainland. The stalls, boxes, stage and vault were reduced to a heap of rubble.*
*The mayor of Venice, Cacciari, immediately declared that the theatre should be rebuilt "where it was and how it was" and promised rapid construction work and a new inauguration by the end of 2000. After various ups and downs the project for the new theatre was completed by Aldo Rossi. The work involves rebuilding the Apollo Auditoria, the theatrical auditorium and the stage exactly as they had been before the fire, and making extensive changes to the northern and southern wings. A scenery workshop, changing rooms and workshops (north wing), and a fire prevention tank and the new 200-seat Rossi Hall for both rehearsals and concerts (south wing) will be built in these two areas. According to the project, the La Fenice Theatre was due to have been inaugurated in December 2003. The contractor had a very difficult time, though, both due to the difficulty in reproducing the details of the boxes and internal areas that had been decorated using techniques that are very difficult to emulate nowadays, and the difficulty in reproducing the original colours. The organisation of the building site was also very problematic in a logistically difficult city like Venice.*

RECONSTRUCTION OF FLOORS

# La Fenice Theatre Venice

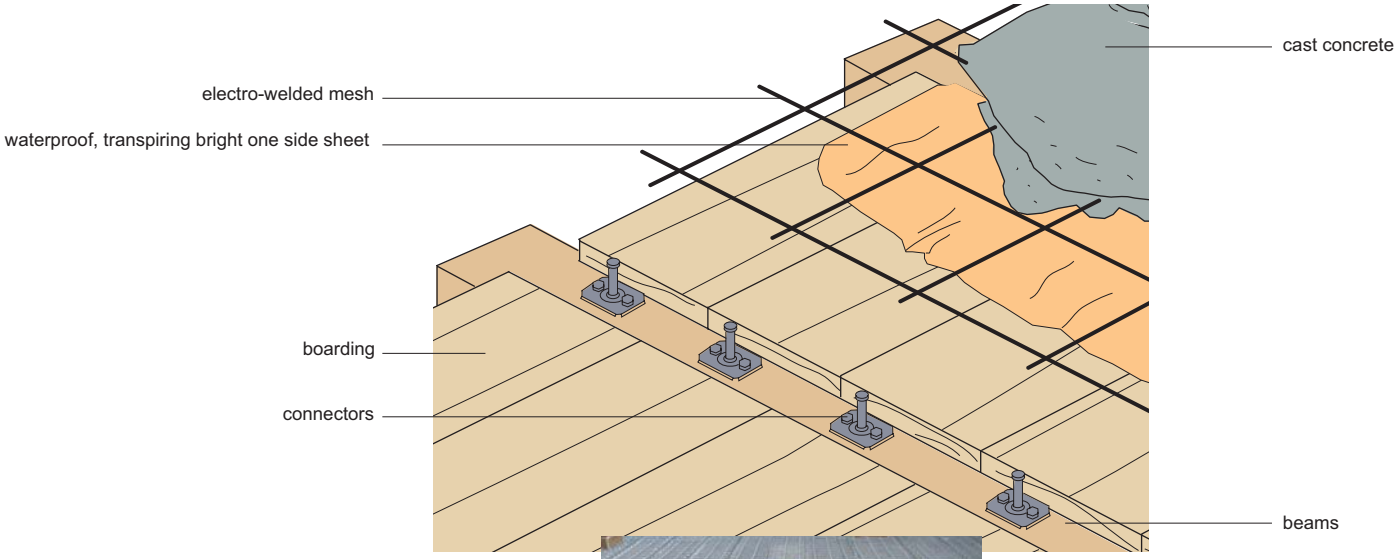
*The theatre had been built in 1792 by the "Noble Society" comprising leading members of the nobility and middle classes of Venice. That luxurious and magnificently decorated building was the last great work of the Republic of Venice, which, just five years later (1797), following the treaty of Campoformio, was ceded by Napoleon to Austria. The theatre immediately become one of the most prestigious venues in Italy, along with the S. Carlo of Naples and the La Scala of Milan. The work was designed by the neo-Palladian architect, Antonio Selva; two styles exist side by side in the theatre, the neoclassical façades and the neo-baroque interiors that were partially modified during their history (for example, in 1808 the interior of the theatre was partly modified with the construction of an imperial box). The first great fire occurred in 1836 under Austrian rule. Rebuilding work did not involve significant changes to the original layout of the theatre.*



Project drawings by arch. Aldo Rossi

## Description of the work done on the wooden floors of the Apollo auditoria

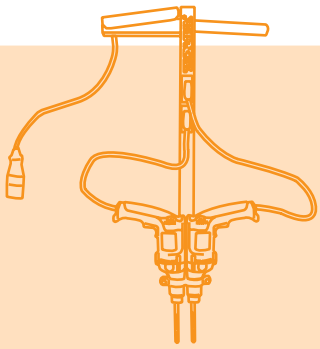
The desire to copy the original building caused the materials originally used to build the theatre to be selected. The floors, therefore, were built with solid larch wood beams, as envisaged in the original design. In areas with less demanding load capacities, the floors were built with a frame of beams and two layers of crossed boards nailed to the beams. The most demanding jobs were the floors of the Apollo auditoria, used right from the start as banqueting and reception halls, with the consequent concentration of crowds of people. In order to comply with current standards, the floors had to withstand accidental and variable overloads of at least 500 kg\m². The technique of the composite wood-concrete floor made it possible to satisfy these requirements for increased rigidity and load capacity. The floors were built with solid larch wood beams (class S10) protected against parasites and woodworm, featuring a cross-section of 17 x 25 cm and a centre-to-centre distance of 50 cm, with 2.5 cm thick overlying continuous cut boards and an 8 cm thick slab of cast concrete.



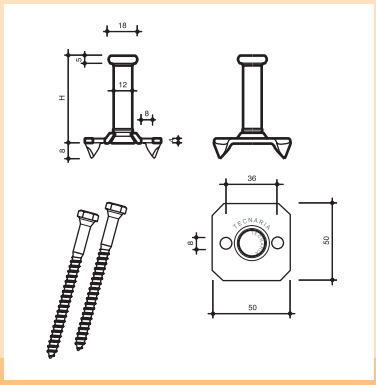

Connectors fixed to the beams. In some areas, mineralised wood fibre panels are used instead of the wooden boarding.

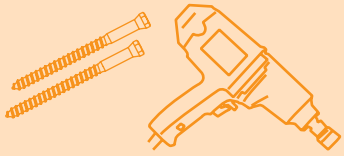
## laying procedure

After fitting the beams, the boarding was placed over them and then cut to expose the extrados. In order to prevent the wood from absorbing the water from the cast concrete, a bright one side sheet was placed over the boarding.

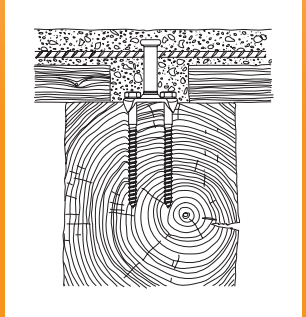


Special tools were used to accelerate the work process. These can be hired from Tecnaria if required.



As work was being done on seasoned larch wood, two holes with a diameter of 5 mm and a depth of 10 mm were drilled to hold the two screws used to secure the connector. The two screws were then tightened with an air impact wrench. Given that a large number of connectors were used, a special pneumatic tool was developed by Tecnaria to rapidly drill the two holes at the same time. The floor was then reinforced with electro-welded mesh. The floors were shored before casting the concrete. An 8 cm thick layer of concrete was then cast (Rck 250). The shoring was not removed until the concrete had totally cured. No specialised operators were required.



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