


MASTER
 CLIMATE SOLUTIONS


University of Technology is not afraid of cold

In just a few months, the Poznan University of Technology will be showing off their new Mechatronics, Biomechanics and Nanoengineering Centre, which is currently under construction at Berdychowo and John Paul II streets in Poznan. Budimex S.A. company, who was awarded the contract to build it by tender, plans to finish the works by September 2011.

Despite harsh conditions caused by very low sub-zero temperatures in late 2011, the construction hasn't stopped. This high-tech facility of 3,784.4 sq. m will have five, and partly two, floors with a total area of 15,610 sq. m. It will include teaching halls, labs, lecture halls, as well as green terraces allowing the students and the teachers to rest and relax.

Right now, the construction is nearing a shell stage. Harsh winter is not an obstacle for the construction crew, which plans to close the site as planned. Current technological solutions, as well as the machines and equipment used in construction, allow for continued work even in bad weather.

"In the winter, when the temperature outside drops, air heaters are indispensable", says construction engineer Jakub Wawrzyniak. "They are one of the elements that allow us to keep working."

The space between the ceilings, when walls and windows will soon appear, was covered with foil, so that warm air doesn't escape too fast. In case of such a big facility, it is hard to maintain a steady temperature above zero throughout the whole site, especially when the temperature outside is freezing. But as it turns out, raising the temperature on the site by just a few degrees ensures that the works can be continued.

During the construction of CMBiN, Budimex uses both 44 kW direct

oil heaters (Master B 150) and more efficient indirect oil heaters. The latter, with an efficiency of approx. 80 kW have a very large air output of 3,300 m³/h, with an output temperature of 105°C. It is also worth mentioning, that these devices are very convenient to use, thanks to their mobility and instant readiness. The heaters heat the pillar, ceilings and walls, allowing for applying concrete in successive parts of the University building. The heating will also ensure that the durability requirements for the concrete will be met. The works would otherwise have to stop.

"We are also using electric blow heaters Master B 9 at the site", continues Mr Wawrzyniak. "We currently have seven of them. They are great for heating the pillars, among other things. The pillars are covered in foil to keep them warm. In this case, electric heaters are safer, as high-performance oil heaters may burn the tarps on the relatively small pillars. Electric heaters are also used to heat smaller areas, such as offices."

Mobile heaters will surely also be used in the finishing works, to heat the floors and dry the rooms. Both oil and electric heaters will be suitable for this.

As we can see, Budimex' employees are not afraid of bad weather, and the Poznan University of Technology will soon have a high-tech facility, which will surely be and object of envy from many universities.

