

SCI BOILEAU DUQUESNE

Lyon - France

▶ THE PROJECT

**85 Rooms Hospital Complex for elderly patients
R+7 type cage with a single storey basement for
5000 m².**

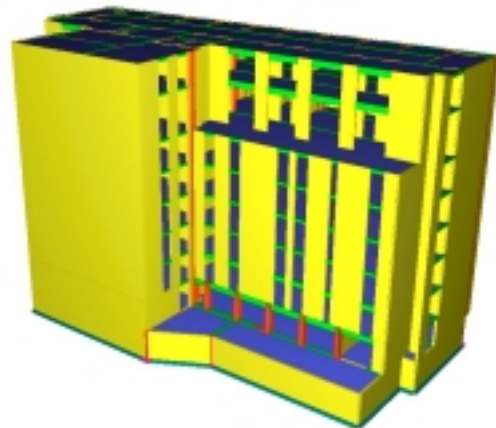
■ Project particularities

- > Duquesne street cantilever facade
- > Attic underpinned by cantilever beam and transfer slab
- > Studied variants to take into account: raft foundation or foundations by footings

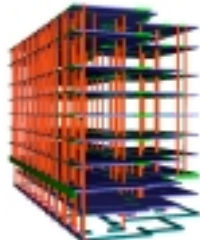
■ Solution

Software used : Arche

- > Modeling of 5000m² in Arche for the load distribution calculation, simulation of variants and creation of reinforcement drawings.



▶ QUESTIONS to M. ONDO, Structure Engineer at MATTE SA



Mr. Ondo, for this project, which was the contribution of Arche ?

We had to study 2 variants for foundations: foundations by footings (superficial or on well) or raft foundation. With Arche we could

simulate these two options easily and could propose them for the project estimation.

The conclusions of the soil survey are in progress, but to avoid several resumption for some neighboring building in work, one will choose the superficial foundations on well.

Due to modeling and loads distribution, Arche (Structure, Plate and Footing) is a good simulation and analysis tool.

What about the reinforcement level?

With Arche we get on one hand a good loads distribution and reliable and clear reinforcement plans on the other.

In APD / DCE phases, the calculation modules are specifying correctly the reinforcement area.

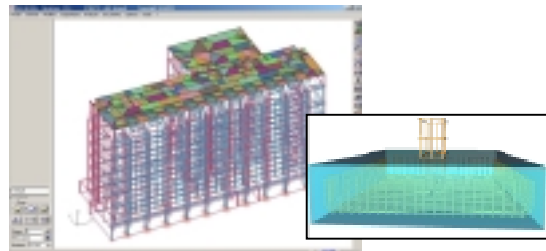
In this project, we had to check the fire resistance of the basement columns: due to the Arche Structure / Arche Column connection, we could lead this work correctly.

How is the daily usage of Arche ?

Arche allows in general gaining time and quality. I estimate between 10% and 20%, the gain on the productivity.

It's an effective production tool, which customized very well to get good results. The DXF quality is accordingly our internal rules and facilitates the usage of our plans on site and by the subcontractors of the concerned enterprises.

I think that we are not the only satisfied Graitec customers.



MATTE SA

119 bld Stalingrad
69100 Villeurbanne
France

Tel : +33 (0)4 72 69 86 02

Fax : +33 (0)4 72 44 26 59



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