









For architect Manuelle Gautrand, the «making-of» process is in full swing: the new Art Brut Museum near the city of Lille is due to open next year. The competition won by her studio was about extending the Modern Art Museum of Lille, located in a magnificent park of Villeneuve d'Ascq. Designed by Roland Simounet and inaugurated in 1983, the existing museum complex has already acquired a landmark status. The architecture of the extension wraps around the north and east sides of the existing arrangement in a fan-splay of long, fluid and organic volumes. On one side, the fan ribs stretch in tight folds to shelter a cafe-restaurant that opens to the central patio; on the other, the ribs are more widely spaced to form the five galleries for the art brut collection. At the extremity of each gallery, a large bay opens views into the parkland, to add breathing space to the visitor's itinerary. The outer shell is sober: smooth untreated concrete, with mouldings and openwork screens that protect the exposed artworks from too much daylight.

The radical constructive system of Simounet's concrete-and-brick architecture induced Gautrand to apply the principles that would be just as strong in their clear contemporary expression. Concrete was a natural choice for the extension's topomorphic splay. Prefabrication was ruled out, to avoid unsightly joints between wall panels and preserve the project's organic spirit. The concrete shells, some of which are 12m high, are poured on-site, using self-settling concrete to ensure a perfect spread of the mix in the formwork. Because of the volume's irregular forms, on-site pouring has to be done in an almost artisan-like manner, relying on the skills of the journeymen. Imprinting on the concrete skin a biomorphic motif (which is sunk 3 cm and has chamfered edges) demanded a number of tests. The chosen method of matrix-printed membranes — of the kind often seen on motorway barrier walls — has been fine-tuned by creating several heavyduty sets of 32 unitary mountings. For the sheer parts of the shells, these precision-design mountings are built using plywood sheet covered with a thick coat of moulded polyurethane, which reduces the risk of tearing when formwork is stripped. For the parts that present particularities, such as protruding or set-back angles, the upper and lower edges of the mountings were custom-shaped in the workshop, using MDF coated with a resin film — these can only be used once. Precise laying out of the pattern on the concrete shells and exact positioning of the mountings in the formwork are achieved by means of real-size polyester membrane stencils.

To control the inflow of daylight, a sort of concrete lacery screens are hung like curtains in front of each bay. An efficient filter, the screens however leave 30% of the glass unobstructed to frame views of the landscape. The cell-like composition of the voids and the large dimensions of the bays did not allow using traditional reinforced concrete techniques. Instead, the architect opted for High-Performance Fibre Concrete (Ductal) to prefabricate the screens on pouring tables. Producing some 250 m² of Ductal panels demanded precise surveying of the position of patterns, to ensure seamless joins between the walls poured on-site and the prefab elements. Special attention was given to securing a perfect colour match between different kinds of concrete.















