The French National Library in Paris, 13th Arrondissement
Delivered in 1995, the French National Library is the centrepiece of the new Seine Rive Gauche district, the new major urban project in eastern Paris. This large 350,000 m² amenity is organised around four towers acting as beacons and framing an esplanade, which is itself hollowed out to create a vast garden in its centre, landscaped as a forest setting. The building’s architecture, with its extensive use of wood, metal, concrete and glass, is the result of a semi-industrial approach which is carried right through into a number of details. This can clearly be seen in the use of stainless steel, the dominant metal in this project. It is present in different forms both outside of the building and inside on floors, ceilings and walls. Full panels are used to clad certain outdoor plantrooms and occasionally to create partitions. Different sized woven meshes are used as coverings for walls and ceilings, whether in the large researchers’ reading rooms in the towers or in the halls leading through to them. These spectacular monumental towers with their vertical links are draped from top to bottom in stainless steel. It is worth noting that this finish is obtained using approximately five metre high panels, each overlapping the upper edge of the element lying below (implying that their installation began with the positioning of the lower row).
Stainless steel mesh wall hangings in the main halls at the base of the towers.

The flexible stainless steel mesh provides decorative reflections that alter with the different types of lighting.

Lower garden floor - research reading rooms
In the large research rooms, a mesh is hung from the ceiling like a large velum, hiding away the technical ducts and, more importantly, controlling the acoustics. It is used in a more decorative manner in the reading rooms where it provides a wave-like ceiling effect, and in the conference room where it is used as a stage curtain falling in folds from the ceiling.

While the building provides large, open spaces, it is never possible to see right across a volume due to the presence of carefully positioned shutters and visual screens. The same logic is applied to grilles and meshes which provide a certain intimacy, given their kinetic particularity of being almost translucent from the readers’ side while being transparent from the other side where people stroll by.
Grids can also be found on “accessories” such as lighting masts in the reading rooms, sheathed in braided stainless steel, and ceiling-mounted lights that are connected via a braided stainless steel cable. In order to develop the unaccustomed use of these metal grids as velum or wall coverings, Dominique Perrault’s team of architects worked closely with French and German companies, specialists within the industrial sector: wire manufacturers and wire processors, without these companies necessarily being involved in the building industry. For instance, one of the company’s manufacturing the woven stainless steel mesh is particularly specialised in the production of filters and belts for industrial transporters. Other companies, responsible for hanging elements weighing up to five tons, were fully involved in researching the solutions.

Metal plays an all-important role inside the library.

Designed by the architect, the lighting masts in the reading rooms are clad in braided stainless steel.
Textural perception is modified by the pattern of a given grid. This is why these grids first had to be designed (materials and characteristics) using samples which were then tested on prototypes. “The different elements had to undergo in-depth studies before their validation. This led to many visits between the factory, agency, prototypes site and production chains, so that they were perfectly designed and fabricated. It was a multi-disciplinary exercise that demanded the participation of a wide range of professionals”.

(interview with Dominique Perrault by Françoise Fromonot, AA n° 300, Sept. 1995)

Woven meshes are used to drape the long side wall and ceiling in the reading rooms.

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