
TEACHING & RESEARCH COMPLEX OF NANJING MEDICAL UNIVERSITY, CHINA

HPC Application: AALBORG WHITE P.W.52,5



PROJECT DESCRIPTION

The concept design of this project was done by British architect studio of BDP (Building Design Partnership), followed detailed design by a local Chinese architecture institute JSARCHI (Jiangsu Provincial Architectural D&R institute). The total facade area of the project is 32,000sqm, in which OmegaZeta White HPC panel covers 22,000sqm. This is the first white HPC façade application project for made with 52.5 high strength AALBORG WHITE® cement, produced at Cementir's plant in Anqing, Anhui of China.

The design of BDP presents a strong architectural form that unites the two buildings and responds to the landscape setting of the campus master-plan. The architect of BDP, who borrowed the successful experience of using HPC in Europe, required to adopt white high performance concrete façade again into this project. HPC Panel, having outstanding pure white color in mass, realized by 52.5 AALBORG WHITE® cement, could help to create a natural travertine texture which is preferred by the architect.

The sustainable concept of the buildings responds to the specific climatic conditions of Jiangsu province. The white HPC panel made with micro-mortar reaches the high level resistance of water and fire, and Nano particles creates "the lotus effect" applied on the panel surface. Moreover, the molecule reduces the dirt in the surface efficiently and makes the building much

easier to clean and even self-cleaning. It is important to have all these characters of the facade for such a public complex in order to provide the durable and stable working and studying space and environment for students and professors to enjoy access to internal or external landscaped spaces throughout the year.

Big size of the HPC panel is another feature for this project, which makes the building much more magnificent and majestic, while less segmentation also means a reduction in installation difficulty and timing. The biggest size of HPC panel is 2.2m*3m (full size) without any cracks, which meets perfectly to the requirement of architects. Meanwhile, the HPC panel is reinforced with 3mm pre-stressed wires placed every 10cm in both directions, and every full size panel has 48 pre-embedded bushings, with 15KN anti-pull resistance of each, which allows the installation of large panels complete safely and quickly.

ROJECT PARTICIPANTS

HPC Producers: OmegaZeta

Architects: Jiangsu Provincial Architectural D&R institute, architect studio of BDP

White Cement Producer: Aalborg Portland Anqing